

FUNNY MONEY: WHY BITCOIN DOES NOT WARRANT INCREASED GOVERNMENTAL REGULATION

*Aaron Lindquist**

I. INTRODUCTION

Money is defined as “something generally accepted as a medium of exchange, a measure of value, or a means of payment.”¹ Even though the origins of money are hard to trace, money has come in many different forms throughout history.² Egyptians under Roman rule used grain to pay grain-taxes and rent.³ During the fifth and sixth centuries, arrowheads were used as “coins” in the Black Sea Region.⁴ Coinage was introduced in western Asia Minor during the sixth century.⁵ Paper bills were first used during the Tang Dynasty in China before catching on in Europe during the seventeenth century.⁶

The Internet has only further aided the transfiguration of money. The Internet boom of the 1990s saw the advent of digital currencies, with the most famous of all, albeit slightly different in scope than when originally introduced, being PayPal.⁷ However, the trendiest digital currency on the market is Bitcoin. Bitcoin is a digital currency based on cryptographic proof that is exchanged on a peer-to-peer network.⁸

This note explores the origins and workings of Bitcoin, its popularity and regulation in Germany, how criminal enterprises have used Bitcoin, and governments’ ability to regulate it. To date, there have been no cases challenging the power of individuals to make transactions using Bitcoin. However, policymakers and consumers around the world

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¹ *Money Definition*, MERRIAM-WEBSTER.COM, <http://merriam-webster.com/dictionary/money> (last visited Nov. 9, 2014).

² Henry S. Kim, *Archaic Coinage as Evidence for the Use of Money*, in *MONEY AND ITS USES IN THE ANCIENT GREEK WORLD* 7, 9 (Andrew Meadows & Kirsty Shipton eds., 2001).

³ *Id.*

⁴ *Id.*

⁵ *Id.* at 9–10.

⁶ *Top 10 Things You Didn’t Know About Money: The First Paper Money*, TIME, http://content.time.com/time/specials/packages/article/0,28804,1914560_1914558_1914593,00.html (last visited Aug. 21, 2014).

⁷ *History*, PAYPAL, <https://www.paypal-media.com/history> (last visited Aug. 21, 2013).

⁸ SATOSHI NAKAMOTO, BITCOIN: A PEER-TO-PEER ELECTRONIC CASH SYSTEM 1 (2009), available at <http://bitcoin.org/bitcoin.pdf>.

are calling for enhanced government regulations. This leads to the question of whether national governments can regulate a currency that is not their own, and if so, what exactly those regulations should look like.

This note will show that national governments around the world have no legal basis to prohibit Bitcoin users from entering the marketplace. National governments should refrain from passing legislation or regulations that would have a chilling effect on the use of Bitcoin. This note suggests that if a dispute arises, contract law provides a suitable solution for all consumers, and taxation provides sufficient regulation for governments.

Section II of this note provides an overview of Bitcoin, its technological foundations, and its use in the marketplace. Section III analyzes Germany's loose regulatory approach to regulating Bitcoin. Section IV examines how Bitcoin has been, or could be, utilized for illicit purposes by criminal enterprises around the world. Section V analyzes the arguments against increased regulation and proposes solutions that will not have a chilling effect on the adoption of Bitcoin.

II. OVERVIEW OF BITCOIN

A. *What is Bitcoin?*

Satoshi Nakamoto⁹ created Bitcoin to be the world's first viable decentralized currency.¹⁰ Like other fiat currencies, Bitcoin has no intrinsic value.¹¹ Bitcoin's valuation is based on supply and demand—what the market is willing to pay for the currency.¹² Because Bitcoin has no intrinsic value, it is a complete departure from prior digital currencies such as E-gold, and from other fiat currencies, which were historically backed by precious metals or underwritten by sovereign states.¹³ Bitcoin also utilizes peer-to-peer technology to manage transactions and to issue

⁹ *Who is Satoshi Nakamoto?*, COINDESK, <http://www.coindesk.com/information/who-is-satoshi-nakamoto/> (last modified Apr. 2, 2014). Satoshi Nakamoto is likely a pseudonym as the identity or identities of the individual(s) behind Bitcoin are anonymous. *Id.*

¹⁰ NAKAMOTO, *supra* note 8, at 1.

¹¹ *Myths*, BITCOIN WIKI, https://en.bitcoin.it/wiki/Myths#Bitcoins_have_no_intrinsic_value_.28unlike_some_other_things.29 (last visited Aug. 29, 2014).

¹² *Id.*

¹³ *See generally* Bob Sullivan, *Feds Accuse E-Gold of Helping Cybercrooks*, NBC NEWS TECHNOLOGY (May 2, 2007, 5:19 PM), http://redtape.nbcnews.com/_news/2007/05/02/6346006-feds-accuse-e-gold-of-helping-cybercrooks?lite (explaining that E-Gold was a digital currency that was backed by precious metals); *see, e.g.*, Pascal-Emmanuel Goby, *All Money is Fiat Money*, FORBES (Jan. 8, 2013, 5:23 AM), <http://www.forbes.com/sites/pascalemanuelgoby/2013/01/08/all-money-is-fiat-money/> (describing the nature and origin of fiat currencies).

bitcoins.¹⁴ It is an open-source technology, designed to be accessible to everyone.¹⁵ Individuals, businesses, or technology developers can utilize Bitcoin.¹⁶

Bitcoin provides users with a secure yet cheap, quick, and easy way to transfer money.¹⁷ Bitcoin transactions utilize military-grade cryptography to protect users.¹⁸ Additionally, Bitcoin helps protect users' identities by creating a unique Bitcoin address that contains no identifying information.¹⁹ One of the biggest complaints from small businesses concerns the swipe fee that is charged every time a debit or credit card transaction occurs.²⁰ Swipe fees represent the second highest operating expense for merchants, even though technological advances have lowered the processing costs of credit and debit transactions.²¹ Bitcoin eliminates such processing fees, except in cases of very small payments.²² Additionally, Bitcoin allows for fast international payments because there is no third party to slow down the process, charge exorbitant fees, or freeze transfers.²³ Bitcoins can be transferred with mobile phone payments and require no particular software because Bitcoin utilizes open-source technology that is compatible across the board.²⁴ Ease of transfer makes Bitcoin a great alternative to fiat currencies and precious metals.

B. Mining & Distribution

1. Mining

The creation and transfer of Bitcoins is known as “mining.”²⁵ Mining adds transactions to Bitcoin's public ledger of previous transactions.²⁶

¹⁴ BITCOIN, <http://bitcoin.org/en> (last visited Oct. 19, 2013).

¹⁵ *Id.*

¹⁶ *See id.*

¹⁷ *Bitcoin for Individuals*, BITCOIN, <http://bitcoin.org/en/bitcoin-for-individuals> (last modified Oct. 22, 2008).

¹⁸ *See generally Myths*, *supra* note 11 (relating the fact that Bitcoin utilizes well-known industry standard algorithms SHA256 and ECDSA). The United States government uses and endorses SHA256. *Id.*

¹⁹ *Id.*

²⁰ Doug Kantor, *Create Jobs by Ending the Swipe Fee Rip-Off*, REAL CLEAR POLITICS (Oct. 13, 2013), http://www.realclearpolitics.com/articles/2013/10/13/create_jobs_by_ending_the_swipe_fee_rip-off_120306.html.

²¹ *Id.*

²² *Bitcoin for Individuals*, *supra* note 17.

²³ *Id.*

²⁴ *Id.*

²⁵ *Mining*, BITCOIN WIKI, <https://en.bitcoin.it/wiki/Mining> (last modified Oct. 29, 2013, 10:38 AM) (discussing that the process of introducing new Bitcoins into the market is

The ledger is known as the “block chain” because it is a chain of blocks of data that help prove the validity of the current block.²⁷ Mining is a resource-intensive and difficult consensus process.²⁸ Because mining is the mechanism by which bitcoins are created, miners are paid transaction fees as well as a “commission” for newly created coins.²⁹

Miners must utilize the best hardware available to mine blocks.³⁰ There are currently four ways to mine bitcoins. The first method is called central processing unit (CPU) mining.³¹ CPU mining allows users to utilize their home computer to mine. While CPU mining is very inefficient and the Bitcoin software has disabled CPU mining as a default setting, CPU mining can still be accessed, and is still used.³² The second method of mining is called graphics processing unit (GPU) mining. GPU mining is much faster and more efficient than CPU mining.³³ The third type of mining is known as field-programmable gate array (FPGA) mining. FPGAs consume small amounts of power and are extremely quick.³⁴ The most recent mining development is application-specific integrated circuit (ASIC) mining. ASIC is a microchip designed and manufactured to accomplish very specific purposes.³⁵ ASICs consume very little power and are vastly faster than all the other mining technologies.³⁶

2. Distribution

Bitcoin mining is actually the first step in the distribution chain. As mentioned above, mining is an intensive process that may take a great

called mining because it requires exertion, in the form of computing power, and steadily makes new currency available at a rate similar to mining physical commodities like gold).

²⁶ *Id.*

²⁷ *Bitcoin Mining in Plain English*, CODING IN MY SLEEP (Sept. 6, 2012, 11:49 PM), <http://codinginmysleep.com/bitcoin-mining-in-plain-english/>. Blocks are large chunks of data linked together that prove the previous block as valid. *Id.* See also *Blocks*, BITCOIN WIKI, <https://en.bitcoin.it/wiki/Block> (last modified June 15, 2013, 3:06 PM) (providing an in-depth look at blocks).

²⁸ *Mining*, *supra* note 25. It is called a consensus process because each block must contain proof of work to be valid and each Bitcoin node verifies proof of work when it receives a block. *Id.*

²⁹ *Id.* The transaction fee consists of the fees paid by users sending transactions. Additionally, everyone in the network agrees upon the number of Bitcoins that may be awarded to a block discoverer. *Id.* The current “commission” for discovering a block is 25 Bitcoins. *Id.*

³⁰ *Id.*

³¹ *Id.*

³² *Id.*

³³ *Id.*

³⁴ *Id.*

³⁵ *Id.*

³⁶ *Id.*

deal of time and computing power. Because mining is such a difficult process, most users will acquire Bitcoins in one of three ways: by purchase, through payment, or by gift or donation.

a. Purchasing Bitcoins

Like any other currency, Bitcoin can be purchased at an exchange. Bitcoin is traded on exchanges identical to traditional currency exchanges. Mt. Gox was the largest exchange.³⁷ However, Mt. Gox has since filed for Chapter 15 bankruptcy protection in the United States.³⁸ Mt. Gox handled about eighty percent of the Bitcoin trade worldwide.³⁹ The failure of Mt. Gox is not surprising when considering that forty-five percent of Bitcoin exchanges have failed.⁴⁰

For people wanting to avoid the transactional costs associated with purchasing Bitcoins from an exchange, there is always the option of purchasing Bitcoins from another individual.⁴¹ Parties to the transaction can determine the current exchange rate by checking a Bitcoin exchange. Bitcoins are stored in digital wallets, which facilitate digital transactions by keeping a private key that provides proof of ownership.⁴² This digital signature protects the parties to the transaction by preventing any alterations from being made.⁴³ Bitcoins can be transferred via mobile phone with a Bitcoin wallet.⁴⁴ All the seller has to do is display his Bitcoin quick response (QR) code and allow the buyer to scan it.⁴⁵ The QR code contains all of the data and details regarding the transaction and will transfer the bitcoins to the buyer's Bitcoin wallet.⁴⁶

b. Receiving Bitcoins as Payment

³⁷ Tom Hals, *Failed Bitcoin Exchange Mt. Gox Gets U.S. Bankruptcy Protection*, REUTERS (June 17, 2014, 6:44 PM), <http://www.reuters.com/article/2014/06/17/us-bitcoin-mtgox-bankruptcy-idUSKBN0ES2WZ20140617>.

