I Got 988 Problems But Bitcoin Ain't One: The Current Problems Presented by the Internal Revenue Service's Guidance on Virtual Currency

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I. INTRODUCTION

Virtual currency exists in a regulatory vacuum. Traditionally, virtual currency occupied fictional realms or existed merely within closed networks with no possibility of exchange.[1] However, with Satoshi Nakamoto's creation of blockchain technology, convertible virtual currency has become a viable medium of exchange.[2] With any innovation, however, a period of legal adaptation follows. Just as the internet and email created massive upheavals in the law, virtual currency will create upheavals of the same magnitude.[3] Of the myriad convertible virtual currencies in existence, the most prominent is Bitcoin.[4] Several regulatory agencies have attempted to pigeonhole virtual currencies in existing legal frameworks, but the task has proved to be the equivalent of forcing a square peg into a round hole.[5] Chief among these agencies is the IRS. The IRS in

    1.   *See, e.g.*, Bryan T. Camp, *The Play's the Thing: A Theory of Taxing Virtual Worlds*, 59 HASTINGS L. J. 1, 3 (2007); Adam S. Chodorow, *Ability to Pay and the Taxation of Virtual Income*, 75 TENN. L. REV. 695, 702 (2008); Leandra Lederman, *"Stranger than Fiction": Taxing Virtual Worlds*, 82 N.Y.U. L. REV. 1620, 1622 (2007); Theodore P. Seto, *When is a Game Only a Game?: The Taxation of Virtual Worlds*, 77 U. CIN. L. REV. 1027, 1033 (2009); Steven Chung, Note, *Real Taxation of Virtual Commerce*, 28 VA. TAX REV. 733, 740 (2009).

    2.   *Could Users Collude Against Bitcoin?*, BITCOIN.ORG, https://bitcoin.org/en/faq#why-do-people-trust-bitcoin (last visited Jan. 20, 2017) (noting that blockchain technology prevents a single unit of currency from being double spent, removing the need for a central managing authority).

    3.   Steve Thomas, *Befuddled by Bitcoin: Defining Virtual Currency Regulation*, TEX. LAWYER, Aug. 25, 2014, LEXIS ("But twenty years from now Bitcoin might have a status like today's cellphones—how did we ever live without them?").

    4.   Javier Espinoza, *Is It Time to Invest in Bitcoin?*, WALL ST. J. (Sept. 22, 2014, 12:35 AM), http://www.wsj.com/articles/how-to-decipher-cryptocurrencies-1411333011. For purposes of this note, the treatment of Bitcoin is synonymous with the treatment of all other cryptocurrencies.

    5.   FinCEN issued guidance stating that virtual currency-based exchanges must follow the same laws and regulations as money service businesses and other

2014 issued Notice 2014-21 that classified all virtual currency as property for tax purposes, which has further muddied the waters of how consumers and investors should treat Bitcoin.[6]

Bitcoin has emerged as a cryptocurrency because it was created to be superior to centralized currency systems in several respects. Centralized currency systems are bloated and loaded with transaction costs.[7] Additionally, centralizing data increasingly ex-

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financial institutions. FIN. CRIMES ENF'T NETWORK, U.S. DEP'T OF THE TREASURY, FIN-2013-G001, APPLICATION OF FINCEN'S REGULATIONS TO PERSONS ADMINISTERING, EXCHANGING, OR USING VIRTUAL CURRENCIES (2013) [hereinafter FIN-2013-G001]; Jeffrey Sparshott, *Regulator on Bitcoin: Same Rules Apply*, WALL ST. J., Aug. 26, 2013, LEXIS; *see also* Timothy B. Lee, *New Money Laundering Guidelines Are a Positive Sign for Bitcoin*, FORBES (Mar. 19, 2013, 4:42 PM), http://www.forbes.com/sites/timothylee/2013/03/19/new-money-laundering-guidelines-are-a-positive-sign-for-bitcoin/#69fadf2177d7; *cf.* SEC v. Shavers, No. 4:13–CV–416, 2014 WL 4652121, at *6 (E.D. Tex. Aug. 26, 2014) (holding that investments in the entity "Bitcoin Savings and Trust," which offered investors Bitcoin-based investment products, were investment contracts); Tracy Alloway et al., *US Regulators Eye Bitcoin Supervision*, FIN. TIMES (May 6, 2013), http://www.ft.com/intl/cms/s/0/b810157c-b651-11e2-93ba-00144feabdc 0.html; Douwe Miedema, *Regulator Mulls Setting Rules for Digital Currency Bitcoin*, REUTERS (May 6, 2013, 6:32 PM), http://www.reuters.com/article/2013/05/06/net-us-Bitcoin-regulation-idUSBRE9450Y520130506.

6.   *See* I.R.S. Notice 2014-21, 2014-16 I.R.B. 938 (Apr. 14, 2014) [hereinafter Notice 2014-21], https://www.irs.gov/pub/irs-irbs/irb14-16.pdf.

7.   See, for example, Adam J. Levitin, *Priceless? The Economic Costs of Credit Card Merchant Restraints*, 55 UCLA L. REV. 1321, 1330–34 (2008), for a discussion of these inefficiencies, and *PayPal Fees*, PAYPAL (Mar. 14, 2016), https://www.paypal.com/webapps/mpp/paypal-fees. Such costs are often prohibitively high, especially when the amount to be transferred is relatively low; for example, an international transfer through PayPal and using a credit card can cost as much as 3.9% plus an additional fee. *See PayPal Fees*, *supra* note 7; *see also* William Jack & Tavneet Suri, *Risk Sharing and Transactions Costs: Evidence from Kenya's Mobile Money Revolution*, 104 AM. ECON. REV. 183 (2014) (noting that transaction costs are a limiting factor in the adoption of mobile money transfer services); Key Pousttchi & Martin Schurig, *Assessment of Today's Mobile Banking Applications from the View of Customer Requirements*, MUNICH PERSONAL REPEC ARCHIVE, (Apr. 25, 2004) http://mpra.ub.uni-muenchen.de/2913/ (noting that SMS banking is not as secure as other conventional banking channels, like the ATM and internet banking).

poses more personal financial transactions and information to hackers.[8] Virtual currency has the potential to revolutionize how we transact on the same scale that email did with "snail mail."[9] Virtual currency transactions have almost zero transactional cost, as contrasted with traditional currency transactions.[10] Virtual currencies, in particular, offer advantages to developing economies and small businesses.[11] These include inflation-proof stores of value and the ability to accept electronic payment free from major credit card companies. However, many of the benefits are still hypothetical at this point. Thus, the experiment that is Bitcoin likely cannot deliver on its self-proclaimed benefits without more widespread adoption.

Widespread adoption of a new financial instrument depends largely on ease of adoption and a clearly defined legal framework.[12] Tax policy is one of the largest legal frameworks that affects business decisions.[13] The decline of bearer bonds as a widely used fi-

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8. Lillian Ablon, *Keeping Safe in the New Year*, U.S. NEWS AND WORLD REP. (Dec. 31, 2014, 3:00 PM), http://www.usnews.com/opinion/blogs/world-report/2014/12/31/after-a-year-of-major-hacks-2015-resolutions-to-bolster-cyber-security ("2014 was the year the hack went viral. Retailers like Staples Inc., Neiman Marcus Inc., Michaels, Home Depot Inc. and eBay Inc. announced breaches, while millions of customers were helpless to stop the flow of credit card information and personal data to cyber attackers. But it wasn't just retail giants: Firms in health care (Community Health Systems), finance (JPMorgan Chase & Co.) and entertainment (Sony Pictures) also fell victim to cyberattacks. In addition to breaches, major software vulnerabilities surfaced. The OpenSSL Heartbleed vulnerability shook confidence in Internet security, while Shellshock exposed a majority of Internet-facing services to attack.").

9. Jerry Brito & Andrea Castillo, *Bitcoin: A Primer for Policymakers*, MERCATUS CENTER (2013), http://mercatus.org/sites/default/files/Brito_Bitcoin Primer_v1.3.pdf (describing the potential benefits of Bitcoin transactions).

10. Gavin Andresen, *Bitcoin: The World's First Person-to-Person Digital Currency*, BITCOIN TRADING (June 20, 2011), http://www.bitcointrading.com/pdf/GavinAndresenCIATalk.pdf.

11. Jerry Brito & Eli Dourado, *Comments to the New York Department of Financial Services on the Proposed Virtual Currency Regulation Framework*, MERCATUS CENTER (2014), http://mercatus.org/sites/default/files/BritoDourado-NY-Virtual-Currency-comment-081414.pdf.

12. Thomas, *supra* note 3 ("It takes time to gather the meanings of legal terms of art and to compare them with emerging technologies . . . .").

13. Stephen Witzel, *From Cacao to the Cloud: Bitcoin and Virtual Currency Regulation*, 252 N.Y. L. J. 45, 48 (2014) ("Smaller businesses, as well as

nancial instrument was due in large part to a change in tax treat-ment.[14] Conversely, favorable tax treatment facilitated the rise of derivative instruments. During the Great Recession, tax policy drove much of corporate decision-making. Bonus depreciation and capital loss carryovers incentivized businesses to continue investing and expanding, even in a down market due to the benefits provided by Congress in the Tax Code. In the same way tax policy drove corporate decision-making, the tax treatment of virtual currencies is central to whether they will be widely adopted.[15]

While there is an incentive to encourage its use, Bitcoin does not come to the table with clean hands. Law enforcement agencies have linked Bitcoin to the deep web black market known as the Silk Road, a notorious source of illegal drugs, firearms, and hitmen.[16] The regulatory wild west surrounding virtual currencies and the anonymous nature of the transactions create an environment rife with massive price fluctuations and fraud schemes.[17] However,

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start-ups, often cannot shoulder the increase in costs that comes from complex regulatory schemes. This is a particular concern even for larger Bitcoin busi-nesses that want to transact in several states or internationally since the regulations are likely to be different in each jurisdiction, including existing bans and re-strictions in various countries.").

14.   *See, e.g.*, Adam W. Glass, *IRS Notice to Sound Death-Knell for Pesky Bearer Bond Depositary Receipts Structure in CDOs, SIVs and DPCs?*, LINKLATERS (2006), http://www.linklaters.com/pdfs/us/061215_sfdnote.pdf.

15.   William Hoffman, *Bitcoin users await more tax guidance*, 75 TAX NOTES INT'L, Sept. 8, 2014, at 817 ("The tax consequences of these and other developments will undoubtedly range into the many billions of dollars."); *see also* Isaac Pflaum & Emmeline Hateley, *A Bit of a Problem: National and Extraterri-torial Regulation of Virtual Currency in the Age of Disintermediation*, 45 GEO. J. INT'L L. 1169, 1211 (2014) ("The position taken by the IRS may significantly enlarge the population of Bitcoin users that are subject to U.S. criminal prosecu-tion. If this risk materializes, it could have a significant chilling effect on the available supply of Bitcoin, the sustainability of mining cooperatives, and the wider adoption of Bitcoin generally.").

16.   *See* United States v. Ulbricht, 31 F. Supp. 3d 540, 547 (S.D.N.Y. 2014) (describing how Bitcoins were used to pay for illicit goods on the dark web site the Silk Road).

