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TAX POLICY FOR THE WIDER CRYPTOVERSE

Arild B. Doerge*

Abstract

The rapid rise of Bitcoin and other “cryptoassets” offers many interesting technological capabilities but also comes with uncertainty and volatility in the markets for these assets. The diversity of types of cryptoassets is increasing rapidly, while public understanding and government policy have generally been slow to take account of this diversity. In regard to taxation policy related to cryptoassets, current IRS guidance merely categorizes cryptoassets as general property. The policy implications of this classification run contrary to fundamental goals of tax policy by inhibiting how people use cryptoassets, making compliance more complex and ambiguous than necessary, and taxing cryptoasset transactions differently than analogous currency transactions and like kind exchanges in addition to contradicting broader domestic and foreign policy goals. A more optimal tax policy would include (1) a general currency classification for cryptoassets; (2) a de minimis exemption for use of cryptoassets as a medium of exchange; and (3) an additional non-recognition exemption for gains realized on all transactions involving only cryptoassets, such as like kind exchanges. This proposed model would greatly improve the efficiency, equity, and administrability of taxation related to cryptoassets in addition to better serving public policy in other areas.

I. Introduction

Since its inception in 2009, Bitcoin has become a household name surrounded by awe, skepticism, ambition, and often bewilderment. In less than a decade, Bitcoin’s valuation has reached over \$300 billion, sparking an ongoing debate about its utility, price volatility, and future value.¹ In

* Arild B. Doerge, Texas A&M University School of Law, J.D., 2019. This article was written under a graduate research fellowship for the Hagler Institute for Advanced Study at Texas A&M University. Special thanks to Hagler Institute fellow Professor Richard A. Epstein of the University of Chicago & New York University, Professor Max Raskin of New York University, and Professor Vanessa Casado Perez of Texas A&M School of Law for all their help developing these ideas.

¹ See Roger Aitken, *Bitcoin Surges Past \$8,000 As ‘Crypto’ Market Cap Passes \$300B, But Where Next?*, FORBES (July 26, 2018, 4:18 PM), <https://www.forbes.com/sites/rogeraitken/2018/07/26/bitcoin-surges-past-8000-as-crypto-market-cap-passes->

parallel, there has been similar growth in a wider market for cryptographically secured assets technically similar to Bitcoin (“cryptoassets” generally).² Innovation in this market has been increasing rapidly, even if public understanding of the technology and market is lagging significantly.³ Developers and proponents of cryptoassets maintain that these new technologies have the potential to revolutionize society and help address major global issues, while other experts are skeptical. Though the ultimate impact is unclear, cryptoassets are already proving to have a significant impact, even if often in niche ways. Regardless of the ultimate impact of the technology, the burgeoning cryptoasset market has already caused huge amounts of capital gains (and losses) for people producing and exchanging these assets, which raises many questions of taxation policy related to this new market.

In the United States, there has been no successful legislative action at a federal level to address taxation of cryptoassets specifically, though some proposals have been made in Congress that were not enacted.⁴ The existing Internal Revenue Code has been applied to identify cryptoassets as simple property for determining taxable income.⁵ This brings its own costs and benefits as it gives a mostly transparent way for cryptoasset buyers and sellers to report their income but also creates odd incentives and complications due to the unique nature of cryptoassets compared to simple commodities. With a new and innovative asset class, tax policy must grapple with how to best promote the public policy goals of encouraging innovation, simplifying compliance and encouraging honesty, and furthering U.S. economic and national security interests domestically and internationally.

This article argues that a more optimal tax policy to accomplish these goals should (1) abandon the current simple property classification, (2)

300b/#7aaa25ef5372 (stating that the market cap valuation is calculated based on the average exchange price for the asset and the number of tokens in circulation).

² Different sources cited in this article use the terms “cryptocurrency,” “cryptoasset,” and “virtual currency” more or less interchangeably. This article primarily uses “cryptoasset,” the broadest of the terms, unless intentionally adopting the terminology of a specific source being cited.

³ See Alex Tapscott, *Cryptocurrency Is Just One of Seven Types of Cryptoassets You Should Know*, QUARTZ (July 25, 2018), <https://qz.com/1335481/cryptocurrency-is-just-one-of-seven-types-of-cryptoassets-you-should-know/> (discussing the major types of cryptoassets and distinguishing between “cryptocurrencies” and “cryptoassets” in general).

⁴ These legislative efforts are discussed in detail below. See discussion *infra* Section III-c.