³⁸ *Id.*

³⁹ Ian Steadman, *Study: 45 Percent of Bitcoin Exchanges End Up Closing*, WIRED.CO.UK (Apr. 26, 2013), <http://www.wired.co.uk/news/archive/2013-04/26/large-bitcoin-exchanges-attacks>.

⁴⁰ *Id.*

⁴¹ See, e.g., LOCALBITCOINS.COM, <https://localbitcoins.com/> (last visited Sept. 22, 2014) (putting local Bitcoin buyers and sellers together via an online marketplace). While finding an individual who is willing to buy or sell Bitcoins might seem like trying to find a needle in a stack of needles, it is actually much easier than one might think. See *id.*

⁴² *How Does Bitcoin Work?*, BITCOIN, <http://bitcoin.org/en/how-it-works> (last visited Sept. 4, 2014).

⁴³ *Id.*

⁴⁴ *Bitcoin for Individuals*, *supra* note 17.

⁴⁵ *Id.*

⁴⁶ *Id.*

The second method in which an individual or business may acquire bitcoins is by receiving them as payment for goods or services. While bitcoins are far from a ubiquitous form of accepted payment, the number of merchants who accept bitcoins as payment increases daily.⁴⁷ As detailed above in Section II(B)(2)(a), it is rather easy for individuals to accept transfers of bitcoins as a payment option. The process is very similar for businesses. All the merchant is required to do is create and post an accessible QR code near its point-of-sale and have buyers scan the code.⁴⁸ Before scanning the QR code, a buyer must enter the amount of bitcoins required for payment, then focus his mobile device on the QR code and press a button that processes the payment.⁴⁹ The bitcoins will be transferred from the buyer's digital wallet to the seller's digital wallet.⁵⁰ With such ease of transfer, the number of merchants who accept Bitcoin is likely to continue its upward trend.

c. Receiving Bitcoins as A Gift or Donation

Like cash, Bitcoin can be gifted or used to make a donation.⁵¹ The transfer process is almost exactly the same as mentioned above; the only major difference is that the QR code is now on a computer screen. Evidence of the digital currency's real world impact can be seen in the political realm. The Conservative Action Fund Political Action Committee (CAFPAC) has requested the Federal Election Commission (FEC) to rule how Bitcoin could be used in congressional fundraising

⁴⁷ See Kate Connolly & Guy Grandjean, *Bitcoin: The Berlin Streets Where You Can Shop with Virtual Money*, THE GUARDIAN (Apr. 26, 2013, 6:08 AM), <http://www.theguardian.com/technology/2013/apr/26/bitcoins-gain-currency-in-berlin> [hereinafter *Berlin's Bitcoin Market*] (detailing a number of retailers who have recently begun accepting Bitcoin as a form of payment in the southern Berlin district of Kreuzberg); Kashmir Hill, *21 Things I Learned About Bitcoin from Living on It for a Week*, FORBES (May 9, 2013, 1:54 PM), <http://www.forbes.com/sites/kashmirhill/2013/05/09/25-things-i-learned-about-bitcoin-from-living-on-it-for-a-week/>; Jon Matonis, *Top 10 Bitcoin Merchant Sites*, FORBES (May 24, 2013, 12:45 PM), <http://www.forbes.com/sites/jonmatonis/2013/05/24/top-10-bitcoin-merchant-sites/> (listing the top ten Bitcoin merchant sites); *Trade*, BITCOIN WIKI, <https://en.bitcoin.it/wiki/Trade> (last modified Dec. 20, 2013, 10:50 PM) (listing online and real world businesses that currently accept Bitcoin.); *Places that Accept Bitcoin*, SPEND BITCOINS, <https://www.spendbitcoins.com/places/> (last visited Sept. 22, 2014) (listing merchants who accept Bitcoin).

⁴⁸ *How to Accept Bitcoin, for Small Business*, BITCOIN WIKI, https://en.bitcoin.it/wiki/How_to_accept_Bitcoin_for_small_businesses (last modified Dec. 20, 2013, 5:09 PM).

⁴⁹ *Berlin's Bitcoin Market*, *supra* note 47.

⁵⁰ *How Does Bitcoin Work?*, *supra* note 42.

⁵¹ *Donation-Accepting Organizations and Projects*, BITCOIN WIKI, https://en.bitcoin.it/wiki/Donation-accepting_organizations_and_projects (last modified Dec. 10, 2013, 7:46 PM) (listing organizations which accept Bitcoin donations).

campaigns.⁵² While CAFAPAC is waiting to hear from the FEC, the Libertarian Party website has already begun accepting Bitcoin donations.⁵³ The estate planning industry is also being forced to deal with how to categorize and include bitcoins in wills, trusts, and estates.⁵⁴ Based on the above evidence, it is likely that gifts and donations in bitcoins will continue to grow as Bitcoin becomes more readily accepted.

III. BITCOIN USE AND REGULATION IN GERMANY

The largest demand for Bitcoin is in the Industrialized World, with the United States leading the way.⁵⁵ While fiat currencies in larger industrialized countries have global stability, economic instability and inflation have created concern amongst citizens of the Industrialized World.⁵⁶ This section will explore the popularity, use, and regulation of Bitcoin in Germany.

Germany, known for its dominance in European fiscal policy decisions, has quickly taken to Bitcoin.⁵⁷ In the second quarter of 2013, Germany ranked fourth in the world in Bitcoin software downloads.⁵⁸ Additionally, the euro has the second highest trading volume, trailing only the United States dollar.⁵⁹ While that may reflect more than just Germany's population, due to the euro's continental use, it certainly shows growing popularity within Germany.

Bitcoin use in Germany, while not as expansive as in the United States, is quite robust.⁶⁰ Kreuzberg, a southern Berlin district, has at

⁵² Kate Rogers, *Using Bitcoin to Donate to Your Favorite Politicians May Soon Be Reality*, FOX BUSINESS (Sept. 9, 2013), <http://foxbusiness.com/personal-finance/2013/09/09/using-bitcoin-to-donate-to-your-favorite-politicians-may-soon-be-reality/>.

⁵³ *Make a Bitcoin Contribution*, LIBERTARIAN PARTY, <http://www.lp.org/make-a-bitcoin-contribution> (last visited Sept. 22, 2014).

⁵⁴ Wayne Parker, *Protect Your Bitcoin Wallet After You Die*, TRADEBLOCK (May 13, 2013), <https://tradeblock.com/blog/protect-your-bitcoin-wallet-after-you-die-2/>.

⁵⁵ Jonathan Stacke, *Mapping Bitcoin Adoption: A Global Perspective in 11 Graphs*, TRADEBLOCK (May 19, 2013), <https://tradeblock.com/blog/mapping-bitcoin-adoption-a-global-perspective/>. The United States leads the world in software downloads, exchange volume, and real world interaction. *Id.*

⁵⁶ See John Gray, *A Point of View: Bitcoin's Freedom Promise*, BBC NEWS MAGAZINE (April 26, 2013), <http://www.bbc.co.uk/news/magazine-22292708> (describing how the inflationary nature of fiat currency, particularly in light of the events in Cyprus, has created appeal for alternative, deregulated currencies).

⁵⁷ Stacke, *supra* note 55.

⁵⁸ *Id.*

⁵⁹ *Id.*

⁶⁰ Laura Lucchini & Valerio Bassan, *In Berlin, Bitcoins Readily Replace the Euro*, VOXEUROP (Aug. 22, 2013), <http://voxeurop.eu/en/content/article/4077541-berlin-bitcoins-readily-replace-euro>.

least twenty-five shops, and counting, that accept Bitcoin as payment.⁶¹ One shop in particular, a coffee house, has customers who regularly pay in Bitcoin.⁶² Phylax, a financial consulting firm, offers its clients a specialized Bitcoin payment system.⁶³ Germany became the first European country to have a Bitcoin platform with a direct banking relationship when Bitcoin.de,⁶⁴ the German Bitcoin marketplace, recently partnered with Munich-based Fidor Bank AG.⁶⁵ Germany's interest in the currency appears to be more than mere infatuation, as Bitcoin has found acceptance across the entire marketplace.

Germany has taken the initiative in providing a solid framework for Bitcoin to grow in both its use and popularity.⁶⁶ On August 19, 2013, the German Federal Ministry of Finance recognized Bitcoin as "units of account" when it formally issued regulations regarding the cryptocurrency.⁶⁷ This means that Bitcoin is legal for use in private transactions, but companies that desire to engage in commercial transactions must receive permission from the Federal Financial Supervisory Authority (BaFin).⁶⁸ At the simplest level, businesses and individuals will be able to utilize Bitcoin without need for BaFin approval; but businesses that desire to run Bitcoin exchanges or offer other financial services will need BaFin approval.

Additionally, German lawmakers issued directives regarding the tax obligations of Bitcoin use and creation.⁶⁹ The German government stated that no exemptions will be granted for commercial activities utilizing Bitcoin.⁷⁰ Not only will Bitcoin users be subject to capital gains taxes (twenty-five percent plus solidarity surcharge and church tax),

⁶¹ *Id.* The shops range from cafes and restaurants to hotels and office supply stores. *Id.*

⁶² *Id.* There is also a bar, Room 77, that is a big proponent of Bitcoin. *Id.*

⁶³ *Id.*

⁶⁴ *Bitcoin Marketplace*, BITCOIN.DE, <https://www.bitcoin.de/en> (last visited Sept. 4, 2014).

⁶⁵ Karen Epper Hoffman, *How Bitcoin is Blossoming in Germany*, PAYMENTSSOURCE (Sept. 12, 2013, 4:00 AM), <http://www.paymentssource.com/news/how-bitcoin-is-blossoming-in-germany-3015408-1.html?pg=1>.

⁶⁶ Pete Rizzo, *Bitcoin Regulation Leaps Forward in Germany*, PYMNTS.COM (Aug. 19, 2013, 3:56 PM), <http://www.pymnts.com/briefing-room/issuers/virtual-currency/2013/bitcoin-regulation-leaps-forward-in-germany/>.

⁶⁷ Loek Essers, *German Government Okays Bitcoins for Private Transactions*, PCWORLD (Aug. 19, 2013, 7:18 AM), <http://www.pcworld.com/article/2046960/bitcoin-can-be-used-for-private-transactions-german-government-says.html>.

⁶⁸ *Id.*

⁶⁹ Rizzo, *supra* note 66.

⁷⁰ Romain Dillet, *Germany Recognizes Bitcoin as "Private Money", Sales Tax Coming Soon*, TECHCRUNCH (Aug. 19, 2013), <http://techcrunch.com/2013/08/19/germany-recognizes-bitcoin-as-private-money-sales-tax-coming-soon/>.

they will also be required to pay sales tax-value added tax (VAT).⁷¹ Payment processors that deal solely with German customers should be exempt from VAT because they serve only as intermediaries between customers and merchants.⁷² Germany's sensible approach has created a regulatory environment that provides sufficient growth prospects while avoiding a chilling effect on Bitcoin adoption.

IV. ILLICIT USES OF BITCOIN

Bitcoin's ease of use, relative anonymity, transferability, and a lack of awareness concerning the cryptocurrency have led to a variety of illicit uses. Like cash, Bitcoin is highly valued for the relative anonymity it can provide.⁷³ Additionally, a lack of awareness concerning appropriate security measures has left a sizable number of users ruing the day they purchased bitcoins.⁷⁴ This section of the note will explore three areas of criminal enterprise that have been greatly impacted by the use of Bitcoin.