17.   *See* Carter Dougherty, *Bitcoin Needs Tighter Rules Than Banks, Say Prosecutors*, BLOOMBERG (Jan. 29, 2014, 11:01 PM), http://www.bloom-berg.com/news/2014-01-29/prosecutor-warns-of-wild-west-without-Bitcoin-oversight.html.

these downsides are not without potential benefits. Bitcoin represents a currency framework independent from the instability of governmental policies and inflationary pressures. Furthermore, Bitcoin can facilitate disintermediation of international financial frameworks and free developing economies from the costs associated with cross-border currency transfers. Most importantly, Bitcoin is an electronic currency transfer method that removes the costs of current electronic payment systems. As more legitimate companies (such as Amazon) accept virtual currency, its use will increase and gain acceptance.[18] Major Silicon Valley investors recently announced plans to set up a "Bitcoin Trust" to allow trades in Bitcoin derivatives.[19] In order for consumers to realize the benefits of Bitcoin, or any other virtual currency, the IRS must ensure the regulatory environment is consistent and free of unnecessary complexity.[20]

The IRS intended Notice 2014-21 to clarify the income tax treatment of virtual currencies.[21] The two competing views are that virtual currencies should be treated (1) like property or (2) like foreign currency.[22] The Code treats these differently in important ways. The general argument in favor of property treatment is convenience; all of the tools for treating virtual currency as property are in place. To treat virtual currency as foreign currency would, at the

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18.   Clare O'Connor, *How to Use Bitcoin to Shop at Home Depot, CVS, and More*, FORBES (Feb. 17, 2014, 11:47 AM), http://www.forbes.com/sites/clareoconnor/2014/02/17/how-to-use-bitcoin-to-shop-at-amazon-home-depot-cvs-and-more/#72186cdc6cd4.

19.   Matt Egan, *Winklevoss twins: Bitcoin will explode beyond $1 trillion*, CNN (Jan. 28, 2015, 12:50 PM), http://money.cnn.com/2015/01/27/investing/Bitcoin-winklevoss-twins-gold/.

20.   *See, e.g.*, Timothy Lavin, *Bitcoin is Still Doomed*, BLOOMBERG VIEW (Nov. 20, 2013, 1:03 PM), https://www.bloomberg.com/view/articles/2013-11-20/bitcoin-is-still-doomed.

21.   *See* Walter Frick, *Why Bitcoin Entrepreneurs are Begging for more Regulation*, HARVARD BUS. REV. (Mar. 26, 2014), https://hbr.org/2014/03/why-bitcoin-entrepreneurs-are-begging-for-more-regulation (noting that regulatory uncertainty is holding back Bitcoin development).

22.   Paul Vigna, *BitBeat: IRS Calls Bitcoin 'Property,' Not Currency*, WALL ST. J. (Mar. 25, 2014), http://blogs.wsj.com/moneybeat/2014/03/25/ bitbeat-irs-calls-Bitcoin-property-not-currency/; Richard Rubin & Carter Dougherty, *Bitcoin Currency Use Impeded by IRS Property Treatment*, BLOOMBERG (Mar. 26, 2014, 11:00 PM), http://www.bloomberg.com/news/articles/2014-03-26/bitcoin-currency-use-impeded-by-irs-property-treatment.

least, require altering existing regulations to broaden the definition of "foreign currency." The IRS was unwilling to do this or to take the matter to Congress. This limited options for the classification of virtual currencies.[23] However, the problems inherent in redefining "foreign currency" pale in comparison to the loopholes created by property treatment.

In attempting to clear the regulatory haze and increase the attractiveness of cryptocurrency as a regular unit of exchange, this Note will propose the IRS retract Notice 2014-21 and issue new guidance that virtual currency transactions be handled under existing Section 988 procedures.[24] Property treatment creates tax loopholes and discourages legitimate business from transacting in virtual currencies in high volumes. Part II of this Note will include a brief history of virtual currency and the importance of its emergence. Part III will analyze the rationale supporting property treatment and explain that treatment's shortfalls and loopholes. Finally, Part IV will outline the advantages of foreign currency treatment for cryptocurrency and reasons why the IRS can still change course.

II. BACKGROUND—FUNCTION AND REGULATION OF VIRTUAL CURRENCY

A. *History of Virtual Currency and the Emergence of Bitcoin*

There are several different types of virtual currency. Decentralized convertible virtual currencies are the currencies for which Notice 2014-21 created income tax issues. These currencies use cryptography and a distributed network to secure and verify transactions. The most common of these is Bitcoin. Bitcoin's creator

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23.   *See, e.g.*, 31 C.F.R. § 1010.100(m) (2014) (defining currency (also referred to as "real" currency) as "[t]he coin and paper money of the United States or of any other country that [i] is designated as legal tender and that [ii] circulates and [iii] is customarily used and accepted as a medium of exchange in the country of issuance."); *see also* FIN-2013-G001, *supra* note 5 ("either has an equivalent value in real currency, or acts as a substitute for real currency."); *cf.* Pflaum & Hateley, *supra* note 15, at 1173 ("According to the Treasury, in contrast to real currency, 'virtual' currency such as Bitcoin is a medium of exchange that operates like a currency in some environments but does not have all the attributes of real currency. In particular, virtual currency does not have legal tender status in any jurisdiction.").

24.   26 U.S.C § 988 (2012).

introduced the concept of cryptocurrencies in order to address many of the problems with existing transactional models. Some of its benefits are long-term, but some benefits have already been realized.

1. Types of Virtual Currency

Virtual Currency is a catchall term for a wide variety of online media of exchange. Closed virtual currencies are those that exist only within the electronic realm. The most common example is currency used in online multiplayer games.[25] While a market, legitimate or otherwise, might exist for these items, they do not fall within the purview of IRS regulation.[26] Additionally, single direction virtual currencies, such as Facebook Credits or frequent flyer miles, are not under discussion.[27] A consumer can purchase single-direction virtual currencies but cannot convert them back to standard currency. This Note focuses on convertible virtual currencies, and specifically within those, cryptocurrencies. Consumers can freely exchange convertible virtual currencies into hard currency. There are two general types of convertible currencies: centralized and decentralized. Central issuing authorities control centralized virtual currencies,[28] whereas decentralized currencies, including cryptocurrencies, depend upon the collective faith of the user base. Establishing the faith of a user base with no controlling authority is difficult.

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25. *See* Seto, *supra* note 1, at 1028 (2009).

26. The IRS might regard these items as property. However, no official guidance exists on how to treat these items.

27. THE LAW OF BITCOIN 2–4 (Stuart Hoegner ed., 2015).

28. FIN-2013-G001, *supra* note 5, at 3 n.13 ("Typically, this involves the broker or dealer electronically distributing digital certificates of ownership of real currencies or precious metals, with the digital certificate being the virtual currency. However, the same conclusions would apply in the case of the broker or dealer issuing paper ownership certificates or manifesting customer ownership or control of real currencies or commodities in an account statement or any other form. These conclusions would also apply in the case of a broker or dealer in commodities other than real currencies or precious metals. A broker or dealer of e-currencies or e-precious metals that engages in money transmission could be either an administrator or an exchanger, depending on its business model.").

However, cryptocurrencies solve this problem with a digital public ledger that is impossible to rewrite.[29]

Cryptocurrencies are virtual currencies with a built-in mechanism to prevent double spending,[30] i.e., spending the same unit of currency twice. Programmers saw double spending as the inherent problem with any decentralized virtual currency system.[31] Programmers solved this by using a mathematical process and ledger to ensure each transaction is unique.[32] This ledger, also known as the "Blockchain," is what forms the backbone of cryptocurrencies.[33] The first virtual currency to utilize this process, and currently the most popular in circulation, is Bitcoin.[34]

2. Bitcoin

Satoshi Nakamoto, an enigmatic individual, launched Bitcoin in 2009.[35] He intended Bitcoin to address an inherent shortcoming of the existing currency transaction model—its dependence on the trust of a third party.[36] In the current electronic transfer system between individuals and businesses, there is always at least one intermediary (e.g.: a bank or a credit card company). The Bitcoin

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29.   Sean Ross, *How Does a Block Chain Prevent Double-spending of Bitcoins?*, INVESTOPEDIA (June 19, 2015, 8:11 AM), http://www.investopedia.com/ask/answers/061915/how-does-block-chain-prevent-double-spending-bitcoins.asp.

30.   Eric Pacey, Note, *Tales from the Cryptocurrency: On Bitcoin, Square Pegs, and Round Holes*, 49 NEW ENG. L. REV. 121, 126 (2014) ("[T]he fact that electronic transactions conducted through a third party cannot be truly irreversible, forcing third parties to mediate disputes and consequently increasing transaction costs.").

31.   Ross, *supra* note 29.

32.   Chris DeRose, *Why the Bitcoin Blockchain Beats Out Competitors*, AMERICAN BANKER (June 26, 2015), http://www.americanbanker.com/bankthink/why-the-Bitcoin-blockchain-beats-out-competitors-1075100-1.html.

33.   *How does Bitcoin work?*, BITCOIN.ORG, https://Bitcoin.org/en/how-it-works (last visited Feb. 1, 2017).

34.   *Who created Bitcoin?*, BITCOIN.ORG, https://bitcoin.org/en/faq#who-created-bitcoin (last visited Feb. 1, 2017).

35.   *Id.*

36.   A third-party in this instance would be a bank, credit card company, or the like—in essence, any person or entity that has "hands on" a transaction besides the person paying for the goods or services, and the person providing the goods or services. *See generally id.*

system seeks to remove that intermediary. Three major features make up the Bitcoin "system." First, "it is peer-to-peer" and "computationally impractical to reverse."[37] Second, it is "cryptographically secure."[38] Third, it uses "proof of work" among the different users to verify transactions and to add new units of currency to circulation.[39] However, just because the math adds up does not mean that customers trust the result.

In the same way customers in the early days of internet commerce were frightened of providing credit card information online, many casual consumers viewed Bitcoin as risky or even criminal. Most casual consumer contact is likely with single-direction virtual currencies. For this reason, widespread public adoption has been slow due to lack of trust in the Bitcoin system.[40] Ironically, the Bitcoin transaction system can be more trustworthy than those implemented by major banks. However, many consumers today do not have a second thought about providing credit card information to PayPal, the Apple Store, or other online retailers that once engendered widespread distrust. That trust and comfort came after an expansion in adoption and a demystification of the system.

Nakamoto released the software to transact in Bitcoin in January 2009. A niche market has grown rapidly. As of this writing, the market capitalization of Bitcoin is $20.5 billion,[41] making up close to 81% of the total cryptocurrency market.[42] For this reason, regulation of Bitcoin is synonymous with regulation of any of the

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37.   Satoshi Nakamoto, *Bitcoin: A Peer-to-Peer Electronic Cash System*, BITCOIN.ORG, https://bitcoin.org/bitcoin.pdf (last visited Feb. 1, 2017). A peer-to-peer transaction is one that only involves the person paying for the goods or services, and the person providing the goods or services and no financial intermediaries. *See generally What is Bitcoin?*, BITCOIN.ORG, https://bitcoin.org/en/faq#who-created-bitcoin (last visited Feb. 1, 2017).

38.   THE LAW OF BITCOIN, *supra* note 27, at 5 ("Transactions are publicly announced, with each owner transferring coins . . . to the next owner by digitally signing a hash of the previous transaction; these transactions are put into consecutive blocks . . . secured by cryptographic proofs ensuring that the data has not been tampered with . . . .").

39.   *Id*.

40.   Mike Orcutt, *Is Bitcoin Stalling?*, MIT TECH. REVIEW (Feb. 18, 2015), http://www.technologyreview.com/news/535221/is-Bitcoin-stalling.