A. *Drug Trade / Silk Road*

The drug trade has always been known for employing clever tactics to evade law enforcement officers, namely by utilizing an anonymous source of payment—cash. While centralized governments regulate fiat currencies, there is essentially no way to track a single currency note as it makes its way through the economy without serious oversight. Advanced technology has only further aided this process. Silk Road was a Bitcoin-only virtual black marketplace specializing in the sale of illegal goods, with the sales of narcotics and other illicit drugs constituting thirty-six percent of sales.⁷⁵ Silk Road operated on the Deep Web, ran off several servers in multiple countries, and was only accessible via Tor, an anonymous web browser.⁷⁶ Additionally, it even had a stealth mode, whereby vendor details were only accessible via a specific URL that

⁷¹ *Id.* However, Germany does not require casual users of sites such as eBay to pay VAT for their rare sales. *Id.* As such, it is likely that the same standard will apply to Bitcoin transactions. *Id.* Bitcoin users that hold their currency for more than a year will also be able to avoid tax gains. *Id.*

⁷² *Id.*

⁷³ *Anonymity*, BITCOIN WIKI, <https://en.bitcoin.it/wiki/Anonymity> (last modified Nov. 8, 2013, 11:59 AM).

⁷⁴ Daniel Cawrey, *Bitcoin's Cruel World: Scams, Thefts and the FBI's Influence*, COINDESK (Nov. 13, 2013), <http://www.coindesk.com/bitcoins-cruel-world-scams-thefts-fbis-influence/>.

⁷⁵ Liat Clark, *A Guide to the Silk Road Shutdown*, WIRED.CO.UK (Oct. 9, 2013), <http://www.wired.co.uk/news/archive/2013-10/09/silk-road-guide>.

⁷⁶ *Id.* See also Jose Pagliery, *The Deep Web You Don't Know About* (Mar. 10, 2014, 9:18 AM), <http://money.cnn.com/2014/03/10/technology/deep-web/index.html>.

required prior knowledge on the part of a user.⁷⁷ While the entire process incorporated multiple layers of security, it was not a foolproof plan.

The United States Federal Bureau of Investigation (FBI) shut down Silk Road on October 2, 2013.⁷⁸ The FBI arrested the alleged Silk Road mastermind, Ross William Ulbricht, in a San Francisco, California public library. Ulbricht is charged with narcotics trafficking, computer hacking, and money laundering.⁷⁹ The specifics of the takedown will be further explored in section V(A)(b) of this note.

Silk Road was not the only virtual black marketplace of its kind. It had three major competitors: Atlantis, Sheep, and Black Market Reloaded.⁸⁰ Atlantis recently announced that it was shutting down for “security” reasons and allowed users to remove their bitcoins one week prior to the site going offline.⁸¹ In an interesting turn of events, a copycat version of Silk Road came online on November 6, 2013.⁸² However, there is speculation as to whether the site is genuine or simply a honeypot.⁸³ While digital currencies present a relatively new area of criminal law, current law enforcement tactics have proven sufficient to take down such high-tech endeavors.

B. Funding Terrorist Organizations

The financing of terrorism has been one of the biggest issues targeted by nations around the world since September 11, 2001.⁸⁴ Financial regulations, including “know your customer” requirements and mandatory reporting for specific transactions, have made it easier to detect illegal transactions and associated criminal activity.⁸⁵ In light of increasing regulation, terrorists have sought alternative methods to

⁷⁷ Clark, *supra* note 75.

⁷⁸ *Id.*

⁷⁹ Sealed Complaint at 1–3, *United States v. Ulbricht* (S.D.N.Y. 2013) (No. 13 MAG 02328), 2013 WL 5460023.

⁸⁰ Clark, *supra* note 75.

⁸¹ John Biggs, *Atlantis: The Flashy Silk Road Alternative, Shuts Down*, TECHCRUNCH (Sept. 21, 2013), <http://techcrunch.com/2013/09/21/atlantis-the-flashy-silk-road-alternative-shuts-down/>.

⁸² Arjun Kharpal, *Copycat Silk Road Drug Site Reopens After FBI Raid*, CNBC (Nov. 7, 2013, 8:40 AM), <http://www.cnbc.com/id/101178729>.

⁸³ Lisa Vaas, *Silk Road Reboots: For Real, or Just a Honeypot?*, NAKED SECURITY (Nov. 8, 2013), <http://nakedsecurity.sophos.com/2013/11/08/silk-road-reboots-for-real-or-just-a-honeypot/> (discussing the theory that the copycat version of Silk Road is a honeypot, a trap laid by law enforcement officers designed to lure criminals in by creating a genuine looking illegal action).

⁸⁴ William Hett, *Digital Currencies and the Financing of Terrorism*, 15 RICH. J.L. & TECH. 4, 27 (2008). The US Patriot Act imposes some of the most stringent regulations, such as “know your customer” rules that require verification of customers’ identities and the implementation of anti-money laundering programs. *Id.*

⁸⁵ *Id.* at 10 (offering further explanation regarding these regulations).

traditional banking channels with regard to laundering and transferring money internationally.⁸⁶ Digital currencies, specifically Bitcoin, present a viable alternative to traditional banking methods due to the lax regulations that have historically accompanied their use.⁸⁷

Utilizing Bitcoin to finance a terror attack would require several steps. First, the physical cash or funds would need to be exchanged for bitcoin. This would likely require a currency dealer and a currency exchanger.⁸⁸ Then the exchanger must be paid with cash, check, credit card, or wire transfer prior to any bitcoins being transferred to the purchaser's digital wallet.⁸⁹ At this point, the bitcoins are freely transferable to anyone with a digital wallet.⁹⁰

While this seems like a relatively easy process, the Bitcoin recipient must now convert the cryptocurrency into a viable fiat currency.⁹¹ This is where the recipient will begin to encounter problems, as many currency exchangers—particularly in the United States and Europe—are subject to very stringent financial regulations.⁹² Thus, a paper trail would begin to form, making the transaction less anonymous. Another option would be to transfer the money to a financial institution with less stringent regulations and use an Automated Teller Machine (ATM) card to withdraw the funds. However, this would also leave a paper trail, as it would alert the authorities to the account holder's foreign bank, which is likely to have recorded customer information.⁹³ Finally, the Bitcoin recipient could purchase pre-paid cash or gift cards that function like ATM or debit cards.⁹⁴ While this tactic has been successfully used to launder money,⁹⁵ many countries have worked with the Financial Action Task Force (FATF)⁹⁶ to change their anti-money laundering laws in an

⁸⁶ *Id.* at 2–3.

⁸⁷ *Id.* at 10.

⁸⁸ *Id.* at 14.

⁸⁹ *Id.*

⁹⁰ *Id.* at 15.

⁹¹ *Id.* at 16.

⁹² *Id.*

⁹³ *Id.*

⁹⁴ *Id.* at 17.

⁹⁵ *Id.* One individual purchased over three hundred prepaid cards in an effort to launder two million dollars from the United States to Colombia. *Id.*

⁹⁶ The FATF, established in 1989, is an inter-governmental body whose objectives are to set standards and promote legal, regulatory, and operational measures to combat anti-money laundering, terrorism financing, and other related international financial threats. *About Us*, FINANCIAL ACTION TASK FORCE, <http://www.fatf-gafi.org/pages/aboutus/> (last visited Sept. 4, 2014). The FATF's series of recommendations are recognized as the international standard for combating money laundering and the financing of terrorism. *Id.*

effort to help prevent money laundering.⁹⁷ Even with an increase in regulations around the world, tracking the sources of funds funneled through digital currencies and exchanges can be extremely difficult.⁹⁸

C. Traditional White Collar Crime: Ponzi Schemes

While Bitcoin is a relatively new technological advancement, criminals have figured out how to fuse new technology with old tactics in the form of Bitcoin Ponzi schemes. In *Securities and Exchange Commission v. Shavers*,⁹⁹ the defendant, Trendon T. Shavers, was alleged to have made fraudulent offers and sales of securities in the form of a Ponzi scheme.¹⁰⁰ From September 2011 to September 2012, Shavers offered and sold investments over the Internet, raising in excess of 700,000 bitcoins in principal investments, or more than \$4.5 million based on Bitcoin's daily average price at the time of each investors purchase.¹⁰¹ Shavers fraudulently induced investors with claims of seven percent weekly interest, when in reality the offering was a Ponzi scheme whereby Shavers used the new investments to pay outstanding promised returns and misappropriated investors' bitcoins for personal use.¹⁰² After a series of calculated moves, the scheme collapsed in August 2012 and Shavers made preferential redemptions to longtime investors and friends.¹⁰³ The complaint was filed on July 23, 2013.¹⁰⁴

After being indicted, Shavers challenged the Securities and Exchange Commission's (SEC) jurisdiction by arguing that the investments were "not securities because Bitcoin is not money, and is not part of anything regulated by the United States."¹⁰⁵ Shavers also

⁹⁷ See, e.g., Joachim Kaetzler & Sabrina Salewski, *White Collar Crime—Germany: Impact of New Anti-money Laundering Act on Pre-paid Markets*, INTERNATIONAL LAW OFFICE (Nov. 12, 2012), <http://www.internationallawoffice.com/newsletters/detail.aspx?g=e2e3bd1f-20aa-43c3-bc77-84157b09b9f2; NZ's Anti-Money Laundering Laws Now in Effect with Banks Expected to Pry More into Customer Identity and Account Activity>, INTEREST.CO.NZ (last updated July 1, 2013, 10:43 AM), <http://www.interest.co.nz/personal-finance/65165/nzs-anti-money-laundering-laws-now-effect-banks-expected-pry-more-customer-id>; see also Michael Cohn, *Deloitte Sees Impact from Anti-Money Laundering Rules for Prepaid Cards*, ACCOUNTINGTODAY (March 28, 2012), http://www.accountingtoday.com/debits_credits/Deloitte-FinCEN-Anti-Money-Laundering-Rules-Prepaid-Cards-62166-1.html.

⁹⁸ Hett, *supra* note 84, at 20.

⁹⁹ SEC v. Shavers, 4:13-CV-416, 2013 WL 4028182, at *1 (E.D. Tex. Aug. 6, 2013).

¹⁰⁰ Complaint at 1, SEC v. Shavers, 4:13-CV-416, 2013 WL 4028182 (E.D. Tex. Aug. 6, 2013), available at <http://www.sec.gov/litigation/complaints/2013/comp-pr2013-132.pdf>.

¹⁰¹ *Id.*

¹⁰² *Id.* at 2.

¹⁰³ *Id.* at 5.

¹⁰⁴ *Id.* at 10.

¹⁰⁵ *Shavers*, 2013 WL 4028182, at *1.

contended that his transactions “were all Bitcoin transactions and that no money ever exchanged hands.”¹⁰⁶ Under 15 U.S.C. § 77b, the term “security” is defined as “any note, stock, treasury stock, security future, security-based swap, bond . . . [or] investment contract.”¹⁰⁷ The court noted that “[a]n investment contract is any contract, transaction, or scheme involving (1) an investment of money, (2) in a common enterprise, (3) with the expectation that profits will be derived from the efforts of the promoter or a third party.”¹⁰⁸ The court quickly determined that all three prongs were satisfied: Bitcoin is a currency or form of money because it can be used to purchase goods or services and to pay living expenses; the investment scheme was a common enterprise because the investors were dependent upon Shavers’s Bitcoin expertise and connections; and profits were expected because Shavers promised one percent daily interest at the outset of the scheme.¹⁰⁹

While the outcome in *Shavers* is not surprising, it was a watershed moment for the Bitcoin community. Prior to this decision, the United States government had not explicitly stated whether Bitcoin was money. The court’s declaration that Bitcoin was money brought increased legitimacy to the new currency. The increased legitimacy stemmed from the United States government bringing Bitcoin under its purview with regard to financial regulations, thus providing further stability for the currency. Current United States regulations are sufficient, as *Shavers* demonstrates, to bring white-collar criminals to justice. Thus, any country considering the enactment of regulations to prevent or prosecute white-collar crime need only enact regulations equivalent to those in the United States. Enacting more stringent regulations will serve only to create a chilling effect on legitimate uses of Bitcoin, as the increased transaction costs become far too much for the average user to handle.