41.   COINMARKETCAP, *Crypto-Currency Market Capitalizations*, http://coinmarketcap.com (last visited Feb. 5, 2017).

42.   *Id*.

other cryptocurrencies.   Additionally, Nakamoto released the Bitcoin software as an open-source application,[43] which allows developers to develop derivative versions of the same algorithm contained within the original software.[44] All existing cryptocurrencies currently in circulation are therefore based on the same three principals as Bitcoin.[45]

B. The Function of the Blockchain

The blockchain lies at the heart of Bitcoin. It is also the source of much confusion and misunderstanding concerning Bitcoin.[46] The blockchain functions to distinguish "normal" transactions from a Bitcoin transaction.[47] A hypothetical transaction between Albert and a fictional online retailer, Bamazon, illustrates the distinction. Albert wishes to purchase a $100 widget from Widgetworld through Bamazon.com, a popular online retailer that makes available many merchants' goods. Albert would rely upon Bamazon, the third party intermediary. Albert would provide his payment information to Bamazon's website, which would then verify he had $100 available in his bank account. At this point, Bamazon would deduct $100 from Albert's account and transfer $100 to Widgetworld's account.[48] In this example, the third party intermediary, Bamazon, functions as the "curator of a common ledger determining who owes what."[49] In a Bitcoin transaction, the collective network maintains the common ledger instead.[50]

Prior to blockchain technology, double spending problems inherently hamstrung virtual currency.[51] If Albert promised $100 of

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43.   Brito & Castillo, *supra* note 9, at 3.

44.   *The Open Source Definition (Annotated)*, OPEN SOURCE INITIATIVE, https://opensource.org/osd-annotated (last visited Feb. 1, 2017).

45.   Carter Graydon, *What is Cryptocurrency?*, CRYPTOCOINS NEWS (Sept. 16, 2016), http://www.cryptocoinsnews.com/cryptocurrency/ ("The technical system on which all cryptocurrencies are based . . . was created by Satoshi Nakamoto.").

46.   *See* Brito & Castillo, *supra* note 9.

47.   *Id.* at 4.

48.   This assumes both parties use the same bank. In reality, both parties would likely use different banks, adding even more steps to the process.

49.   THE LAW OF BITCOIN, *supra* note 27, at 6; *see also* Brito & Castillo, *supra* note 9.

50.   *See* Pflaum & Hateley, *supra* note 15, at 1174–77 (2014).

51.   THE LAW OF BITCOIN, *supra* note 27, at 6.

a virtual currency to Bamazon, and subsequently promised the same $100 to Claire, then the value of that currency would be zero. Without a check on such behavior, there must be a trusted third party to track every unit of currency in circulation.[52] In mainstream business, counterfeiting laws and government regulation of financial institutions provide this check. However, if every user can keep every other user honest simply by participating in the system, the need for a third party intermediary disappears.

A Bitcoin transaction is fundamentally different from all electronic transactions that occur in the marketplace.[53] When Albert wishes to spend $100 in Bitcoin, he enters a series of numbers and letters into the Bitcoin software complete with a unique personal key and Bamazon's "address" on the Bitcoin network. The Bitcoin software refers to this series of numbers and letters as a "hash value."[54] Contained within this hash value is the entire transactional history of the unit of Bitcoin Albert wishes to transfer to Bamazon.[55] At this point, every computer connected to the Bitcoin network verifies this transaction[56] by looking at the entire history of the unit (or units) Albert is transferring and actively verifying Albert has not already transferred it (them).[57] The entire network has to agree that Albert owns the relevant unit of Bitcoin and then approves the transaction.[58]

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52. Brito & Castillo, *supra* note 9, at 3–4.

53. Dorit Ron & Adi Shamir, *Quantitative Analysis of the Full Bitcoin Transaction Graph*, DEP'T OF COMPUT. SCI. AND APPLIED MATHEMATICS, THE WEIZMANN INST. OF ISRAEL, 3–4 (2013), https://eprint.iacr.org/2012/584.pdf.

54. *See* Nakamoto, *supra* note 37, at 2.

55. This is a slight oversimplification of the process. The Hash value enters the algorithm and tells the program where to look for verification. However, in practice the results are the same.

56. *How does Bitcoin work?*, BITCOIN.ORG, https://bitcoin.org/en/faq#how-does-bitcoin-work (last visited Feb. 1, 2017).

57. As an illustration of this point: Assume Bitcoin X was originally owned by User #1 who then transferred it to User #2, and so on. When User #10 transfers Bitcoin to User #11, the hash value will point to the chain of custody all the way back to User #1.

58. ELLI ANDROULAKI, GHASSAN O. KARAME, MARC ROESCHLIN, TOBIAS SCHERER & SRDJAN CAPKUN, EVALUATING USER PRIVACY IN BITCOIN, FIN. CRYPTOGRAPHY AND DATA SECURITY: 17TH INT'L CONFERENCE (Ahmad-Reza Sadeghi ed., 2013), https://eprint.iacr.org/2012/596.pdf ("Bitcoin is a Proof-of-Work (PoW) based currency that allows users to generate digital coins by performing computations.").

Once the network approves the transaction, the algorithm (or equation) enters the transaction into the blockchain ledger.[59] Every node in the Bitcoin network has its own copy of the blockchain ledger.[60] Attempting to enter a fraudulent transaction will immediately be detected and rejected.[61] In essence, every transaction in Bitcoin is publicly recorded on the blockchain. When a transaction occurs and is verified by the group, one more entry on the giant collective ledger appears.[62]

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59.   Pflaum & Hateley, *supra* note 15, at 1170–85. Most network participants store the Block Chain in Random Access Memory (RAM) to ensure speedy retrieval of transaction records. *Id*. Accordingly, as the Block Chain increases in size through the recordation of new transactions, greater computational resources are required by each node (i.e., each participant on the Bitcoin Network) in order for that node to continue caching the Block Chain in local memory. *Id*. As of February 2014, caching the Block Chain locally required approximately 850 megabytes of memory. *Id*. When a block is incorporated by over 50% of nodes on the network, it becomes part of the so-called "longest Block Chain," which is relied upon by Miners to validate future transactions. *Id*. As such, the greater the number of nodes, the more secure the Bitcoin network becomes. *Id*. In order to facilitate network participation by the greatest number of nodes, therefore, a de facto standard has arisen that minimizes the size of each new transaction record to only that information that is required to settle the transaction. *Id*. In order to limit the size of new Blocks to a manageable level, the Block Chain contains "Merkle Tree" entries that provide a sort of "save point" that permits the chain of records to be validated without requiring every node to store every transaction ever conducted in the currency. *Id*. In order for the network to function properly, however, some nodes must maintain public copies of the entire Block Chain (i.e., every transaction ever conducted using the "0" proof-of-work function. *Id.; see, e.g.*, BLOCKCHAIN LUXEMBURG, https://blockchain.info/

60.   Pflaum & Hateley, *supra* note 15, at 1175–76 ("New blocks are broadcasted globally across the Network and saved by the many network participants in the United States and elsewhere, who each independently maintain copies of the Block Chain.").

61.   *See id*. at 1170–85.

62.   *See* Cara R. Baros, Comment, *Barter, Bearer, and Bitcoin: The Likely Future of Stateless Virtual Money*, 23 U. MIAMI BUS. L. REV. 201, 212 (2014) ("The 'block chain' is shared between all Bitcoin users. This is a component of the peer-to-peer network, called the proof-of-work chain. Thus, the block chain proves that the sequence of events that took place, providing the entire network with a record of the transaction. Then, the users on the network check the block chain to 'confirm' that a proper transaction occurred.").

Finally, the software provides the incentive for all parties on the network collectively to verify the transaction. While the software verifies on the network passively, there is no active incentive for a user to participate in the network independent of her own transactions.[63] However, the security of Bitcoin is directly proportional to the number of users actively participating in the network.[64] The more available copies of the blockchain, the harder it becomes to fool the network with a fraudulent transaction.[65] To incentivize Bitcoin users, whenever the network verifies a transaction, the algorithm randomly rewards a user on the network with a predetermined amount of Bitcoin.[66] The software doles out Bitcoin at a set rate to prevent inflation from diluting the value of existing coins.[67] The Bitcoin community refers to this process of verifying transactions to receive rewards as "mining."[68] The implications of mining will be important in considering reporting requirements for the IRS.

The entire process of verifying transactions may seem overly complex compared to the more traditional transaction model that applies when Albert makes a purchase on Bamazon. However, a closer examination reveals that Bitcoin is actually the simpler transaction. Rarely is an online retailer also its own bank. The chain would be more akin to the retailer's bank requesting information from Albert's credit card company who in turn requests information from Albert's bank. Albert's bank would then transfer information to the retailer's bank. The retailer's bank would then transfer information to Bamazon's bank. Each step in this process generates a transaction cost. As the number of steps in the transaction process increases, the need for trust increases, and the need for the reversibility of

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63.   *See* Nakamoto, *supra* note 37, at 4.

64.   *See id.* at 4.

65.   *See id.* at 3.

66.   *See Transaction Commission*, BITCOIN WIKI, http://en.bitcoin-wiki.org/transaction_commission (last visited Feb. 1, 2017) (discussing the mechanics of how commissions are calculated); *Controlled Supply*, BITCOIN WIKI, https://en.bitcoin.it/wiki/controlled_supply (last visited Feb. 1, 2017) (discussing how the number of Bitcoins rewarded to a successful miner is calculated and how this value changes over time).

67.   *See* Nakamoto, *supra* note 37, at 4; *How are bitcoins created?*, BITCOIN.ORG, https://bitcoin.org/en/faq#how-are-bitcoins-created (last visited Feb. 1, 2017).

68.   *How are bitcoins created?*, *supra* note 67.

transactions increases. Bitcoin transactions are permanent and non-reversible.[69] Thus, the blockchain functions as the final bulwark against fraud. If every transaction on the blockchain is final, then the blockchain is the ultimate arbiter of whether a transaction was valid.[70]

The anonymity of Bitcoin transactions represents an attractive part of Bitcoin to some but a concern to others.[71] While each hash value contains a specific key identifier, the key is only tied to a specific unit of Bitcoin, not to an individual.[72] This has made Bitcoin attractive to those who make illegal sales on illicit websites, such as Silk Road.[73] This is not to say a legitimate business could not tag its own transactions to be identifiable within the blockchain. A business could also include its Tax Identification Number within the hashing value for later reporting purposes.[74] The current regulatory environment arose from government attempts to address these ties between Bitcoin and other virtual currencies and the criminal underworld.[75]

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69.   *See* Nakamoto, *supra* note 37, at 1 (describing the difficulty for dishonest Bitcoin users to reverse their transactions).

70.   Nakamoto, *supra* note 37, at 1 ("Commerce on the Internet has come to rely almost exclusively on financial institutions serving as trusted third parties to process electronic payments. While the system works well enough for most transactions, it still suffers from the inherent weaknesses of the trust based model. Completely non-reversible transactions are not really possible, since financial institutions cannot avoid mediating disputes . . . With the possibility of reversal, the need for trust spreads.").

71.   Brito & Castillo, *supra* note 9, at 9.

72.   *Id.* at 8.

73.   *Id.* at 23.

74.   The "hashing value" is the unique identification number associated with a transaction. While the numbers entered into the software are slightly pre-determined, a user can add additional numbers or characters that can provide additional information. *see also Hidden Surprises in the Bitcoin Blockchain and How They Are Stored: Nelson Mandela, Wikileaks, Photos, and Python Software*, KEN SHIRRIFF'S BLOG, http://www.righto.com/2014/02/ascii-bernanke-wikileaks-photographs.html (last visited Oct. 21, 2016) (demonstrating various examples of embedded text in the blockchain); *see generally* Nakamoto, *supra* note 37.