V. FAILURE TO TIP THE SCALES IN FAVOR OF INCREASED REGULATION & PROPOSED SOLUTIONS

While the foregoing evidence exhibits just how Bitcoin can be utilized for illicit purposes, this does not mean that governments across the globe should enact a glut of new regulations. As this section of the note will explore, Bitcoin does not warrant an increase in governmental regulations based on the high risk factors given by the FATF’s 2010 Report on New Payment Methods. Additionally, current law enforcement methods and financial regulations have proven sufficient to bring

¹⁰⁶ *Id.*

¹⁰⁷ 15 U.S.C. § 77b (2011).

¹⁰⁸ *Shavers*, 2013 WL 4028182, at *2 (citing *SEC v. W.J. Howey & Co.*, 328 U.S. 293, 298–99 (1946); *Long v. Shultz Cattle Co.*, 881 F.2d 129, 132 (5th Cir. 1989)).

¹⁰⁹ *Id.*

criminals to justice. Bitcoin may be the newest trend in fiat currency alternatives, but it does not require new or even increased regulation to facilitate its use.

A. *Financial Action Task Force (FATF) 2010 Report on New Payment Methods*

The FATF released its initial report regarding New Payment Method (NPM) in 2006,¹¹⁰ before updating the report in 2010 to reflect global NPM trends.¹¹¹ The new report not only provided updated information on its 2006 data but also added new data, specifically an expanded body of case studies.¹¹² The most important updated data was the Payment Methods Risk Factors (hereinafter “Risk Factors”).¹¹³ This section will analyze Bitcoin in the context of the FATF Risk Factors. The report notes that the Risk Factors are “not [to] be looked at in isolation but as a whole It is important to look at . . . risk mitigants implemented in order to effectively assess the risk associated with” Bitcoin usage.¹¹⁴ Each of the seven Risk Factors must be analyzed and considered to determine whether, under the totality of the circumstances, Bitcoin is indeed a high risk NPM and thus deserving of increased governmental regulation. This note takes the position that Bitcoin is not a high risk NPM, and thus does not warrant an increase in governmental regulation.

1. Customer Due Diligence

The first Risk Factor listed in the matrix is customer due diligence (CDD). CDD consists of three prongs: identification, verification, and monitoring. High Risk NPMs afford a high level of anonymity, fail to reliably verify their customers’ identities, and fail to monitor ongoing business relationships.¹¹⁵ On the other hand, low risk NPMs identify their customers, ensure reliable verification of their customers’ identities, and diligently monitor ongoing business relationships.¹¹⁶ Bitcoin is a low risk NPM because there are procedures to identify, verify, and monitor users.

¹¹⁰ FIN. ACTION TASK FORCE, REPORT ON NEW PAYMENT METHODS (Oct. 13, 2006), available at <http://www.fatf-gafi.org/media/fatf/documents/reports/Report%20on%20New%20Payment%20Methods.pdf>.

¹¹¹ FIN. ACTION TASK FORCE, MONEY LAUNDERING USING NEW PAYMENT METHODS 7–8 (Oct. 2010) [hereinafter FATF 2010 REPORT], available at <http://www.fatf-gafi.org/media/fatf/documents/reports/ML%20using%20New%20Payment%20Methods.pdf>.

¹¹² *Id.* at 9, para. 18.

¹¹³ *Id.* at 22–23.

¹¹⁴ *Id.* at 22, para. 65.

¹¹⁵ *Id.* at 22–23.

¹¹⁶ *Id.*

Anonymity is viewed as a panacea for privacy intrusions committed by peers and governments. Bitcoin is viewed as providing strong anonymity for its users (a red flag according to FATF), but that is not true.¹¹⁷ Bitcoin has a built-in public ledger, called the block chain, which logs every Bitcoin transaction. Not only is each transaction logged, but each transaction is publicly available for all Bitcoin users to view. While the information is usually a random assortment of numbers, there are numerous ways to determine the identity of each user.¹¹⁸ Not only does the Bitcoin software have built-in CDD elements, but third party companies usually have implemented their own CDD measures as well. For example, the company behind the Bitcoin ATMs in Canada requires users to insert a government issued ID and scans their palm prior to making a transaction.¹¹⁹ Additionally, most currency exchanges must implement “know your customer” regulations that require identifying each customer.¹²⁰ Because Bitcoin has sufficient built-in CDD measures and third party companies further enhance those measures, Bitcoin cannot be said to provide anonymity to its users. Thus, Bitcoin has effectively proven to be a low risk NPM when it comes to CDD.

2. Record Keeping

The FATF has identified record keeping as a high-risk issue associated with NPMs. High risk NPMs generate electronic transaction records but fail to retain or make them available upon request to law enforcement agencies. Meanwhile, low risk NPMs take the opposite position by retaining and making such records available.¹²¹ Once again, Bitcoin shows itself to be a low risk NPM with regard to record keeping.

Bitcoin software has a built-in public record system that is available for anyone to view—the block chain.¹²² The block chain contains every transaction ever executed.¹²³ Every block contains a hash of the previous block, which has the effect of creating the block chain from the genesis

¹¹⁷ *Anonymity*, *supra* note 73.

¹¹⁸ *Id.* Identifying methods include running a network analysis, utilizing surveillance, or simply Google searching the address. *Id.* See source for a more in-depth discussion of each identification method.

¹¹⁹ Aaron Pressman, *First ATM Offering Bitcoins Opens in Vancouver*, YAHOO! FINANCE (Oct. 29, 2013, 4:23 PM), <http://finance.yahoo.com/news/first-atm-offering-bitcoins-opens-in-vancouver-202352312.html>.

¹²⁰ See, e.g., *Know Your Customer: Quick Reference Guide*, PRICEWATERHOUSECOOPERS (Jan. 2013), http://www.pwc.com/en_GX/gx/financial-services/assets/pwc-kyc-anti-money-laundering-guide-2013.pdf.

¹²¹ FATF 2010 REPORT, *supra* note 111, at 23.

¹²² See *Block Chain*, BITCOIN WIKI, https://en.bitcoin.it/wiki/Block_chain (last modified Nov. 26, 2013).

¹²³ *Id.*

block to the currently viewed block.¹²⁴ This means that the value belonging to each address can be determined at any point. This is important because once an address has been identified the authorities can track that address from anywhere in the world, without having to make a formal request for that information. Additionally, the block chain helps prevent double spending of the same coin because of the computational impracticality of modifying a block several blocks behind in the chain.¹²⁵ This shows not only how impressive the block chain is for record keeping purposes, but also how critical it is to Bitcoin's intrinsic structure. Because Bitcoin employs a thorough record keeping system, it cannot be validly argued that Bitcoin fails to record its users' transactions. The block chain arguably places Bitcoin into the low risk NPM category with regard to record keeping.

3. Value Limits

The third Risk Factor identified by the FATF is the value limit placed on the NPM. The value limit factor analyzes three issues: the maximum amount that can be stored on an account and the maximum number of accounts per person, the maximum amount per transaction, and the maximum frequency of transactions. While high risk NPMs have no limits on any of the aforementioned issues, low risk NPMs limit each of these issues.¹²⁶

Bitcoin software does not have any designed limits on the amount that may be stored in an account or on the maximum number of accounts per person. However, because there can only ever be 21 million bitcoins in existence,¹²⁷ scarcity acts as a limitation on how many Bitcoins any given user can obtain. While this is true with regard to fiat currency, the distinguishing factor is that centralized governments simply tend to keep printing money. The result is an inflationary effect that serves only to dilute the buying power of the consumer. Additionally, Bitcoin software is designed to release only a designated number of new bitcoins per annum, with the full 21 million bitcoin limit set to be reached in the year 2140.¹²⁸ Once again, scarcity will determine just how many bitcoins one user may store. However, there is no restriction on the number of accounts each user may own. While Bitcoin has no specific limitation, per se, on the size of each transaction, there is a pragmatic restriction due to scarcity.

¹²⁴ *Id.*

¹²⁵ *Id.*

¹²⁶ FATF 2010 REPORT, *supra* note 111, at 23.

¹²⁷ *Bitcoin*, BITCOIN WIKI, <https://en.bitcoin.it/wiki/Bitcoin> (last modified Dec. 10, 2013).

¹²⁸ *Id.*

The Bitcoin software has no built-in limit on transaction size or frequency. However, a large number of Bitcoin exchanges have enacted their own transaction size limits and frequency limits.¹²⁹ While this may sound contradictory, it is in fact a harmonious relationship because most Bitcoin users purchase Bitcoins through an exchange. This is virtually guaranteed due to the high degree of difficulty required to “mine” Bitcoins. Because of the limitations placed on transaction size and frequency by Bitcoin exchanges, Bitcoin sufficiently falls into the low risk category with regard to limitations on transaction size and frequency. Once again, a lack of intrinsic limitations has been overcome by pragmatic business solutions. The limitations placed on Bitcoin’s value place the cryptocurrency into the low risk NPM category with regard to this factor.

4. Methods of Funding

The fourth Risk Factor identified by FATF is the method of funding. High risk NPMs can be funded by anonymous or multiple sources.¹³⁰ On the other hand, low risk NPMs are funded through accounts held at regulated financial institutions or other sources subject to adequate anti-money laundering (AML) obligations.¹³¹ There is a wide range of manners in which Bitcoin can be obtained and each manner is dependent upon where the recipient is obtaining Bitcoin.

Funding the purchase of bitcoins can be accomplished in many different ways, although funding depends on the identity of the seller. When Bitcoin is initially mined it is funded only through the indirect costs of computer hardware and software, utility costs, and the price of Internet access. When bought from an exchange, the method of funding may be different with each entity, as each entity enacts its own funding policies.¹³² For example, CampBX, the online trading platform of Bulbul Investments LLC, allows its customers to fund their accounts with money orders, personal checks, or Automated Clearing House (ACH) payments from a bank account.¹³³ CampBX’s acceptance of money orders seems disconcerting until one considers that the other two payment methods require the use of an account held at a financial institution,

¹²⁹ See, e.g., *Terms of Use*, CAMPBX, <https://campbx.com/register.php> (last visited Aug 23, 2014). CampBX, a large Bitcoin trading platform, limits its United States users to a daily deposit/withdrawal amount of \$1000 and limits its European users to monthly deposit/withdrawal amounts of €5000. The maximum default account size is \$9500, and the daily Bitcoin withdrawal amount is limited to 500 Bitcoins. *Id.*

¹³⁰ FATF 2010 REPORT, *supra* note 111, at 23.

¹³¹ *Id.*

¹³² See, e.g., *Frequently Asked Questions: Money Deposit and Withdrawal Methods*, CAMPBX, <https://campbx.com/faq.php#fund-transfers> (last visited Aug. 12, 2014).

¹³³ *Id.*

meaning that a large majority of transactions create a paper trail. When exchanged between individuals, Bitcoin is usually paid for with cash.¹³⁴ Due to the anonymous nature of cash, this can be a potential red flag when it comes to Bitcoin use. A large number of individuals may purchase Bitcoin from other individuals; however, the amount of each transaction will be relatively small as it is difficult for individuals to stockpile vast Bitcoin stores comparable to the exchanges. Because of the wide range of funding methods available, Bitcoin falls closer to the high risk than low risk side of the NPM scale with regard to this factor. This risk will likely be mitigated, however, as the market develops uniformity and follows strict guidelines to keep up with financial regulations.