75.   *See, e.g.*, Brito & Castillo, *supra* note 9, at 2 (noting the U.S. Department of the Treasury and the Department of Justice have made official statements and that the IRS has been encouraged to issue guidance by the Government Accountability Office).

C. Current Regulatory Environment

The current regulatory environment of Bitcoin is a patchwork of competing interpretations and approaches. The reason for this is that courts and agencies must approach Bitcoin from their own regulatory perspectives. Some see Bitcoin as an investment; others see Bitcoin as a clandestine, black market currency.[76] Additionally, the nature of Bitcoin makes it very difficult to define or regulate within traditional currency frameworks.[77] Several regulatory agencies and federal courts have addressed different issues concerning Bitcoin. However, the IRS's tax treatment of Bitcoin is the foremost concern here.[78]

1. Federal Agencies and Courts

The most prominent agency involved with the regulation of Bitcoin has been the Financial Crimes Enforcement Network ("FinCEN"), a bureau of the United States Department of the Treasury. The FinCEN addressed Bitcoin and other virtual currencies in three separate notices. In the first, issued in 2013, the FinCEN declared that a person who trades in Bitcoin or other decentralized convertible virtual currencies is not a currency dealer for purposes of the Banking Secrecy Act ("BSA").[79] The second notice related to the regulation of individuals who engage in Bitcoin mining.[80] The third

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76.   Brito & Castillo, *supra* note 9, at 13–14, 23–27 (noting both investments by well-known venture capitalists and Bitcoin's criminal uses, particularly on black market websites).

77.   Paul Caron, *Marian: Bitcoin and Notice 2014-21*, TAXPROF BLOG (Mar. 26, 2016), http://taxprof.typepad.com/taxprof_blog/2014/03/marian-Bitcoin.html (describing potential problems with the IRS's treatment of Bitcoin as property for tax purposes).

78.   *Id.* (noting the pressure on the IRS to issue guidance on Bitcoin transactions and describing the Notice issued by the IRS on how to treat virtual currencies).

79.   This means that dealers in virtual currency are exempt from the reporting requirements imposed under the Financial Crimes Enforcement Network. *See* FIN-2013-G001, *supra* note 5, at 5.

80.   *See* FIN. CRIMES ENFORCEMENT NETWORK, U.S. DEP'T OF THE TREASURY, FIN-2014-R001, APPLICATION OF FINCEN'S REGULATIONS TO VIRTUAL CURRENCY MINING OPERATIONS (2014), http://www.fincen.gov/news_room/rp/rulings/pdf/FIN-2014-R001.pdf.

notice addressed the use of rented computers to facilitate such mining, a phenomenon that has emerged over the last several years.[81] The overall thrust of these notices was to shield companies that transacted with Bitcoin miners from additional regulation under federal law.[82] By exempting Bitcoin miners from BSA and FinCEN reporting requirements, FinCEN has left it to other areas of the federal government to define the nature of Bitcoin.[83]

Federal courts and the SEC have also addressed certain legal aspects of Bitcoin. Over the course of three cases, federal courts have applied definitions of virtual currencies that suggest a disinclination to characterize Bitcoin as property. In *United States v. Ulbricht*, the Southern District of New York held that Bitcoin was currency for purposes of an anti-money laundering statute.[84] The Southern District of New York reaffirmed the position that Bitcoin had essential characteristics of money in *United States v. Faiella*, finding that Bitcoin falls within the Federal Unlicensed Money Transmitting Statute.[85] The Eastern District of Texas considered a Bitcoin-fueled Ponzi scheme in *SEC v. Shavers*.[86] Of particular note, this decision addressed the IRS's treatment of property, holding it was more consistent to rule that Bitcoin is currency for purposes of enforcing federal law.[87] The Southern District of New York

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81. *See* FIN. CRIMES ENFORCEMENT NETWORK, U.S. DEP'T OF THE TREASURY, FIN-2014-R007, APPLICATION OF MONEY SERVICES BUSINESS REGULATIONS TO THE RENTAL OF COMPUTER SYSTEMS FOR MINING VIRTUAL CURRENCY (2014), https://www.fincen.gov/sites/default/files/shared/FIN-2014-R007.pdf.

82. *See* FIN-2013-G001, *supra* note 5.

83. This is not unlike the IRS's position in Notice 2014-21. Notice 2014-21, *supra* note 6, at 938. There, the IRS stated that Bitcoin "does not have legal tender status in any jurisdiction." *Id*. That is to say that Bitcoin is not a fiat currency under traditional definitions. However, the IRS does concede that Bitcoin, "[i]n some environments, . . . operates like 'real' currency." *Id*.

84. United States v. Ulbricht, 31 F. Supp. 3d 540, 569–70 (S.D.N.Y. 2014).

85. United States v. Faiella, 39 F. Supp. 3d 544, 545–46 (S.D.N.Y. 2014); 18 U.S.C. § 1960 (2012).

86. SEC v. Shavers, No. 4:13-CV-416, 2014 U.S. Dist. LEXIS 130781 (E.D. Tex. Sept. 18, 2014).

87. *See id*. at *19–20, *33–35 (treating Bitcoin investments as investment contracts, and thus securities, and treating Bitcoin as an exchangeable currency when calculating monetary penalties).

recently affirmed this inconsistency with IRS definitions in *United States v. Budovsky*.[88]

The current approach of a few district courts is to disregard the IRS's current definition of Bitcoin as property in order to facilitate convictions under federal law.[89] Given the prevalence of banking and financial institutions within New York, the Second Circuit is poised to become the "mother court" for virtual currency law.[90] The most high profile current case regarding Bitcoin is *United States v. Budovsky*, in which the government prosecuted the founders of Liberty Reserve for using Bitcoin to facilitate the laundering of almost six billion dollars.[91] Budovsky claimed that Bitcoin was property and therefore not subject to the federal money laundering statute.[92] He cited both IRS Notice 2014-21 and the FinCEN guidance from 2013.[93] The court rejected this argument, finding the term "funds" should encompass virtual currencies.[94] Clearly there is inconsistency in the treatment of bitcoin between other federal agencies, the courts, and the IRS.[95] Moreover, Bitcoin might even by

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88.   United States v. Budovsky, 13cr318 (DLC), 2015 U.S. Dist. LEXIS 127717, at *37–38 (S.D.N.Y. Sept. 23, 2015) (citing *Faiella*, 39 F. Supp. 3d at 545–47) (denying defendant's motion to dismiss charges under 18 U.S.C. § 1956(c)(4)).

89.   It should be noted that only three federal cases, as discussed in the preceding paragraph, have even addressed the classification of Bitcoin.

90.   Justice Blackmun used this language in reference to the Second Circuit as the "mother court" of securities law due to the disproportionate number of securities cases out of the Southern District of New York. Blue Chip Stamps v. Manor Drug Stores, 421 U.S. 723, 762 (1975) (Blackmun, J., dissenting).

91.   *Budovsky*, 2015 U.S. Dist. LEXIS 127717 (S.D.N.Y. Sept. 23, 2015).

92.   *Id*. at *35–36.

93.   *Id*. at *36.

94.   *Id*. at *37–38 (citing United States v. Faiella, 39 F. Supp. 3d 544, 545–47 (S.D.N.Y. 2014)).

95.   *See* Baros, *supra* note 62, at 220 ("Although the federal government had respectful remarks about Bitcoin, it acknowledges that a currency, by definition, is something the government controls. However, individual users and companies are accepting payment for goods and services in Bitcoin, meaning that even though it is not officially qualified as a currency, it is still functionally operating as a currency.").

regarded as a "security."[96] These competing interpretations high-light the need for a clear delineation of how the federal government views Bitcoin.

2. IRS

The IRS chose to issue guidance to taxpayers on how to treat income from Bitcoin transactions because of the explosion of the market capitalization of virtual currencies.[97] In March 2014, the IRS issued Notice 2014-21.[98] The IRS relied on the previously issued guidance from FinCEN in 2013 to determine that virtual currency is property for purposes of reporting income to the IRS.[99] The IRS made a specific point to distinguish Bitcoin from actual fiat currency.[100]

> In some environments, it operates like "real" currency—i.e., the coin and paper money of the United States or of any other country that is designated as legal tender, circulates, and is customarily used and accepted as a medium of exchange in the country of issuance—but it does not have legal tender status in any jurisdiction.[101]

Notice 2014-21 elaborates on specific reporting requirements for gains and losses on dealings in virtual currency.[102] Additionally, it outlines the treatment of income from Bitcoin mining and

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96.   *See* Vesna Harasic, Note, *It's not Just about the Money: A Comparative Analysis of the Regulatory Status of Bitcoin under Various Domestic Securities Laws*, 3 AM. U. BUS. L. REV. 487, 492–3 (2014) ("According to [the *Howey*] test, an investment contract is: (1) an investment of money, (2) in a common enterprise, which is (3) expected to produce profits, due to (4) the efforts of others.") (citing SEC v. W.J. Howey Co., 328 U.S. 293, 298–99 (1946)).

97.   *See* Notice 2014-21, *supra* note 6, at § 1.

98.   *Id*.

99.   *Id*. at § 4.

100.   *Id*. at § 2.

101.   *Id*.

102.   *Id*.

the determination of the tax basis in Bitcoin acquired through mining.[103] There is further guidance on other specific situations; however, these situations are more a reiteration of existing Internal Revenue Service positions and not directly relevant to Bitcoin's treatment as property.[104] Based on the notice's language, the IRS seems more concerned with the fair market value at the moment of conversion to fiat currency rather than the fair market value at the moment of creation or the occurrence of an exchange involving Bitcoin as payment.[105]

Treatment at the moment of creation, however, is critical to a determination of basis and character of income upon realization. Decentralized convertible currencies, like Bitcoin, exist within their own market, unlike centralized convertible virtual currencies.[106] This means a taxpayer could potentially transact solely with Bitcoin in a tax year and never exchange it for "legal tender."[107] The I.R.S. directs much of its concern at non-cryptocurrencies because the Code computes income tax liability in U.S. Dollars. In order to determine income, there is still recognition at the moment an exchange occurs. This creates a problem regarding the treatment of cryptocurrencies like Bitcoin,[108] and their designation as property creates problems with basis and potential tax avoidance.

III. Limitations of the Property Treatment

By declaring Bitcoin to be property, the IRS created, perhaps inadvertently, problems with the manner in which the Internal Revenue Code applies to certain transactions. The property treatment creates issues of determining basis in Bitcoins mined, purchased on

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103.   Notice 2014-21, *supra* note 6, at § 2.

104.   *See id.*

105.   *See id.* at § 3 ("This notice addresses only the U.S. federal tax consequences of transactions in, or transactions that use, convertible virtual currency. . . .").

106.   *See, e.g., What is Bitcoin?*, CoinDesk (Mar. 20, 2015), http://www.coindesk.com/information/what-is-bitcoin/ (providing an example of the extensive nature of the Bitcoin market and its interaction with other fiat currencies).

107.   *See id.* ("And if some part of the network goes offline for some reason, the money keeps on flowing.").