5. Geographical Limits

FATF's fifth Risk Factor concerns the geographical limitations placed on the NPMs transferability across national borders. High risk NPMs are denoted for their ability to be transferred or withdrawn across national borders. Low risk NPMs are typically limited domestically. Bitcoin has no intrinsic limitations on transferability but some geographic limits have been placed on the currency by Bitcoin exchanges.¹³⁵

Bitcoin likely falls into the high risk NPM category with regard to this factor due to its status as a decentralized currency lacking geographical limitations. One of Bitcoin's most touted features is its ability to circumvent government instituted capital controls.¹³⁶ The average Argentinean, for example, cannot transfer hard currency or gold out of the country or use a credit card to make international purchases.¹³⁷ The Chinese government has made it very easy to bring money into the country but extremely difficult to get money out.¹³⁸ In both of these situations, the fiat currency can be used to purchase Bitcoin. Because Bitcoin is stored digitally, the currency can be

¹³⁴ Lauren Orsini, *I Bought Bitcoin in Person and Here's What Happened*, READWRITE (Oct. 23, 2013), <http://readwrite.com/2013/10/23/i-bought-bitcoin-in-person-and-heres-what-happened#awesm=~onZ79jU8Q8FK6R>; see also Lauren Orsini, *How to Sell Bitcoin—Legally*, READWRITE (Oct. 29, 2012) (explaining how the author exchanged Bitcoin for cash), <http://readwrite.com/2013/10/29/bitcoin-atm-money-services-regulation#awesm=~onZmVU24JH1ab9>.

¹³⁵ FATF 2010 REPORT, *supra* note 111, at 23.

¹³⁶ See, e.g., John Matonis, *Bitcoin's Promise in Argentina*, FORBES (Apr. 27, 2013, 12:57 PM), <http://www.forbes.com/sites/jonmatonis/2013/04/27/bitcoins-promise-in-argentina/>; see also Tim Worstall, *Finally, A Proper Use for Bitcoin, Avoiding Capital Controls*, FORBES (Nov. 21, 2013, 12:58 PM), <http://www.forbes.com/sites/timworstall/2013/11/21/finally-a-proper-use-for-bitcoin-avoiding-capital-controls/>.

¹³⁷ Matonis, *supra* note 136.

¹³⁸ Worstall, *supra* note 136.

transferred out of the country without exception. Bitcoin was expressly designed to circumvent geographic limitations.

However, there are two exceptions to the unlimited geographical range of Bitcoin. The first exception could be encountered anywhere—a location without Internet access. Because the currency must be traded over the Internet, buyers and sellers must have Internet access to complete transactions. This limitation will be most felt in countries where small percentages of the population have Internet access. The second exception is in countries that have outlawed Bitcoin. On July 31, 2013, the Thai government outlawed Bitcoins in Thailand.¹³⁹ Thailand's Foreign Exchange Administration and Policy Department reportedly declared Bitcoin illegal because there are no applicable laws to control or tax bitcoins.¹⁴⁰ Bitcoin cannot be bought or sold, goods or services cannot be purchased with bitcoins, selling things in exchange for bitcoins is forbidden, and transferring bitcoins across Thailand's borders is also forbidden.¹⁴¹ Thailand's decision will create a massive chilling effect on the adoption of Bitcoin within the country. The Thai government is basically admitting that its laws are too antiquated to regulate, tax, and profit from the cryptocurrency. On December 5, 2013, China became the second country to ban Bitcoin.¹⁴² China's central bank banned financial institutions and payment providers from conducting Bitcoin transactions.¹⁴³ With the ban seeming only to affect businesses, private transactions between individuals seem to be legal and Bitcoin ownership is not, in itself, illegal. Thus, while there are no intrinsic geographic limitations on Bitcoin's transferability, the practicalities of life and third world governments have already enacted such limitations. Bitcoin likely falls into the high risk NPM category with regard to this factor.

6. Usage Limits

The FATF's sixth Risk Factor regards the usage limits of the NPM. The usage limits factor is analyzed under three prongs: negotiability (merchant acceptance), utility, and withdrawal. High risk NPMs are

¹³⁹ Kit Eaton, *Thailand Makes Bitcoins Illegal Because Its Laws Are Too Old-Fashioned*, FAST COMPANY (July 30, 2013, 6:35 AM), <http://www.fastcompany.com/3015007/fast-feed/thailand-makes-bitcoins-illegal-because-its-laws-are-too-old-fashioned>.

¹⁴⁰ *Id.*

¹⁴¹ *Id.*

¹⁴² Marc Shoffman, *Bitcoin Plunges 29% After China Ban and Then Bounces Back Up. So How Are People Investing in This Rollercoaster Ride?*, MAILONLINE.COM (last updated Dec. 6, 2013, 9:11 AM), <http://www.dailymail.co.uk/money/investing/article-2519269/bitcoin-plunges-29-china-bans-use-bounces-up.html>.

¹⁴³ *China Bans Payment Companies from Clearing Bitcoin, News Says*, BLOOMBERG (Dec. 17, 2013), <http://www.bloomberg.com/news/2013-12-17/china-bans-payment-companies-from-clearing-bitcoin-news-says.html>.

known for their ability to be used with a high number of merchants; can be utilized in person-to-business (p2b), business-to-business (b2b), person-to-person (p2p), and used online; and are anonymous and have unlimited withdrawal amounts.¹⁴⁴ Low risk NPMs are only accepted by a few merchants; have p2b, b2b, and possible online use utility, but lack p2p utility; and have limited withdrawal options, amounts and frequency.¹⁴⁵ Bitcoin's unique design makes it fall somewhere within a gray area of the FATF's NPM risk categories because certain features of each category are applicable.

The biggest drawback for Bitcoin users is its lack of acceptance for even the most basic purchases. However, the negotiability factor of Bitcoin increases each day as new merchants, businesses, and other for-profit and non-profit entities begin accepting the cryptocurrency.¹⁴⁶ Bitcoin is trending upward, but there is still a low adoption rate globally. This means that businesses are even slower to adopt an NPM that is not widely used because of the looming possibility of its illiquidity. While there are a fair number of businesses that accept the cryptocurrency,¹⁴⁷ Bitcoin is far from being ubiquitously accepted like other fiat currencies, mainstream credit/debit cards, PayPal, or even gift cards. Because of the extremely limited number of merchants who accept Bitcoin, it falls into the low risk NPM category for the negotiability prong.

Bitcoin was designed to be freely transferable between any and all parties, without oversight from a centralized governmental body.¹⁴⁸ This freedom means that Bitcoin can be and has been exchanged via p2b, b2b, p2p, and online. In fact, the entire Bitcoin network is a peer-to-peer (another term for p2p) system that utilizes the combined computing power of every connected node to mine and administer the Bitcoin network.¹⁴⁹ Additionally, the fact that Bitcoin is a *digital* currency requires it to be transferred online. Not only must it be transferred online but also the system for transferring Bitcoin between users changes very little between p2p, p2b, and b2b transactions.¹⁵⁰ Bitcoin's

¹⁴⁴ FATF 2010 REPORT, *supra* note 111, at 23.

¹⁴⁵ *Id.*

¹⁴⁶ See, e.g., ASSOCIATED PRESS, *Cypriot University to Accept Bitcoin Payments*, YAHOO! NEWS (Nov. 21, 2013, 8:51 AM), <http://news.yahoo.com/cypriot-university-accept-bitcoin-payments-132125253—finance.html> (noting that Cyprus' biggest private university will start accepting Bitcoin as an alternative tuition payment method); see also PIZZAFORCOINS.COM, <http://pizzaforcoins.com> (last visited Oct. 25, 2014) (allowing users to order Domino's Pizza with Bitcoin). See *supra* Section III regarding Bitcoin's growing acceptance.

¹⁴⁷ *Trade*, *supra* note 47.

¹⁴⁸ BITCOIN WIKI, https://en.bitcoin.it/wiki/Main_Page (last modified Sept. 21, 2013, 4:39 PM).

¹⁴⁹ See *Mining*, *supra* note 25.

¹⁵⁰ See *supra* Section II for an overview of the buying and selling process.

design makes it freely transferable between users and over the Internet. Because of Bitcoin's unlimited utility, it falls into the high risk NPM category for this factor.

As noted in Section V(A)(3) of this note, Bitcoin has no intrinsic designs that limit withdrawal options, amounts, or frequencies other than its scarcity. However, the major Bitcoin exchanges have limited the withdrawal options, the total amounts that may be withdrawn, and how withdrawals may be made.¹⁵¹ The first Bitcoin ATM was installed in Vancouver, Canada.¹⁵² The ATM acts more like a vending machine, where users can purchase Bitcoins or exchange their Bitcoins for fiat currency. However, the machine limits customers (who must swipe their government issued ID and have their palm scanned) to making only CAD\$3,000 worth of transactions per day.¹⁵³ Even where potential high-risk elements are present, the industry has begun to regulate itself in order to prevent illegal activity from occurring. Because of the withdrawal limits imposed by Bitcoin exchanges, Bitcoin falls into the low risk NPM category.

The usage limits imposed on Bitcoin mean that the currency is a low risk NPM with respect to this criterion. Bitcoin has a growing, but still very low negotiability factor, has unlimited utility between users and online, and has numerous withdrawal limitations. Based on the totality of the circumstances, Bitcoin arguably falls into the low risk NPM category regarding usage limits.

7. Segmentation of Services

The final Risk Factor identified by the FATF regards the segmentation of services. Segmentation of services is analyzed under two prongs: interaction of service providers and outsourcing. High risk NPMs are serviced by multiple independent service providers without effective oversight and coordination, and several of the singular steps in the process are outsourced, usually to jurisdictions lacking appropriate safeguards.¹⁵⁴ Low risk NPMs have service providers who carry out the entire transaction and all processes are completed in-house.¹⁵⁵

It is helpful to analyze both prongs, interaction of service providers and outsourcing, at the same time as they are pragmatically conflated. As noted above, Bitcoin has an unlimited utility with regard to usage limits. However, the largest amounts of transactions will take place

¹⁵¹ See CAMPBX, *supra* note 132 (noting the withdrawal limits imposed by CampBX).

¹⁵² Pressman, *supra* note 119.

¹⁵³ Taylor Soper, *World's First Bitcoin ATM Sees 81 Exchanges, \$10,000 in Transactions During the First Day*, GEEKWIRE (Oct. 30, 2013, 3:36 PM), <http://www.geekwire.com/2013/world-bitcoin-atm-sees-81-exchanges-10000-transactions/>.

¹⁵⁴ FATF 2010 REPORT, *supra* note 111, at 22–23.

¹⁵⁵ *Id.*

through the exchanges. With regard to the service provider's prong, exchanges are self-contained and operate as one-stop shops for those wishing to buy or sell Bitcoin. The outsourcing may be a problem, not because the work itself is outsourced, but because the actual exchange may be in a different jurisdiction from the buyer or seller. However, this is less of a concern because buyers tend to buy from exchanges within their jurisdiction, if one exists. This is important because many of the exchanges are implementing stringent financial regulations that are common in traditional currency exchanges. Because one in-house provider conducts entire Bitcoin transactions, Bitcoin is a low risk NPM with regard to segmentation of services.

Based on the totality of the circumstances, Bitcoin does not warrant increased governmental regulation because it is a relatively low risk NPM according to FATF criteria. Five of the seven FATF Risk Factors fall into the low risk NPM category: (1) Bitcoin has sufficient CDD measures that reliably identify, verify, and monitor customers; (2) the block chain provides thorough and transparent record keeping; (3) there are imposed value limits due to scarcity and regulations implemented by exchanges; (4) there are few accepting merchants, it has unlimited utility, and major withdrawal limitations; and (5) there is almost no segmentation of services. Only two of the Risk Factors fall into the high risk NPM category: (1) there are numerous funding methods for purchasing Bitcoin, and (2) almost no geographical limitations exist on where Bitcoin can be used and transferred. Based on the totality of the circumstances, Bitcoin is a relatively low risk NPM that does not warrant increased governmental regulation.