108.   Omri Marian, *Are Cryptocurrencies Super Tax Havens?*, 112 Mich. L. Rev. First Impressions 38, 45–48 (2013).

an exchange, or received in payment. Moreover, clever accounting involving Bitcoin can create tax havens and loopholes where well-informed investors can generate artificial losses or hide gains.[109] This is an incentive for the IRS to create a clearer and less ambiguous method of reporting because Bitcoin investors and holders will likely forego reporting requirements otherwise.[110] Choosing to simply not report income will drive Bitcoin further into the shadows and reinforce the view that virtual currencies are a vehicle for criminal enterprises.[111]

A. Basis Issues

Treating Bitcoin like property forces investors to determine basis in their Bitcoins in order to determine if they have any reportable income (or losses).[112] This can be particularly difficult for those who participate in mining activities.[113] Additionally, classification as long-term and short-term capital gains raises questions concerning determination of holding periods and the purposes for which a taxpayer holds Bitcoin.[114] Simply put, the basis in Bitcoin is the benchmark by which a taxpayer gauges gains or losses for a taxable year.[115] If a taxpayer acquires Bitcoin for $100 (his basis) and the market price of Bitcoin increases to $110 by the end of the year, then the taxpayer has $10 in taxable gains assuming he exchanges it for goods or services.[116] Such use of Bitcoin raises questions of holding period and capital gains.[117] If another taxpayer purchases that Bitcoin for $110, then her basis in that unit of Bitcoin is $110.[118] All of this assumes the taxpayer purchased the Bitcoin with after-tax money. However, when a miner acquires Bitcoin as part of a reward

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109.   *See* Pflaum & Hateley, *supra* note 15, at 1214–15 (2014) (describing problems with Bitcoin and tax evasion prosecutions under the current guidance).

110.   *Id.* at 1212.

111.   *Id.* at 1214.

112.   Jonathan Marino, *Bitcoin Will be a Big Mess for Both Bitcoin Holders and the IRS*, BUSINESS INSIDER (Feb. 19, 2015, 3:11 PM), http://www.businessinsider.com/bitcoin-will-be-a-big-headache-for-both-bitcoin-holders-and-the-irs-2015-2.

113.   *See infra* note 123 and accompanying text.

114.   Baros, *supra* note 62, at 203–215.

115.   26 U.S.C. § 1011 (2012); Notice 2014-21, *supra* note 6, at § 4.

116.   Notice 2014-21, *supra* note 6, at § 4.

117.   Marino, *supra* note 112.

118.   26 U.S.C. § 1011 (2012); Notice 2014-21, *supra* note 6, at § 4.

for participating in the verification process, resolving questions of basis is not so obvious.[119] Consider these issues more closely.

1. Basis for Mining

When a user mines Bitcoin via the verification process, the software rewards the miner with Bitcoin in her wallet.[120] The miner must include the receipt of Bitcoin in his gross income.[121] This raises the question whether the amount of income is the market value of Bitcoin at the moment of mining or at the moment the miner spends or sells it. IRS guidance provides that the value of the currency is the fair market value at the moment it is mined.[122] But this does not end the matter. The nature of the involvement in the activity could cause the IRS to treat it as prize income, earned income, or even capital assets in some instances.[123]

Mining is often a computationally intense process requiring large computer banks to verify transactions.[124] This requires upfront investment in equipment and power,[125] the "tools" of mining. The

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119.   *See* Marino, *supra* note 112 (describing basis problems with mined Bitcoins).

120.   *How does Bitcoin work?*, BITCOIN.ORG, https://Bitcoin.org/en/how-it-works (last visited Feb. 1, 2017).

121.   Notice 2014-21, *supra* note 6, at § 4.

122.   *Id*.

123.   Earned income and prize money are essentially taxed as income in the same way. 26 U.S.C.§ 74 (2016 Supp.). However, prize money might be distinguished for purposes of employment taxes or the occasions when "modified adjusted gross income" is important, e.g., income caps on modified adjusted gross income that limit other benefits such as earned income credit, deductibility of student loan interest, limitation of contribution to an IRA, etc. *See also* American Bar Association Section of Taxation, Comment Letter on Notice 2014-21, (Mar. 24, 2015) [hereinafter ABA Comment], http://www.americanbar.org/content/dam/aba/administrative/taxation/policy/032415comments.authcheck-dam.pdf.

124.   Joshua Kopstein, *The Mission to Decentralize the Internet*, NEW YORKER (Dec, 12, 2013) http://www.newyorker.com/tech/elements/the-mission-to-decentralize-the-internet ("The network's 'nodes'—users running the Bitcoin software on their computers—collectively check the integrity of other nodes to ensure that no one spends the same coins twice. All transactions are published on a shared public ledger, called the 'blockchain[]' . . . .").

125.   *Id*.; *see also* Brito & Castillo, *supra* note 9, at 5–7 (describing the nature and increasing difficulty of Bitcoin mining).

IRS has not provided guidance on whether a miner may deduct the cost of the power and equipment or must amortize such costs over their useful lives.[126] It is also important to note Bitcoin itself, despite being property, does not have a "useful life" for purposes of depreciation or amortization.[127] This is important because in reporting the fair market value of the Bitcoin at the moment of receipt, factoring in expenses decreases taxable income and therefore tax basis in the Bitcoin.[128] Hence, when a miner later transfers the Bitcoin, her gains or losses could be significantly different depending on the treatment of such costs—whether expensed or capitalized.

With taxes, as in comedy, timing matters. Especially with high market volatility, a miner could potentially see a mining reward worth $100 drop to $50 market value. Based on current IRS guidance, the taxpayer would be required to pay tax on ordinary income of $100, while only realizing $50 from the actual exchange and recognizing only a $50 capital loss.[129]

Generally, § 162 of the Internal Revenue Code allows deduction of expenses in relation to a trade or business.[130] However, to the extent Notice 2014-21 depends upon the FinCEN 2013 notice, Bitcoin miners are not engaged in a trade or business.[131] While the IRS has not expressly forbidden miners from deducting operating expenses under § 212, there is no current guidance on how miners should treat expenses.[132] One possible solution would be for the IRS

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126.   Pflaum & Hateley, *supra* note 15, at 1211–12.

127.   This is important because it means the miner could potentially deduct the costs of acquiring Bitcoin instead of being forced to amortize them over the life of the asset. Section 263(a)(1) of the Internal Revenue Code denies a deduction for any amount paid out for construction or permanent improvement of facilities. This extends to the cost of acquisition, construction, or erection of buildings. Treas. Reg. §1.263(a)-2(a); *see also* Comm'r v. Idaho Power Co., 418 U.S. 1 (1974).

128.   *See* Hoffman, *supra* note 15 (describing the "gain-loss" problem under the current IRS treatment).

129.   A taxpayer is limited in how they can use capital losses to offset ordinary income. *See generally* United States v. Generes, 405 U.S. 93 (1972) (holding that in determining whether a bad debt has a "proximate" relation to the taxpayer's trade or business, and thus qualifies as a business bad debt, the proper standard is that of dominant motivation, rather than significant motivation).

130.   26 U.S.C. § 165 (2014 Supp.).

131.   *See* FIN-2013-G001, *supra* note 5.

132.   *See* Notice 2014-21, *supra* note 6.

to provide a *de minimis* exception for small gains and losses to encourage reporting. The IRS already allows this *de minimis* exception with gains or losses on foreign currency exchanges.[133] Unfortunately, the IRS does not have a *de minimis* rule for gains from dealings in property.[134] Finally, a miner could possibly claim the computing was done overseas on a distributed network and therefore shield all the income from U.S. taxation.[135] This is an extreme scenario and would require the income to be generated by a "foreign" corporation. However, the source of the income is still important for tax purposes. Specifically, whether the source of the income is from the sale of property or compensation for work done will have a tax impact.

2. Basis for Capital Gains or Losses

At a more fundamental level, determining basis for capital gains and losses is complicated because how an owner records information concerning capital assets is not always the same as for other assets, especially cash. To be sure, a taxpayer who keeps meticulous records could determine the date from which she held a specific unit of currency or Bitcoin. However, this burden seems excessive for those who would use Bitcoin to make a significant number of purchases. The volatility of markets compounds the problem for merchants willing to accept Bitcoin as payment.[136] Conceivably, they may engage in hundreds or even thousands of transactions daily.

How long a taxpayer has held a unit of virtual currency affects the tax treatment of its disposition. If an investor holds an asset

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133.   26 U.S.C. § 988(e)(2) (2012) ("[N]o gain shall be recognized for purposes of this subtitle by reason of changes in exchange rates after such currency was acquired by such individual and before such disposition. The preceding sentence shall not apply if the gain which would otherwise be recognized on the transaction exceeds $200.").

134.   Hoffman, *supra* note 15.

135.   While U.S. taxpayers are required to report all foreign income, many countries, like China, do not recognize Bitcoin as a store of value. That means when there is a recognition event, the taxpayer simply claims a basis equal to FMV at the moment of redemption, which means zero gain, or taxable income. *See generally* Marian, *supra* note 108 (describing how Bitcoin may be used for tax-evasion purposes).

136.   Baros, *supra* note 62, at 220.

longer than a year, the Code taxes an individual on gain at lower tax rates than it does ordinary income. However, determining the holding period for Bitcoin can be akin to asking how long a person has held one particular dollar bill in her wallet relative to all the others.[137] The possibility of holding or exchanging for other virtual currency further erodes clarity.[138] Additionally, at year-end a Bitcoin holder could report gains and losses from exchanges that consistently generate favorable matches with other capital gains or losses.[139]

The Notice does not specify how a taxpayer should record her inventory of Bitcoin for accounting purposes.[140] When selling Bitcoin, a taxpayer could report the basis from sale on the Bitcoins that have been in her wallet the longest or the shortest.[141] While the Code allows a taxpayer to designate *any* share as the one being sold—not just the first or last—multiple transactions involve collections of Bitcoin fractions and each could have different holding periods. This speaks further to the record keeping issues associated with treating Bitcoin as property.

However, there is a problem if an audit requests the basis of each specific Bitcoin unit sold.[142] Because virtual Bitcoin wallets have no built-in method for differentiating between units,[143] a taxpayer whose Bitcoin wallet has received different Bitcoin amounts at different prices will be unable to maintain accurate bases to report

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137.   *See* Paul N. McCullum & Greg N. Zblyut, *Bitcoin: Property or Currency*, 2015 TAX NOTES TODAY 165-7 (2015) (describing the difficulty in record-keeping for Bitcoin users and related taxation issues).

138.   *See* Josh Ungerman, *IRS Approach to Taxation of Bitcoin*, FORBES (Dec. 4, 2014, 1:02 AM), http://www.forbes.com/sites/irswatch/2014/12/04/irs-approach-to-taxation-of-bitcoin/#2393c097198c (discussing difficulties calculating basis in Bitcoin).

139.   *See* McCullum & Zblyut, *supra* note 137 ("[T]here is no way to ensure that the FMV reported by the seller will serve as the cost basis for the buyer. It would not be unexpected to see two parties using a different cost basis for the same transaction, with each party using the basis that most favors its position.").

140.   Erin M. Hawley & Joseph J. Colangelo, *Bitcoin Taxation: Recommendations to Improve the Understanding and Treatment of Virtual Currency*, ENGAGE, (Nov. 19, 2014), http://www.fed-soc.org/publications/detail/Bitcoin-taxation-recommendations-to-improve-the-understanding-and-treatment-of-virtual-currency.