B. Current Legislation / Law Enforcement Tactics

In addition to Bitcoin not warranting increased governmental regulation because it is a low risk NPM, there are already sufficient law enforcement tactics and regulations in place to thwart illegal activity and bring Bitcoin criminals to justice. United States and Australian law enforcement agencies have shown that current tactics and technology are capable of catching Bitcoin criminals. As countries determine how to categorize Bitcoin as a financial instrument, there will already be sufficient regulatory schemes in place to cover the cryptocurrency. Bitcoin may be cutting edge, but it has not slipped through the law enforcement or legislative cracks.

1. FBI Agents Take Down Silk Road

Silk Road was an illicit Bitcoin-only virtual black marketplace operating on the Deep Web and running via Tor (a web browser

providing anonymity for users).¹⁵⁶ With the anonymity provided by only accepting Bitcoin, using an “underground” Internet system and an anonymous web browser, it should have been impossible to determine who was buying goods from Silk Road, let alone who was behind the scheme. However, the United States government was able to do just that.

Ulbricht and a small team of employees controlled the servers and infrastructure, established terms of service, and offered customer support.¹⁵⁷ The website had acquired nearly a million users worldwide, almost thirty percent of whom were located in the United States.¹⁵⁸ The site generated over 9.5 million bitcoins in revenue and over 600,000 bitcoins in commissions.¹⁵⁹ On October 2, 2013, the FBI arrested Ross William Ulbricht, the Silk Road mastermind, in a San Francisco, California public library.¹⁶⁰

To understand Ulbricht’s mistakes, it is imperative to review the origins of Silk Road. On January 23, 2011, an account dubbed “silkroad420” was anonymously created on the popular blogging site “WordPress.com.”¹⁶¹ Four days later, a user identified as “altoid” created a post on the online forum Shroomery.org entitled, “anonymous market online?”. The posting stated as follows:

I came across this website called Silk Road. It’s a Tor hidden service that claims to allow you to buy and sell anything online anonymously. I’m thinking of buying off it, but wanted to see if anyone here had heard of it and could recommend it. I found it through silkroad420.wordpress.com, which, if you have a tor browser, directs you to the real site at <http://tydgccykixpbu6uz.onion>. Let me know what you think . . .¹⁶²

This was the only message “altoid” ever posted on the Shroomery forum, likely meaning that it was intended to elicit interest in the newly created Silk Road. Two days later, on January 29, 2011, “altoid” posted to a discussion forum on Bitcointalk.org¹⁶³ concerning the possible operation of a Bitcoin-based heroin store. Altoid asked whether “anyone [had] seen Silk Road yet?” and noted “they basically use Bitcoin and

¹⁵⁶ Clark, *supra* note 75. See *supra* Section IV(A) for a broad overview of Silk Road’s structure and operation.

¹⁵⁷ Clark, *supra* note 75.

¹⁵⁸ Tim Hume, *How FBI Caught Ross Ulbricht, Alleged Creator of Criminal Marketplace Silk Road*, CNN (last updated Oct. 5, 2013, 11:10 AM), <http://www.cnn.com/2013/10/04/world/americas/silk-road-ross-ulbricht/>.

¹⁵⁹ *Id.*

¹⁶⁰ *Id.*

¹⁶¹ Sealed Complaint, *supra* note 79, at 25.

¹⁶² *Id.* at 24.

¹⁶³ BITCOIN FORUM, <https://bitcointalk.org/> (last visited Dec. 22, 2013).

[T]or to broker anonymous transactions.”¹⁶⁴ Altoid then directed other users to the silkroad420.wordpress.com site.¹⁶⁵ It is apparent that “altoid” was the same user who created the WordPress site, and he was using these postings to stimulate interest in the newly created virtual marketplace.

Eight months later, “altoid” created another post on Bitcoin Talk, stating “that he was looking for an ‘IT pro in the Bitcoin community’ to hire in connection with ‘a venture backed Bitcoin startup company.’”¹⁶⁶ Interested users were directed to send their responses to rossulbricht@gmail.com—an indication that “altoid” used that email address.¹⁶⁷ According to records obtained from Google, that email account was registered to Ross Ulbricht, who also had a public Google+ account.¹⁶⁸ The FBI was able to match Ulbricht’s Google+ photos to his LinkedIn photos, thus confirming Ulbricht to be “altoid.”¹⁶⁹ Additionally, several postings made on Ulbricht’s personal social media accounts matched postings by Dread Pirate Roberts (DPR), Ulbricht’s Silk Road alias.¹⁷⁰

The FBI next uncovered evidence that, on June 3, 2013, someone logged into a server used to administer Silk Road at an Internet café near Ulbricht’s residence.¹⁷¹ The FBI was able to look through the history of the IP addresses that had regularly accessed the Ulbricht Gmail account and determine that one of the IP addresses was associated with a friend of Ulbricht, with whom Ulbricht lived upon moving to San Francisco.¹⁷² The IP address of the café was then matched to a Virtual Private Network (VPN) server used by Ulbricht to log into Silk Road anonymously and to his Gmail account on June 3, 2013.¹⁷³ All of this evidence placed DPR in approximately the same geographic location, on the same day, as Ulbricht.¹⁷⁴

By July 2013, Ulbricht had moved to a new San Francisco address.¹⁷⁵ Ulbricht shipped a package containing numerous counterfeit identification documents to that address, at the same time DPR was

¹⁶⁴ Sealed Complaint, *supra* note 79, at 25.

¹⁶⁵ *Id.*

¹⁶⁶ *Id.* at 26.

¹⁶⁷ *Id.*

¹⁶⁸ *Id.*

¹⁶⁹ *Id.*

¹⁷⁰ *Id.* at 26–27.

¹⁷¹ *Id.* at 28.

¹⁷² *Id.* at 27–28.

¹⁷³ *Id.* at 28.

¹⁷⁴ *Id.*

¹⁷⁵ *Id.*

known to be looking for such documents on Silk Road.¹⁷⁶ On July 10, 2013, US Customs and Border Protection (CBP) intercepted the package bound for Ulbricht, finding that it contained nine counterfeit ID documents, each with different names, but the same picture of Ulbricht.¹⁷⁷ Homeland Security Investigation (HSI) agents visited the address on the package and encountered Ulbricht, who matched the photographs on the counterfeit identification documents.¹⁷⁸

The final nail in the coffin implicated Ulbricht in running a Tor hidden service by linking him to certain programming codes and an encryption key found on the Silk Road web server. Ulbricht posted a request on the website “stackoverflow.com” (Stack Overflow) regarding some of the programming language he was using to “connect to a Tor hidden service.”¹⁷⁹ Ulbricht made the initial post under the username “Ross Ulbricht” and provided his Gmail account to register.¹⁸⁰ Ulbricht then changed the username to “frosty” and the email to a fictitious email, all in an effort to prevent law enforcement officers from determining his online identity because he had implicated himself in running a Tor hidden service.¹⁸¹ Agents were then able to match an encryption key on the Silk Road server ending in “frosty@frosty” to Ulbricht’s computer.¹⁸²

The FBI used the aforementioned evidence to link Ulbricht to the “altoid” user name, the DPR Silk Road administrator, the “frosty” username, and to the counterfeit IDs, thus proving that Ulbricht was the Silk Road mastermind. All of this was done using current law enforcement techniques and tactics. The FBI was not required to create new technology or even new procedures for tracking and capturing Ulbricht; they simply utilized the best available techniques, tactics, and technology to bring him to justice.

2. Australian Police Arrest Drug Dealer

Paul Leslie Howard utilized Silk Road to buy and import illicit drugs into Australia on eleven occasions.¹⁸³ Unfortunately for Howard, he decided to ship all of the drugs to his home in Melbourne.¹⁸⁴

¹⁷⁶ *Id.*

¹⁷⁷ *Id.* at 28–29.

¹⁷⁸ *Id.* at 29.

¹⁷⁹ *Id.* at 30.

¹⁸⁰ *Id.*

¹⁸¹ *Id.* at 30–31.

¹⁸² *Id.* at 32.

¹⁸³ Olivia Solon, *Police Crack Down on Silk Road Following First Drug Dealer Conviction*, WIRED.CO.UK (Feb. 01, 2013), <http://www.wired.co.uk/news/archive/2013-02/01/silk-road-crackdown>.

¹⁸⁴ *Id.*

Australian Customs and Border Protection Service (ACBPS) officers intercepted the packages, finding 46.9 grams of the drug MDMA and 14.5 grams of cocaine.¹⁸⁵ Australian federal police raided his home in July 2012 and found digital scales, zip lock bags, \$2,300 in cash, thirty-five stun guns, a money counter, and two cell phones containing more than 20,000 incriminating text messages.¹⁸⁶ While the Australian federal police have not divulged exactly how they discovered Howard's illicit acts, it is clear that even the relative anonymity provided by Bitcoin was not sufficient to prevent law enforcement from catching him.

Howard "was charged with ten offenses relating to the importation, trafficking and possession of narcotics and prohibited weapons."¹⁸⁷ Howard pleaded guilty to two charges of "importing a marketable quantity of a border-controlled drug" and to possessing controlled weapons.¹⁸⁸ Additionally, the prosecutor made it known that the authorities had gathered a lot of information about Howard from Silk Road, including access to his profile registered under the name "Shadh1."¹⁸⁹ Australian Federal Police and the ACBPS have issued a warning that users of allegedly anonymous marketplaces such as Silk Road could be identified by police techniques.¹⁹⁰

The Ulbricht and Howard cases show that using Bitcoin for illicit purposes fails to provide sufficient anonymity to prevent law enforcement agencies from arresting the perpetrators. While the specific law enforcement tactics and techniques have not been divulged, it is evident that law enforcement agencies are capable of tracking and capturing those utilizing Bitcoin for illicit purposes.¹⁹¹ For this reason there is arguably no need to implement further regulations or laws geared specifically toward Bitcoin.

C. Proposed Solutions

Governments need not enact new regulations concerning Bitcoin. Governments should allow the private market to determine proper

¹⁸⁵ *Id.*

¹⁸⁶ *Id.*

¹⁸⁷ Timothy B. Lee, *Australian Cops Tout Arrest of Man for Bitcoin Drug Deal*, ARS TECHNICA (July 27, 2012, 3:57 PM), <http://arstechnica.com/tech-policy/2012/07/australian-cops-tout-arrest-of-man-for-bitcoin-drug-deal/>.

¹⁸⁸ Solon, *supra* note 183.

¹⁸⁹ *Id.*

¹⁹⁰ *Id.*

¹⁹¹ See Craig Timberg & Ellen Nakashima, *U.S., European Authorities Strike Against Internet's Black Markets*, WASH. POST (Nov. 7, 2014, 4:34 PM), http://www.washingtonpost.com/business/technology/2014/11/07/8cac8ef0-66b9-11e4-bb14-4cfe1e742d5_story.html (noting the shut down of more than four hundred sites and seventeen arrests for alleged sales of drugs, weapons, and illegal services to anonymous buyers globally).

regulations. This portion of the note will explore contract law and taxation as alternatives to increased governmental regulation of Bitcoin. Contract law will allow the cryptocurrency to be adopted by users and still allow them freedom of contract, as if they were using cash. The taxing power will allow governments at all levels to collect tax obligations incurred by using Bitcoin without creating a chilling effect on its use.

1. Contract Law

Individuals and businesses generally have the freedom to contract as they see fit. This freedom includes determining the method of remuneration for goods and services. Even if Bitcoin never gains worldwide status as an actual currency, transactions utilizing the cryptocurrency will be barter contracts.¹⁹² As such, international buyers and sellers should look to the United Nations Convention on Contracts for the International Sale of Goods (CISG)¹⁹³ and the Uniform Commercial Code (UCC) § 2¹⁹⁴ when interacting with buyers and sellers in the United States to protect their transactions and provide sufficient remedies in the event of a dispute. The CISG has been adopted by over eighty countries¹⁹⁵ and provides “uniform rules which govern contracts for the international sale of goods and take into account the different social, economic and legal systems” to aid “the removal of legal barriers in international trade and promote the development of international trade.”¹⁹⁶ The UCC is applicable to the sale of goods in this country, and has been adopted by every state in the United States with the exception of Louisiana.

a. CISG

The CISG is the preeminent treaty regarding the international sale of goods. The CISG applies to all sales contracts in which both parties’ principal places of business are in CISG countries.¹⁹⁷ Parties to a sales

¹⁹² Nikolei M. Kaplanov, *Nerdy Money: Bitcoin, the Private Digital Currency, and the Case Against Its Regulation*, 25 LOY. CONSUMER L. REV. 111, 140 (2012).

¹⁹³ United Nations Convention on Contracts for the International Sale of Goods, Apr. 11, 1980, 1489 U.N.T.S. 3 [hereinafter CISG].

¹⁹⁴ U.C.C. § 2 (amended 2012), available at <http://www.law.cornell.edu/ucc/2>.

¹⁹⁵ *Status: United Nations Convention on Contracts for the International Sale of Goods*, UNITED NATIONS COMMISSION ON INTERNATIONAL TRADE LAW, http://www.uncitral.org/uncitral/en/uncitral_texts/sale_goods/1980CISG_status.html (last visited Aug. 30, 2014). This impressive list of countries includes, *inter alia*, the United States of America, Spain, France, Italy, Germany, Mexico, China, Israel and Canada. *Id.*

¹⁹⁶ CISG, *supra* note 193, at pmb1.

¹⁹⁷ *Id.* at art. 1(1).

contract can still choose to have the CISG govern their contract as long as their principal place of business is in a CISG country.¹⁹⁸ The CISG provides several advantages for Bitcoin users: there is no Statute of Frauds (SoF) requirement,¹⁹⁹ the Parol Evidence Rule (PER) does not apply,²⁰⁰ and there is a liberal warranty of merchantability provision.²⁰¹ These advantages will be a major boon to parties contracting across international lines because they provide flexibility and protection in the event of a dispute.

The lack of a SoF provision provides a major benefit to Bitcoin users. Article 11 states that “[a] contract of sale need not be concluded in or evidenced by writing and is not subject to any other requirement as to form. It may be proved by any means, including witnesses.”²⁰² This article is perfect for Bitcoin users as they are likely to prefer to conduct business without formalistic requirements, especially when making small purchases. This could lead to fraudulent claims, but the CISG has already covered this scenario. Proving a sales contract via any means (i.e., invoices, receipts, witnesses, et cetera) can prevent fraudulent claims. When it comes to protecting buyers and sellers, the ability to prove a contract “by any means” allows a consumer to contract without fear of repudiation by permitting him to use any information pertaining to the alleged contract to prove its validity.²⁰³ This built-in protection means that the buyer or seller can utilize anything from text messages to witness testimony to prove the existence of a contract.²⁰⁴ When dealing at arm’s length, and likely across the globe, the ability to utilize any information pertaining to the alleged contract will prove a valuable resource for protecting buyers and sellers. The CISG’s lack of a SoF provision will be beneficial for Bitcoins users, as it further serves to reduce transaction costs.

It follows as a necessary corollary that contracts not evidenced in writing will need to be proved by some means. The CISG allows for this by disregarding the PER and allowing witnesses to help prove whether a contract is a fully integrated agreement.²⁰⁵ Article 8(1) provides that, when interpreting parol evidence, “statements made by and other conduct of a party are to be interpreted according to his intent where the other party knew or could not have been unaware what that intent

¹⁹⁸ *Id.*

¹⁹⁹ *Id.* at art. 11.

²⁰⁰ *See id.* at art. 8(1), 11.

²⁰¹ *Id.* at art. 36(2).

²⁰² *Id.* at art. 11.

²⁰³ *See id.*

²⁰⁴ *Id.*

²⁰⁵ *Id.*

was.”²⁰⁶ Because of the admissibility of parol evidence, Bitcoin users will be better served when engaging in dispute resolution, as they will have the flexibility to prove or disprove any portion of the contract or the contract itself. The CISG’s dismissal of the PER provides further protection for buyers and sellers by providing them with the broadest possible means of establishing or repudiating part of, if not the entire, contract. Once again, this protection will be helpful to parties operating across the globe who may fail to convey the complete agreement to the other party. The ability to remedy a situation in which pertinent details of the contract have not been included or were changed due to a breakdown in communication will prove vital when transacting across the globe. This will be helpful as Bitcoin users continue to make informal transactions in p2p settings.

The CISG provides very liberal rules regarding warranty disclaimers. Article 36(2) states that “[t]he seller is also liable for any lack of conformity which . . . is due to a breach of any of his obligations.”²⁰⁷ The underlying assumption of this provision is that the goods are fit for their ordinary use.²⁰⁸ Both parties must expressly agree to a valid disclaimer of warranty, but it need not be written nor contain the word “merchantability.”²⁰⁹ This means that a seller can simply disclaim the warranty, a distinct advantage when it comes to dispute resolution. While this might seem harmful to the buyer, it does nothing other than put the onus on the buyer to contract for a disclaimer of warranty. It shields the seller from fraudulent warranty claims, but also requires him to make sure the goods are fit for their ordinary use. Article 36(2) provides protection for the seller from fraudulent claims, protects the buyer from being required to accept goods unfit for ordinary use, and allows for an additional layer of protection to be added by contracting for a disclaimer of warranty.²¹⁰

The CISG provides flexibility and protection while reducing transaction costs for all parties by removing SoF requirements, allowing parol evidence, and permitting liberal warranty disclaimers. These provisions will be helpful for international buyers and sellers who will be operating at arm’s length and likely not in a face-to-face setting. Nation states that are not members of the CISG should consider becoming members to protect their Bitcoin using citizens.

²⁰⁶ *Id.* at art. 8(1).

²⁰⁷ *Id.* at art. 36(2).

²⁰⁸ *Id.* at art. 35(1). CISG art. 35 provides, in relevant part, that a “seller must deliver goods which are of the quantity, quality and description required by the contract and which are contained or packaged in the manner required by the contract.” *Id.*

²⁰⁹ *Contra* U.C.C. § 2-316 (amended 2012).

²¹⁰ CISG, *supra* note 193, at art. 36(2).

b. UCC Article 2

For those buyers and sellers who will be interacting with Bitcoin users in the United States, UCC Article 2 provides a solid contractual framework to govern transactions. Article 2 has been adopted by every state within the United States except Louisiana. The UCC provides a more rigid framework than the CISG, but also provides flexibility in a number of ways. One of the biggest advantages of the UCC is that it allows for contracts where no set price exists.²¹¹ Another distinct advantage of the UCC is that it contemplates and covers barter transactions. Finally, the UCC's Statute of Frauds provision allows for flexibility while protecting the seller from fraudulent claims. Due to Bitcoin's nature, these two provisions prove to be extremely helpful when transacting with Bitcoin.

Bitcoin is not backed by any hard currency or national government; its value is derived solely by demand.²¹² When Bitcoin first started garnering attention in 2011, it traded for about thirty cents per Bitcoin.²¹³ As of November 8, 2014, Bitcoin was trading for around USD \$346 per unit on the BitStamp exchange.²¹⁴ While the cryptocurrency has seen its value increase exponentially over the last few years, it is still a volatile currency that has regularly lost huge percentages of its value.²¹⁵ Due to Bitcoin's volatility, it will be hard for users to make any long-term contracts. This is where UCC Article 2 proves important. The relevant portion of UCC § 2-305(1) states:

The parties if they so intend can conclude a contract for sale even though the price is not settled. In such a case the price is a reasonable price at the time for delivery if . . .

²¹¹ U.C.C. § 2-305 (amended 2012), available at <http://www.law.cornell.edu/ucc/2/2-305>.

²¹² See *Myths*, BITCOIN WIKI, https://en.bitcoin.it/wiki/Myths#Bitcoins_are_worthless_because_they_aren.27t_backed_by_anything (last modified Aug. 14, 2014, 12:12 AM).

²¹³ BITCOIN CHARTS, <http://bitcoincharts.com/charts/mtgoxUSD#rg730zigWeeklyzczsg2011-01-01zeg2013-11-20ztgSzm1g10zm2g25zl> (last visited Aug. 30, 2014).

²¹⁴ BITSTAMP, <https://www.bitstamp.net/> (last visited Nov. 8, 2014).

²¹⁵ See generally Cyrus Farivar, *Bitcoin Investors Turn to Derivatives Markets to Bet on the Bubble*, WIRED.CO.UK (Apr. 12, 2013), <http://www.wired.co.uk/news/archive/2013-04/12/bitcoin-derivative-betting> (describing how investors are turning to derivative markets in hopes of stabilizing Bitcoin's value volatility); Joe Weisenthal, *Bitcoin is a Joke*, BUSINESS INSIDER AUSTRALIA (Nov. 7, 2013), <http://www.businessinsider.com.au/bitcoin-is-a-currency-for-clowns-2013-11> (noting that Bitcoin is mostly a speculative vehicle with wild price swings due to its lack of intrinsic value).

(c) the price is to be fixed in terms of some agreed market or other standard as set or recorded by a third person or agency and it is not so set or recorded.²¹⁶

UCC § 2-305(1)'s anticipation of a scenario where the price is fixed in terms of an agreed market or other standard perfectly describes Bitcoin. Bitcoin is valued by its demand on the open market, thus its price is bound to fluctuate daily, even hourly. Additionally, the current value of Bitcoin is recorded on multiple exchanges. As such, Bitcoin's price is "set or recorded by a third person or agency."²¹⁷ Contracting for anything at a future date will require the price to be left open, as the value of Bitcoin may change in the days leading up to the execution date. While leaving the price open under the common law or even CISG would result in a void contract, open price terms are valid under the UCC.²¹⁸ Because Bitcoin users will have to leave the price open on contracts taking place at a future date, UCC § 2-305(1)(c) is the perfect provision to protect Bitcoin users. Fluctuating valuation will not be an issue for Bitcoin users because the UCC will provide sufficient protection and flexibility for their contracts.

While the Internal Revenue Service recently classified Bitcoin as property,²¹⁹ contracts utilizing Bitcoin as a payment method will be covered as barter transactions under the UCC.²²⁰ Under the § 2-201 Statute of Frauds provision, a price must be included within the contract. When the price "consists of goods rather than money, the quantity of goods must be stated."²²¹ Additionally, § 2-304 notes that "[t]he price may be made payable in money or otherwise. If it is payable in whole or in part in goods, each party is a seller of the goods which he is to transfer."²²² The UCC is describing barter transactions by allowing each party to be a "seller of the goods which he is to transfer."²²³ This is important for Bitcoin users because it means a contract for the exchange of Bitcoin is valid under state contract law. While this will only be applicable to transfers within the United States and to transfers where at least one party resides in the United States, this provision could save a great number of contracts from otherwise failing.

The UCC provides flexibility and protection for buyers and sellers by requiring more formality than the CISG when it comes to written

²¹⁶ U.C.C. § 2-305(1)(c) (amended 2012).