141.   *See id.*

142.   *Id.*

143.   *Id.*

taxable gains or losses.[144] A Bitcoin wallet does not track cost basis.[145] All it tracks is the "address" of the respective units of Bitcoin within a user's wallet. While it is possible through the blockchain to pinpoint the date of exchange and to determine a market rate on that date, a single transaction could involve so many different units of Bitcoin that a taxpayer could be required to report basis to an extent rivaling complex brokerage statements. With means to obtain such information, unscrupulous Bitcoin holders can claim the benefit of favorable long-term capital gains rates, while the IRS would tax unsophisticated consumers or businesses at ordinary income rates.[146]

Finally, well-informed investors may exploit these lacunae to their (unintended) advantage. As already implied, they can time their dispositions of Bitcoin to generate artificial losses (or gains) to offset (or utilize) gains (or losses).[147] They may also avoid the effects of the Code's wash sales rule. A wash sale is a purchase of a stock or security less than thirty days after a prior sale at a loss.[148] A taxpayer's purpose in executing a wash sale is to sell a stock at the end of a tax year to generate a loss for tax purposes and then repurchase the stock after the New Year to regain an investment position.[149] The Code disallows such losses.[150] This probably is not the case for transactions in Bitcoin since the IRS has not classified

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144. *Id*.

145. *See id*. ("[A] bitcoin wallet that receives different bitcoin amounts at different prices will be unable to maintain accurate specific share identification.").

146. This would be akin to asking a taxpayer which dollar had been in her wallet longest. High-income taxpayers have an incentive to incorrectly report any Bitcoin holdings as long term and there is no way to effectively verify holding periods. *See* McCullum & Zblyut, *supra* note 137.

147. *See also* Hawley & Colangelo, *supra* note 140; s*ee generally* Martin Mushkin, *Churning: An Insidious and Vicious Fraud*, MUSHKINLAW.COM, http://www.mushkinlaw.com/churning-as-fraud.html (last visited Feb. 17, 2017) (describing the fraud in securities investments known as churning).

148. 26 U.S.C. § 1091(a) (2012).

149. *Id*.

150. *Id*.

Bitcoin as either a stock or commodity.[151] If Bitcoin is simply property and not a stock or security, a Bitcoin holder could sell Bitcoins repeatedly and generate artificial losses through churning.[152]

Churning is the rapid sale and purchase of commodities or securities either with the intention of generating commission fees or to manipulate market price.[153] Churning could be profitable in two respects. First, rapid sales and purchases of Bitcoin can create artificial demand, driving up the price of Bitcoin.[154] Conversely, rapid sell offs before the end of the tax year could drive the price of Bitcoin holdings lower. After the New Year, however, the taxpayer reacquires his holdings at the lower price. This drop in price creates an end-of-year loss for the taxpayer. Ultimately, this strategy is not profitable directly and relies on Bitcoin to generate a tax loss that can offset possible capital gains.

If Bitcoin were a stock or security, the IRS would disallow businesses that accept Bitcoin as payment from claiming losses from the exchange of the Bitcoins on an open exchange.[155] If the company exchanged the Bitcoin as a stock or security less than thirty days after accepting payment, the Wash Sale Rule would disallow claiming any losses.[156] The Code, however, treats currency losses as ordinary losses, which would offset ordinary income, but, in the former instance, the lack of clarity on what kind of property Bitcoin is creates a unique disincentive for businesses to transact in Bitcoin.[157]

B. Tax Shelters

There may be specific instances where a Bitcoin holder can create losses to offset taxable income or hide gains entirely. These

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151.   Hoffman, *supra* note 15.

152.   McCulum & Zblyut, *supra* note 137 ("[C]reation of artificial losses via churning [is] a legitimate concern in the stock context. However, this concern does not translate into the Bitcoin realm.").

153.   *Churning*, U.S. SEC. AND EXCHANGE COMMISSION, https://www.sec.gov/answers/churning.htm (last modified Jan. 15, 2013).

154.   Under the property treatment, however, there would be no tax advantage to this strategy as the gains would still have to be reported, regardless of how the IRS chose to classify Bitcoin. *See* 26 U.S.C. § 1091 (2012).

155.   Howard Wiener, et al., *Chomping at the Bit: U.S. Federal Income Taxation of Bitcoin Transactions*, 11 J. TAX'N FIN. PRODUCTS, no. 3, 2013, at 35, 42–43 (2013).

156.   *Id.*

157.   *Id.*

tax loopholes can be even more lucrative than the simple basis adjustments a holder could utilize to reduce her tax liability. Specifically, a taxpayer may be able to use Bitcoin to her advantage in a straddle or a like-kind exchange.

1. Straddles

An investor can utilize a straddle to generate artificial losses for the taxable year to reduce taxable income. A straddle is a unique derivative instrument that allows an investor to hold simultaneous positions both above and below the market price of a commodity.[158] If an investor believes a particular commodity's price will be volatile, he can place a straddle on the commodity to hedge his position. In practice, it works as follows: if the market value of widgets is currently $50, and an investor believes the price will vary by over fifty percent, he will place a straddle with a "call" at $75, and a "put" at $25. If from that point the price of widgets either increases or decreases above his call and put respectively, he can exercise his option. In either case, the investor makes a profit only if he exercises the profitable option and cancels the unprofitable option.[159]

There are generally two types of straddles for tax purposes: basic straddles, and identified straddles.[160] Taxpayers cannot use identified straddles to surreptitiously avoid taxes; therefore, they are not specifically relevant to the current discussion.[161] A basic straddle is constructed by looking at the loss on all closed options up until

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158.   *Straddle*, INVESTOPEDIA, http://www.investopedia.com/terms/s/straddle.asp (last visited Feb. 10, 2017).

159.   *Id.*

160.   Additionally, there is a third type of option identified in the Code as a Qualified Cover Call ("QCC"). 26 U.S.C. § 1092(c)(4)(B) (2012). QCC's are comprised of a long equity position and a short call option. *Id.* The principal rules are (a) the option is granted more than thirty days before it expires, and (b) the option is not deep-in-the-money, as defined by § 1092(c)(4)(C). The term "deep-in-the-money option" means an option having a strike price lower than the lowest qualified benchmark. 26 U.S.C. § 1092(C)(4)(C). The "lowest qualified benchmark" means the highest available strike price, which is less than the applicable stock price. *Id.*

161.   26 U.S.C. § 1092(a)(2)(A)(i) (2012) ("[the allowance of an offsetting loss] shall not apply with respect to positions comprising the identified straddle").

the end of the year and offsetting them against any current unrealized gains.[162] What is important about basic straddles is that it ultimately is at the taxpayer's discretion how the offsetting positions are matched. This is where a taxpayer can be tricky. Realized losses in a basic straddle are matched against lots with *unrealized gains*. However, if the taxpayer has placed call options that will generate little to no gain, then the size of the loss can reduce a taxpayer's taxable income.[163] Normally, a relatively low call position designed to generate a small gain would be considered "in-the-money."[164] Under normal § 1092 rules, this would be considered a Qualified Cover Call and all of the loss would be disallowed at the end of the year.[165] However, as Bitcoin would not fall under that category, the taxpayer would be free to generate a tax loss with loss positions until year-end.

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162.   26 U.S.C. § 1092(a)(1)(A) (2012); *see also* George Michaels, *Tax Implications of Straddles*, G2 FINTECH 9 (Feb. 15, 2012) http://g2ft.com/images/products/Tax%20Implications%20of%20Straddles_G2FinTech.pdf   ("Example [of a] Basic Straddle: Activity: The fund buys a call option for 100 shares of ABC stock on January 5th, 2011. The fund buys a put option for 100 shares of ABC stock on January 6th, 2011. The fund sells the call option on December 1st, 2011 for a loss of $11.00. On December 31st, the put option shows an unrealized gain of $5.00. Result: $5.00 of the $11.00 loss is disallowed. The $6.00 loss is allowed for the tax year of 2011, and the $5.00 loss is allowed in a later taxable year.").

163.   Michaels, *supra* note 162, at 5 ("One important thing to remember is that the candidate position list only contains lots with unrealized gains. So even if your unrealized losses on lots created by the straddle vastly outweigh your unrealized gains, you can still experience dis-allowed [sic] losses on your loss lot.").

164.   *See   In   The   Money*,   INVESTOPEDIA,   http://www.investopedia.com/terms/i/inthemoney.asp (last visited Feb. 10, 2017) ("In the money means that your stock option is worth money and you can turn around and sell or exercise it. For example, if John buys a call option on ABC stock with a strike price of $12, and the price of the stock is sitting at $15, the option is considered to be in the money. This is because the option gives John the right to buy the stock for $12 but he could immediately sell the stock for $15, a gain of $3. If John paid $3.50 for the call, then he wouldn't actually profit from the total trade, but it is still considered in the money.").

165.   *See* 26 U.S.C. § 1092(c)(4) (2012). QCC's can still be straddles. Bitcoin straddles, however, could never qualify under 26 U.S.C. § 1092(c)(4)(B)(i), as Bitcoin is not currently traded on an SEC approved exchange.

After the tax year ends, the investor reestablishes her position on the straddle with no loss but decreases her taxable income.[166] The taxpayer will still profit if the value of Bitcoin decreases, due to the new put positions. Moreover, if any of the call positions generate a profit, the taxpayer can repeat the process to defer the gain another year. The IRS permits this practice on personal property.[167] As there is no clear guidance on whether Bitcoin is a capital asset or a security or commodity, the taxpayer can choose how to treat the investment vehicle.[168] If the taxpayer chooses to treat Bitcoin as a capital asset, she could establish a straddle through an exchange with a very large price range. The volatility of the Bitcoin market would not make these extreme options unlikely.[169] At the end of the tax year, the taxpayer would simply exercise the option with the larger loss and offset her taxable income by a wide margin. Notice 2014-21 does not close this major loophole. The blanket treatment of Bitcoin as property leads directly to this straddle loophole.

2. Like-Kind Exchanges

The second major loophole is the utilization of Section 1031 like-kind exchanges. Often in business, a taxpayer will exchange one capital asset for another instead of paying cash. The Code encourages this practice through Section 1031.[170] If, for example, a taxpayer wishes to exchange a building with a basis of one-million dollars for another building worth two-million dollars, technically the taxpayer has one-million dollars in long-term capital gains. However, Section 1031 allows the taxpayer to defer paying tax on the gain from this exchange of buildings until the disposition of the

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166.   BARBARA BRABEC, HOW TO MAXIMIZE SCHEDULE C DEDUCTIONS & CUT YOUR SELF-EMPLOYMENT TAXES TO THE BONE 107 (2014).

167.   26 U.S.C. § 1092(c)(1) (2012).

168.   *IRS Virtual Currency Guidance: Virtual Currency Is Treated as Property for U.S. Federal Tax Purposes; General Rules for Property Transactions Apply*, IR-2014-36, INTERNAL REVENUE SERVICE (Mar. 25, 2014) ("The character of gain or loss from the sale or exchange of virtual currency depends on whether the virtual currency is a capital asset in the hands of the taxpayer.").

169.   *See, e.g.,* COINDESK, http://www.coindesk.com (follow "Price & Data" dropdown menu; then follow "Bitcoin Price Index) (last visited Feb. 10, 2017) (showing a Bitcoin price index for the previous twenty-four hour period).

170.   26 U.S.C. § 1031 (2012).

second building.[171] This can create major implications for Bitcoin because a like-kind exchange between virtual currencies can create a tax shelter.[172]

The like-kind exchange tax shelter also benefits from the classification of Bitcoin as a capital asset.[173] If a business acquires Bitcoin during the year and the market value increases, under Notice 2014-21 it is required to recognize the gain at the moment of disposition.[174] However, if before the end of the taxable year the taxpayer exchanges Bitcoin for another virtual currency, the taxpayer can classify it as a § 1031 like-kind exchange and defer the tax on the gain.[175] This will affect the basis calculation (carryover) for any future disposition of the virtual currency.[176] While there are exceptions to § 1031, property does not fall under any of those exceptions.[177] There is currently no guidance from the IRS on how a taxpayer should report like-kind exchanges of virtual currency. By defining Bitcoin as property, the IRS allows taxpayers to shield gains by simply shifting Bitcoin investments to other virtual currencies.[178]

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171.   *Id.*

172.   David Kocieniewski, *Major Companies Push the Limits of a Tax Break*, N.Y. TIMES (Jan. 6, 2013) ("With hundreds of thousands of transactions a year, it is hard to gauge the true cost of the tax break for so-called like-kind exchanges, like those used by Cendant, General Electric and Wells Fargo.").

173.   Bitcoin would likely be classified under § 1031(a)(1). It could potentially be classified under § 1031(a)(2) as "other property held primarily for sale." However, under the current nebulous "property" classification, a Bitcoin holder who wished to defer a gain could argue the property was "for investment" under § 1031(a)(1). *See generally* 26 U.S.C. § 1031 (2012).

174.   For a cash-basis taxpayer, there would be no realization. However, for those that would transact in Bitcoin as an investment vehicle on the accrual basis, it would apply here. *See* ABA Comment, *supra* note 123.

175.   *Id.* at 6.

176.   *Id.*

177.   26 U.S.C. § 1031(a)(2)(A)–(F) (2012).

178.   Currently there are over one-hundred virtual currencies actively traded and tracked. *See, e.g., Crypto-Currency Market Capitalizations*, COINMARKETCAP, http://coinmarketcap.com (last visited Feb. 10, 2017).

IV. BENEFITS OF CURRENCY TREATMENT

There is a solution to the problems of treating Bitcoin as property. The Code has an established body of law to handle exchanges and trading in foreign currencies. Section 988 of the Internal Revenue Code sets out the tax treatment of foreign currencies. Bitcoin is inherently more analogous to currency than property.[179] The IRS adopted the property treatment because Bitcoin did not fit under the technical definition of a "foreign currency."[180] Nevertheless, the IRS might have provided guidance to the effect that virtual currency gains and losses should be treated as equivalent to § 988 income. Treating cryptocurrencies as foreign currencies allows the IRS to take advantage of the existing body of law that solves the problems that arise from trying to shoehorn Bitcoin into property treatment.

The spread of Bitcoin is not good for its own sake. The positive effects of reducing intermediaries in financial transactions can usher in an era of secure transactions without the need for a third party intermediary. Much of the success is less about active regulatory encouragement and more about providing a simplified framework without unintended loopholes.[181] If a taxpayer can abuse a loophole, the IRS response would undoubtedly be more regulation and stricter reporting requirements.[182] With each subsequently closed loophole, and increased regulation, Bitcoin becomes a less and less attractive medium of exchange. The IRS should instead strive to "regulate" Bitcoin, and by extension all cryptocurrencies, in a manner that structurally removes loopholes and simplifies its use.[183]

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179.   *See* 26 U.S.C. § 988 (2012).

180.   *See* Notice 2014-21, *supra* note 6, a §§ 1–4.

181.   Evan Hill, *Bitcoin Supporters Say New York Regulations Would Stymie Innovation*, AL JAZEERA AMERICA (July 21, 2014, 5:30 PM), http://america.aljazeera.com/articles/2014/7/21/new-york-crafts-bitcoinlicenses.html ("[Advocates] argued that the regulations would kill innovation in New York, pushing bitcoin exchanges and businesses to more favorable environments in Canada or abroad. Others pointed out that most ordinary consumers wouldn't be affected and could continue buying and exchanging bitcoins and using them to purchase goods.").

182.   *Id*.

183.   *Id*.

Foreign currency treatment solves all of the aforementioned tax loopholes and allows for legitimate treatment of real gains or losses. Prior to the 1986 Tax Reform Act, the IRS treated currency as property, much as Bitcoin is now.[184] However, Congress changed the treatment of foreign currencies because of the problems related to defining currency within existing property frameworks.[185]

Current § 988 law prevents the abuse of currency straddles to generate artificial losses.[186] Further, it prevents like-kind exchange abuse, as a § 1031 income exclusion is not applicable to exchanges of foreign currency, even currencies held for investment.[187] Section 988 treatment is not beneficial simply because it avoids these loopholes. There are also benefits available for consumers, businesses, and investors if the IRS adopted foreign currency treatment.

A. Casual Consumer Benefits

As noted earlier, use of Bitcoin reduces transaction costs.[188] Virtual currencies have the potential to affect consumers and corporations in a wide variety of ways, starting with the immediate advantages of reducing transaction costs and permitting instant, safe execution of large transactions without needing a "middleman" bank or credit card company.[189] Section 988 treatment would give casual users a *de minimis* exception, allowing taxpayers to exclude up to $200 in gains.[190]

Ultimately, many individuals who transact in Bitcoin are casual consumers.[191] In fact, Bitcoin continues to grow in popularity

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184.   2-16 RHOADES & LANGER, U.S. INT'L TAX'N & TAX TREATIES § 16.05.

185.   *Id*. ("Prior to the 1986 Act, the courts, taxpayers and the government consistently tried to characterize foreign currency or label the transaction in which gain or loss was realized on foreign currency. Although foreign currency might be analogized to any number of assets, the most common analogy is to commodities. That analogy is perhaps useful if not taken too literally.").

186.   *See* 7 U.S.C. § 1a(47) (2012); *see also* Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, § 929-Z, 124 Stat. 1376, 1871 (2010) (codified at 15 U.S.C. § 78o).

187.   Hawley & Colangelo, *supra* note 140.

188.   *See supra* Part II.B.

189.   Hawley & Colangelo, *supra* note 140.

190.   26 U.S.C. § 988(e) (2012).

191.   John D. McKinnon & Ryan Tracy, *IRS Says Bitcoin Is Property, Not Currency*, WALL ST. J. (last updated Mar. 25, 2014, 4:30 PM),

as a grassroots currency.[192] The user base is what ascribes value to Bitcoin as a medium of exchange.[193] Easing the onerous reporting requirements associated with the property treatment will continue to make Bitcoin an attractive exchange medium for taxpayers who wish to legitimately use the currency.[194] Section 988 treatment furthers this.

Applying the Personal Transaction exception to an example illustrates how § 988 treatment is preferable. If Alex buys a $500 television with Bitcoin he initially acquired for $400, there is a taxable recognition event. Under the property treatment, Alex has $100 in gains.[195] However, if Bitcoin was foreign currency for tax purposes, Alex can claim the Personal Transaction exclusion and pay no tax.[196] This is one of the most important aspects of § 988 treatment.

Casual consumers want to be able to transact in Bitcoin as if it were ordinary U.S. dollars. The share of the Bitcoin market made up of investors versus consumers is unknown. However, based on the Blockchain ledger, most transactions fall under $500 in average transaction size.[197] Based upon the average fluctuation of Bitcoin on exchanges, a yearly gain of over $200 on consumer sized transactions would be difficult to achieve.[198] For the average consumer, this means Bitcoin would, in essence, be fungible with the U.S. Dollar.

Fungibility is important to solving basis tracking issues as well.[199] If a consumer were to have that same transaction when

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http://www.wsj.com/articles/SB10001424052702303949704579461502538024502.

192.   *Id.*

193.   *See supra* Part II.B.

194.   *Id.*

195.   The classification of the gain is irrelevant for this particular example. It only matters that there is now $100 of taxable income.

196.   26 U.S.C. § 988(e)(2) (2012).

197.   *See What Can You Buy With Bitcoin?*, COINDESK, http://www.coindesk.com/information/what-can-you-buy-with-bitcoins/ (last updated Oct. 19, 2015) (detailing the variety of consumer purchases available with Bitcoin).

198.   *See generally* CoinDesk, http://www.coindesk.com (last visited Oct. 24, 2016).

199.   *See* 26 U.S.C. §§ 1001(a), 1011 (2012). ("The gain from the sale or other disposition of property shall be the excess of the amount realized therefrom

bitcoin is treated as property, a taxpayer would need to report how long they had owned each input into that transaction.[200]   Each Bitcoin wallet could have several dozen hash values to account for the accumulated value of the entire wallet.[201]   A wallet could consist of Bitcoin Units A, B, C, and D, worth $100, $200, $300, and $400 respectively.   Each unit could have a unique holding period and basis as well.   A consumer could purchase a good worth $500 using units A and D or B and C.   Based on the holding period and basis of each unit the transaction involving units A and D could result in completely different tax results than the transaction involving B and C.[202]   A single transaction could be several lines on a tax return for purposes of reporting the recognition event.[203]

By using § 988 treatment, Bitcoin becomes a more fluid medium of exchange.   This combined with the low transaction costs once again demonstrates the attractiveness of Bitcoin as a unit of exchange.   However, § 988 treatment is not just beneficial on the consumer end.   For businesses that choose to accept Bitcoin, foreign currency treatment is also an attractive alternative.

B. Business Benefits

Section 988 treatment offers many of the same benefits to businesses as it does to consumers.   It would solve many of the basis issues for miners and businesses because basis is easily determinable for the entire wallet.[204]   Clarifying tax treatment of Bitcoin as equivalent to foreign currency will lead to greater use of virtual currencies, in turn leading to the development of apps, protocols, and

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over the adjusted basis provided in section 1011 for determining gain, and the loss shall be the excess of the adjusted basis provided in such section for determining loss over the amount realized."); *see also*, Matt Dodson, *Is it Better for Bitcoin to be Taxed as Property or Currency?*, QUORA (Apr. 1, 2014), https://www.quora.com/Is-it-better-for-Bitcoin-to-be-taxed-as-property-or-currency.

200.   § 1001(a), 1011; *see also* Dodson, *supra* note 199.

201.   To give an equivalent example: each dollar bill in a wallet has a unique serial number. In the same way, a Bitcoin wallet can contain upwards of hundreds of unique hash values. So, a $5 transaction can involve several fractions of Bitcoins accumulated over the life of the wallet.

202.   Adam Levitin, *Bitcoin Tax Ruling*, CREDIT SLIPS (Mar. 26, 2014, 9:56 AM) http://www.creditslips.org/creditslips/2014/03/bitcoin-tax-ruling.html.

203.   *See* Dodson, *supra* note 199.

204.   THE LAW OF BITCOIN, *supra* note 27, at 6.

infrastructure that will allow for seamless accounting and tax report-ing for users of virtual currency.[205] Currency treatment allows a company to look to the rate of exchange at year-end and report any gains or losses based on the rate of exchange from the previous hold-ing period.[206] No individual itemization is required, and there is no onerous bookkeeping for companies that choose to accept Bitcoin as payment.[207] In particular, it solves the sales tax problem.

While there is no federal sales tax, the federal government's classification of Bitcoin as property increases the chance states might pass regulation to collect sales tax on all Bitcoin transactions. For example, under the property treatment, if Alice buys one Bitcoin on an exchange, she would owe X% in local sales tax. If Alex then buys a television from Bob, she would owe X% in sales tax (as would be expected), but then Bob would owe X% in sales tax on the Bitcoin he "purchased" from Alice. While technically Bob did not purchase the Bitcoin from Alice, he did barter for the exchange.[208] Under the Internal Revenue Code, barter transactions are a recogni-tion event for income tax purposes.[209] Therefore, in this hypothetical transaction, sales tax would be charged three separate times.[210] While no states have enacted specific guidance on sales tax treat-ment of Bitcoin, the property treatment leaves that possibility open.[211]

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205.   Hawley & Colangelo, *supra* note 140 ("By encouraging the use of vir-tual currency, the IRS can simultaneously encourage virtual currency companies [to] develop technologies to assist their users in properly reporting transactions as necessary, resulting in increased overall taxpayer compliance.").