²¹⁷ *Id.*

²¹⁸ See *Academy Chicago Publishers v. Cheever*, 144 Ill. 2d 24, 29 (1991); see also CISG *supra* 193, at art. 14(1). *But see* U.C.C. 2-204(3) (amended 2012).

²¹⁹ I.R.S. News Release IR-2014-36 (Mar. 25, 2014).

²²⁰ RICHARD A. LORD, WILLISTON ON CONTRACTS § 26:5 (4th ed. 2011).

²²¹ U.C.C. § 2-201 cmt. 1 (amended 2012).

²²² U.C.C. § 2-304 (amended 2012).

²²³ *Id.*

contracts. Unlike the CISG, the UCC has a codified Statute of Frauds requirement for buyers and sellers. The relevant language states:

Except as otherwise provided in this section a contract for the sale of goods for the price of \$500 or more is not enforceable by way of action or defense unless there is some writing sufficient to indicate that a contract for sale has been made between the parties and signed by the party against whom enforcement is sought or by his authorized agent or broker.²²⁴

To understand how this provision provides flexibility and protection for buyers and sellers, it is necessary to analyze the provision in several steps. First, the UCC imposes a written contract requirement for any goods valued at or over five hundred dollars.²²⁵ This provides flexibility for Bitcoin users by allowing them to transact for normal everyday purchases or sales without formal written contracts when the value of the goods is below five hundred dollars. This will likely cover a large majority of the “contracts” into which Bitcoin users enter.²²⁶ Transactions for smaller amounts will likely not require a written contract because the Bitcoins and goods will likely have been directly exchanged at the moment the contract was created. Additionally, goods falling under the five hundred dollar threshold are apt to be easily replaced or have a substantially equivalent substitute. The five hundred dollar limit also provides protection for buyers and sellers by requiring a written contract for much larger purchases and sales.²²⁷ When individuals begin contracting for more expensive goods, the enforceability of a contract becomes more important because of the high value ascribed to the goods. Bitcoin users will find the writing requirement to be less of a hassle when viewed in light of the protection it brings. Without the writing requirement, there are only a limited number of circumstances in which a contract may be enforced.²²⁸ Additionally, Bitcoin cannot be charged back like a credit card transaction can be²²⁹ when there is a dispute regarding the payment.

²²⁴ U.C.C. § 2-201(1) (amended 2012).

²²⁵ *Id.*

²²⁶ If Bitcoin is to replace fiat currencies, consumers will simply continue making the same daily transactions with the new currency. Everyday staples such as morning coffee from Starbucks, lunch with coworkers, and gas for a vehicle will be bought with Bitcoin instead of fiat currency. None of these transactions are likely to exceed the five hundred dollar amount. *See, e.g.,* PIZZAFORCOINS.COM, *supra* note 146 (providing an example of everyday purchases that could be made using Bitcoin).

²²⁷ *See* U.C.C. § 2-201(1) (amended 2012).

²²⁸ *See* U.C.C. § 2-201(2)-(3) (amended 2012).

²²⁹ A charge back occurs when money paid out is disgorged from the payee by the payment processing company and returned to the payer. *See What Is a Chargeback?*, CONSUMERIST (Apr. 9, 2007), <http://consumerist.com/2007/04/09/what-is-a-chargeback/> (explaining the chargeback process).

With a simple writing, buyers and sellers will be able to assure themselves of the full protection of the law in the event of a dispute.

The second portion of the analysis involves the actual writing itself. The writing must be “sufficient to indicate that a contract for sale has been made between the parties and signed by the party against whom enforcement is sought or by his authorized agent or broker.”²³⁰ The contract itself does not need to follow strict formalities but must, at least, “evidence a contract for the sale of goods,” be signed, and state the quantity of goods.²³¹ This provides the flexibility needed for the average Bitcoin user because he or she is likely a layperson with minimal, if any, understanding of contract construction. It also provides protection for the average Bitcoin user by requiring that the quantity of goods be determined, thus preventing attempts to change the contract at a later date. The signature component of the requirement is extremely broad and can be satisfied by “using any symbol executed or adopted with present intention to adopt or accept a writing.”²³² For Bitcoin users, who will be operating in the digital realm, this broad definition gives them the ability to “sign” almost anything by simply designating “any symbol” as their signature—a typed name in cursive font, an “x”, or even an amalgamation of numbers and letters.²³³ It also provides protection for Bitcoin users whose counterparts carelessly leave out their signature, as many individuals are wont to do when quickly replying to emails or other forms of electronic messaging. Without a signature, there are very few ways to enforce the contract.

With rules come exceptions. The last step of the Statute of Frauds analysis covers the exceptions for when an unwritten contract for goods over five hundred dollars may be enforced. When it comes to the sale of goods between merchants, a contract may be enforceable “if within a reasonable time a writing in confirmation of the contract and sufficient against the sender is received and the party receiving it has reason to know its contents . . . unless written notice of objection . . . is given within 10 days.”²³⁴ This exception truly only allows for a delay with regard to a writing evidencing the contract. It does not require the formality of a signed contract, but nonetheless accomplishes the same goal by requiring each party to the contract to have an understanding and acceptance of the terms of the agreed-upon contract. The UCC allows for this meeting of the minds and also protects buyers and sellers by allowing them to object to the writing within ten days. Thus, Bitcoin

²³⁰ U.C.C. § 2-201(1) (amended 2012).

²³¹ U.C.C. § 2-201 cmt. 1 (amended 2012).

²³² U.C.C. § 1-201(37) (amended 2012).

²³³ U.C.C. § 1-201 cmt. 37 (amended 2012).

²³⁴ U.C.C. § 2-201(2) (amended 2012).

users who are merchants can be protected in the event of a dispute even though a written contract is lacking. Three additional scenarios exist in which a Bitcoin user may be able to enforce his or her contract when a writing is lacking: (1) when the goods are specifically manufactured for the buyer and work or preparation has already begun,²³⁵ (2) if the defending party admits in his or her court pleadings, testimony, or otherwise in court that a sales contract was made,²³⁶ or (3) when the goods have been paid for and accepted or received and accepted.²³⁷ As noted above, there are very few instances in which a Bitcoin user will be able to enforce an unwritten contract for the sale of goods valued at or above five hundred dollars. With such a narrow list of exceptions for enforcing unwritten contracts, Bitcoin users are best served by drafting a simple contract evidencing the sale of goods, signing the contract, and making sure it states the quantity of goods.

UCC § 2 provides flexibility and protection while reducing transaction costs for all parties by allowing for open price contracts, permitting barter contracts, and codifying the Statute of Frauds. These provisions will be helpful for international Bitcoin users who will be interacting with a buyer or seller in the United States. International Bitcoin users interacting with buyers and sellers in the United States should utilize the UCC to protect themselves.

2. Taxation—Follow Germany’s Lead

Governments need only utilize their tax laws to bring Bitcoin under their purview. By classifying the cryptocurrency as “money,”²³⁸ “private money,”²³⁹ taxable vouchers,²⁴⁰ or any kind of financial instrument, governments can bring Bitcoin within their current tax laws. This will allow governments to collect income, capital gains, and sales (or VAT) taxes from every Bitcoin user. Germany has led the way with respect to taxing Bitcoin.²⁴¹ The tax revenue collected will simply add to government coffers while the marketplace evolves and Bitcoin develops into a viable alternative payment method.

²³⁵ U.C.C. § 2-201(3)(a) (amended 2012).

²³⁶ U.C.C. § 2-201(3)(b) (amended 2012).

²³⁷ U.C.C. § 2-201(3)(c) (amended 2012).

²³⁸ *Shavers*, 2013 WL 4028182, at *2.

²³⁹ See Dillet, *supra* note 70; Essers, *supra* note 67; Jason Mick, *U.S. Court Demands Bitcoin Regulation, Germany Offers a Libertarian View*, DAILY TECH (Aug. 19, 2013, 4:12 PM), <http://www.dailytech.com/US+Court+Demands+Bitcoin+Regulation+Germany+Offers+a+Libertarian+View/article33197.htm>.

²⁴⁰ David Gilson, *Bitcoin in the UK: HMRC Suggests Bitcoins Are ‘Taxable Vouchers’*, COINDESK (Nov. 14, 2013, 4:30 PM), <http://www.coindesk.com/bitcoin-uk-hmrc-suggests-bitcoins-taxable-vouchers/>.

²⁴¹ See Mick, *supra* note 239.

a. *Income and Capital Gains Taxes*

Germany has taken a libertarian view with Bitcoin by deciding simply to tax Bitcoin use rather than regulate the cryptocurrency via financial regulations.²⁴² The German Finance Ministry (GFM) argued that Bitcoin should be taxed and lightly regulated.²⁴³ The GFM has classified Bitcoin as kind of “private money” and as such, Bitcoin mining is the creation of “private money.”²⁴⁴ This means that a Bitcoin miner or day trader will be subject to Germany’s capital gains tax rate of twenty-five percent. However, investors can escape the tax by holding the cryptocurrency for more than a year.²⁴⁵ This also means that traders and miners may be able to write off part of those purchases as a capital investment. Additionally, traders may be able to claim capital losses if they lose money on trading. Based on the foregoing, it appears that Germany is taking a libertarian regulatory approach with Bitcoin.

b. *Sales Tax*

In addition to income tax and capital gains taxes, German Bitcoin users will likely be paying VAT (sales tax) as well.²⁴⁶ While Germany has yet to introduce any official guidelines about paying VAT on Bitcoin transactions, it is likely that businesses will be required to charge customers VAT. Businesses are already required to add VAT to all transactions, so it will hardly be an issue for those businesses now to charge Bitcoin users VAT. When it comes to p2p transactions, individuals likely will not be required to bother with VAT.²⁴⁷ As of now, Germany does not require now-and-again eBay users to pay VAT.²⁴⁸ Bitcoin purchases between individuals are similar in nature to eBay purchases and may even occur online like eBay purchases. As such, it is likely that Germany will not require Bitcoin users to pay VAT in p2p transactions.

Countries looking to bring Bitcoin under their purview should, likewise, utilize their taxing power. Germany has exhibited a model that should be emulated by other countries around the world. By lightly regulating Bitcoin and utilizing their taxing power, governments will

²⁴² *Id.*

²⁴³ *Id.*

²⁴⁴ *Id.*

²⁴⁵ *Id.*

²⁴⁶ Dillet, *supra* note 70.

²⁴⁷ *Id.*

²⁴⁸ *Id.*

prevent a chilling effect on Bitcoin's adoption while filling their coffers with a new stream of tax revenue.

VI. CONCLUSION

The development of new currencies has been a constant throughout history. Very rarely has a new currency had the chance to completely revolutionize payment methods the way Bitcoin has. However, increased governmental regulations would create a chilling effect on Bitcoin and other similar cryptocurrencies.²⁴⁹ This note maintains that, unless common-sense contract law and tax solutions are implemented, increased governmental regulation will create a chilling effect on the adoption and development of Bitcoin as a new payment alternative.²⁵⁰ Allowing Bitcoin to evolve and flourish will create virtually unlimited commercial opportunities around the globe.

²⁴⁹ See Joe Light, *Virtual-Currency Craze Spawns Bitcoin Wannabes*, WALL ST. J. (Nov. 20, 2013), available at <http://online.wsj.com/news/articles/SB10001424052702304607104579210051252568362> (noting that there are over eighty Bitcoin competitors).

²⁵⁰ See Kenneth Corbin, *Bitcoin Is Legal, Let It Evolve into Its Role*, *Researchers Urge*, PCWorld (Aug. 25, 2013, 9:17 AM), <http://www.techhive.com/article/2047369/bitcoin-is-legal-let-it-evolve-into-its-role-researchers-urge.html>.