206.   26 U.S.C. § 988 (2012).

207.   *See generally id*.; Dodson, *supra* note 199.

208.   Robert I. Keller, *The Taxation of Barter Transactions*, 67 MINN. L. REV. 441, 451 (1982).

209.   Comm'r v. Glenshaw Glass Co., 348 U.S. 426, 431–33 (1955); *see also* Cottage Sav. Ass'n v. Comm'r, 499 U.S. 554, 566 (1991) ("[A]n exchange of property gives rise to a realization event so long as the exchanged properties . . . embody legally distinct entitlements."); Treas. Reg. § 1.61-1(a) (2009).

210.   Dodson, *supra* note 199.

211.   Mark J. Kohler, *Be careful of an Audit if Bartering for Goods and Ser-vices or Using Bitcoin*, MARK J. KOEHLER, (last updated May 10, 2016), http://markjkohler.com/be-careful-of-an-audit-if-bartering-for-goods-and-ser-vices-or-using-bitcoin/ ("[W]here the services are rendered at a stipulated price, the value of the services is the stipulated price in the absence of evidence to the contrary."); *see also* Rooney v. Comm'r, 88 T.C. 523 (1987).

Classifying Bitcoin as a currency eliminates the triple sales tax problem. If the IRS shifted its position, it would remove the precedent for states to exploit that opportunity. Sales tax would only be collected once, when a business sold its inventory.[212] Again, triple sales tax would present a unique disincentive for a business to transact in cryptocurrencies.[213] Currency treatment would close off a regulatory roadblock that would disincentivize wider adoption of Bitcoin.

C. Investor Benefits

Besides consumers and businesses who transact in Bitcoin, investors also benefit from foreign currency treatment. With a more certain body of law, higher risk investment vehicles become attractive to more investors.[214] Currency derivatives, like straddles, bring stability to the marketplace.[215] These investment vehicles cause volatile markets to stabilize.[216] This is critical if Bitcoin is to see further adoption in the marketplace. Businesses and investors are less likely to adopt Bitcoin as a form of exchange if the market is overly volatile.[217] Only through increased adoption and use can Bitcoin become a stable and viable medium for exchange.[218]

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212. There would be no reason the transaction would not fall under the standard sales tax rules. *See, e.g.*, TENN. CODE ANN. §§ 67-6-102, 67-6-202 (2016).

213. Dodson, *supra* note 199.

214. Matthew Leising & Silla Brush, *Bitcoin Swaps Near Reality as Tera Creates Legal Framework*, BLOOMBERG (Mar. 24, 2014, 5:04 PM), http://www.bloomberg.com/news/2014-03-24/Bitcoin-swaps-near-reality-as-tera-group-forms-legal-framework.html.

215. *See id.*

216. *See id.*

217. Jerry Brito et al., *Bitcoin Financial Regulation: Securities, Derivatives, Prediction Markets & Gambling*, 16 COLUM. SCI. & TECH. L. REV. 144, 156 (2014) ("Additionally, as a nascent currency, it is very thinly traded and as a result a single large trade can affect the exchange price substantially. Positive news, such as major retailers announcing they will accept the currency, can make the price jump dramatically, while negative news, such as unfavorable regulatory pronouncements, can send the price plummeting.").

218. *See* Johannes Tynes, *Bitcoin: A Future with Digital Currencies*, MONEY HACKER (Aug. 29, 2013), http://www.moneyhacker.com/195/Bitcoin-a-future-with-digital-currencies/.

D. Ostensible Benefits of Bitcoin

In order for Bitcoin to become a useful medium of exchange, it must provide consumers and businesses a net gain over the way they do business without it. The benefits of Bitcoin are greater than they first appear.[219] It is true the specific benefits of Bitcoin are currently hypothetical and require more widespread adoption. More fully discussed below, these benefits include reducing crimes associated with existing payment systems, reducing the transaction costs almost to zero, providing an inflation-proof store of value, and increasing the fluidity of cross border transactions.[220] Providing a smooth and consistent regulatory framework is critical to allowing Bitcoin or any virtual currency to flourish.[221] Many of the harms and disadvantages of Bitcoin grow out of the current patchwork of ineffective regulation.[222]

The security and irreversibility of Bitcoin would reduce the incidence of crime associated with payment. For example, use of Bitcoin would prevent charge-back fraud. Charge-back fraud occurs when a purchaser charges a payment to a credit card, collects the product purchased, and then challenges the transaction as fraudulent to recoup the purchase price.[223] The merchant has the burden of proving the transaction occurred and that the purchasing party entered the transaction.[224] If the merchant fails to verify the transaction, the merchant absorbs the loss on the transaction equal to the item's price.[225] Bitcoin prevents this problem because the transaction is irreversible and verified, just as a cash transaction would be.[226]

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219.   *See* Nakamoto, supra note 54.

220.   *Id.* at 4 (noting that, as an incentive, eventually Bitcoin will be inflation-free).

221.   *See generally id.*

222.   Pflaum & Hateley, *supra* note 15, at 1205–11 ("Bitcoin's potential to improve the lives of the world's poor and disadvantaged justifies both reworking the tax code in order to foster Bitcoin's development and adopting the robust extraterritorial application of the U.S. Criminal Code to help mitigate the risks posed by disintermediation of the financial services industry.").

223.   Pacey, *supra* note 30, at 127.

224.   *Id.*

225.   *Id.*

226.   *Id.*

This could eliminate not only credit card fraud but also potentially replace credit cards as a means of electronic exchange. In the example of Albert and Bamazon, if the transaction was conducted in Bitcoin, there would be no need for Albert's bank or credit card company to be involved. Additionally, Bamazon would receive Bitcoins, which would be as good as cash on an open exchange. The transaction would be verified by the public ledger, and a record would exist in perpetuity that the transaction occurred. Bamazon is assured payment and has no worry that Albert would later claim the transaction was fraudulent.[227] Bamazon paid no credit card authorization fees and assumed no risk of charge back claims. Concurrently, Albert accrued no interest on a credit card purchase and exposed no personal information that could possibly be abused if Bamazon's payment information was hacked.[228]

Bitcoin can also function as a store of value secure against inflationary pressures. In many countries, hyperinflation is a serious problem.[229] Inflation damages domestic economies and hampers foreign trade.[230] However, Bitcoin can be an inflation-proof store of value.[231] After the Cypriot banking crisis, Bitcoin became a haven

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227.   While it is still possible, Albert could *claim* the transaction was fraudulent, a Bitcoin transaction is as close to a cash transaction as it could get. For the that transaction to have been faked, it would require a person to acquire not only the public key ("the address") but also the private key ("the password") associated with Albert's holdings of Bitcoin. However, the burden lies on Albert in that situation, not the retailer. While not directly analogous, the law supports a similar finding in the realm of commercial paper. A holder in due course, or a person with the rights of a holder in due course under the shelter doctrine, takes the instrument free from many defenses. *See* U.C.C. §§ 3-302, 3-306 (AM. LAW INST. & UNIF. LAW COMM'N 2016). In the same way, a holder of Bitcoin receives payment under the presumption the Bitcoin was properly transferred.

228.   The private key associated with Albert's Bitcoin is never actually seen by Bamazon or stored in any Bamazon database. *See* Nakamoto, supra note 54, at 6.

229.   *See* Jeff Fong, *Bitcoin Price 2013: How Bitcoin Could Help the World's Poorest People*, MIC: POLICY (May 14, 2013), http://www.policymic.com/articles/41561/Bitcoin-price-2013-how-Bitcoin-could-help-the-world-s-poorest-people.

230.   *Id*.

231.   *See* Pflaum & Hateley, *supra* note 15.

currency for many in the country to avoid the risk of inflation.[232] Bitcoin's security, together with the low transaction costs to transfer its ownership across borders, make it an ideal medium of payment that, by extension, would ease international investment.[233] Generally, cross border remittances require a third-party intermediary, increasing the cost;[234] Bitcoin eliminates such costs.[235]

Encouraging the free use of Bitcoin can prevent hyperinflation from devastating economies. The cost of hyperinflation can render a country's economy all but unrecoverable.[236] One of the easiest ways to combat hyperinflation is to offer an alternative currency.[237] During the height of hyperinflation in Zimbabwe, the government attempted to restrict use of foreign currencies, but, as a result, demand for the dollar was merely driven underground.[238] In an example more directly tied to Bitcoin, the Russian central bank has largely failed to stop their national currency from falling in value.[239] As the value of the ruble fell, currency traders began dumping their holdings in the Russian currency.[240] During this time, transaction volumes between the ruble and Bitcoin spiked 250 percent, despite Russia's classification of Bitcoin as illegal.[241]

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232.   *Bitcoins Surge After Cyprus Bank Raid*, ACTIVISTPOST (Mar. 19, 2013), http://www.activistpost.com/2013/03/cyprus-bank-raid-Bitcoins.html.

233.   *Beyond Silk Road: Potential Risks, Threats, and Promises of Virtual Currencies: Hearing Before the S. Comm. on Homeland Sec. and Governmental Affairs*, 113th Cong. 29–31 (2013) (statement of Patrick Murck, General Counsel, the Bitcoin Foundation).

234.   *See* Pflaum & Hateley, *supra* note 15, at 1191–93.

235.   *Id.* at 1192.

236.   Caleb Watney, *Can Bitcoin Challenge Hyperinflation?*, POLICY INTERNS (June 22, 2015), https://policyinterns.com/2015/06/22/can-bitcoin-challenge-hyperinflation ("Zimbabwe provides one of the most devastating examples of how crippling hyperinflation is for an economy. At its peak in November of 2008, the inflation rate was at the astronomically high rate of 79,600,000,000% per month and prices were doubling every 25 hours. The human cost of hyperinflation has been just as tremendous; current economic data on Zimbabwe is sparse, but some measures of unemployment have it as high as 95% and the poverty rate at 72%.").

237.   *Id.*

238.   *Id.*

239.   *Id.*

240.   *Id.*

241.   Watney, *supra* note 236.

Bitcoin can provide instant, peer-to-peer transactions that the government is powerless to prevent because of Bitcoin's decentralized nature.[242] No longer can corrupt governments levee fees or custom or border officials require "facilitation payments" in regard to international transactions.[243] In the same way Bitcoin reduces the number of "hands" touching Albert's and Bamazon's transaction, it reduces the number of parties involved in international transactions. The fewer links in the chain, the cheaper it is. The expansion of Bitcoin should not be viewed as an anarchic creep of shadow transactions. It should instead be encouraged and welcomed as a rapid, fluid, and cheap medium of exchange suited for a twenty-first century economy.

V. CONCLUSION

Bitcoin is emerging from its nascency and is now a market force that has grown into billions of dollars in spending power. However, the IRS, by sticking to strict definitional requirements, decided to classify Bitcoin as property. Without a full clarification of all the possible classifications under the property treatment, the IRS has created loopholes and bookkeeping difficulties. The solution to these problems only requires one-step. The IRS should issue guidance that Bitcoin is not to be treated as property but equivalent to foreign currency and, therefore, subject to the reporting requirements of Internal Revenue Code § 988. In doing this, the IRS will smooth the path for broader adoption and investment in Bitcoin and virtual currencies generally.

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242.   *Id*.
243.   Pflaum & Hateley, *supra* note 15, at 1191–93.