⁵ See Virtual Currency Guidance, I.R.S. Notice 2014-21 (Apr. 14, 2014), <https://www.irs.gov/pub/irs-drop/n-14-21.pdf>.

adopt a non-recognition policy for gains realized on in-kind transactions of cryptoassets, and (3) adopt a *de minimis* exemption for gains from the use of cryptoassets as a medium of exchange in the manner of currency. This article focuses on the policy for federal income taxation of individuals as related to cryptoassets, but the same principles are similarly applicable to state-level taxation. Given the potential importance of the technology and the recent explosion in cryptoasset valuation, a new income tax policy is necessary to both keep the Internal Revenue Code workable for tax payers and to serve the greater foreign and domestic policy of the United States.

II. State of the Cryptoverse

Bitcoin remains the largest player in an increasingly crowded market of cryptoassets. The core innovation of Bitcoin is the ability to perform person-to-person transactions over a decentralized and public ledger of “blocks” of transactions (commonly called the “blockchain” paradigm) made possible through calculated incentives and strong cryptography built into the Bitcoin software.⁶ The public nature of the blockchain allows decentralized verification of transactions without the need for a third-party intermediary. As the original Bitcoin whitepaper states, Bitcoin was designed to function as a “peer-to-peer version of electronic cash.”⁷ This trustless electronic cash feature allows Bitcoin to provide electronic transactions without the need for the third-party intermediaries required for traditional electronic transactions such as wire transfers, credit card transactions, and electronic checks.⁸ But since Bitcoin’s advent and notoriety there has been a near-exponential growth of other cryptoassets—generally referred to as “altcoins”—that run the gamut from currency-type assets very similar to Bitcoin with minor technical modifications to much more abstract and (potentially) revolutionary assets offering a wide variety of different features. Despite scarce notoriety among the general public compared to Bitcoin, these altcoins have taken over a sizable share of the overall cryptoasset market, reducing Bitcoin’s

⁶ Satoshi Nakamoto, *Bitcoin: A Peer-to-Peer Electronic Cash System*, BITCOIN.ORG, <https://bitcoin.org/bitcoin.pdf>.

⁷ *Id.*

⁸ *Id.*

relative share of total valuation to less than 40% from over 94% in 2013, comprising a wider “Cryptoverse” beyond merely Bitcoin.⁹

A. Innovation, Variety, & Applications of Cryptoassets

In common media discussions, if there is discussion of the wider market beyond merely Bitcoin, the general term “cryptocurrency” is often used.¹⁰ This common usage reflects both the notoriety dominance of Bitcoin as a first-mover and the state of knowledge of the general public and media. “Cryptoasset” is a more apt term as it better captures the rapidly increasing breadth of innovation in the market beyond simply currency-like assets.¹¹ Bitcoin and its early peers can aptly be described as currency-type assets, providing the classic monetary functions of medium of exchange, store of value, and unit of account. For example, Litecoin, the next significant cryptoasset created two years after Bitcoin, was very similar to Bitcoin in adopting the same blockchain ledger model with only minor technical differences relating to transaction verification time, supply of tokens, and creation method.¹² Many other currency-type competitors to Bitcoin have come since, offering certain purported advantages over Bitcoin in areas such as transaction speed, decentralization, and user incentives.¹³ However, there has been much more innovation in cryptoassets that go beyond mere currency functions.

i. Platform Cryptoassets

The second major cryptoasset after Bitcoin is the Ethereum platform that, while capable of currency functions similar to Bitcoin, offers far more robust features such as self-executing “smart contracts” that allow parties to the agreement to create a binding future transaction to be executed electronically “all without middlemen or counterparty risk.”¹⁴ Ethereum launched in 2015 and is billed as a “programmable blockchain” that allows for developers to create applications on the decentralized

⁹ See Tapscott, *supra* note 3.

¹⁰ *Id.*

¹¹ *Id.*

¹² See generally Robert McMillan, *Ex-Googler Gives the World a Better Bitcoin*, WIRED (Aug. 30, 2013), <https://www.wired.com/2013/08/litecoin/>.

¹³ See, e.g., *id.*

¹⁴ See generally ETHEREUM PROJECT, <https://www.ethereum.org/> (last visited Feb. 2, 2019).

Ethereum network.¹⁵ While the Bitcoin blockchain is best described as a “shared world ledger,” the Ethereum network promises to deliver a “shared world computing platform that can flexibly but securely run any application users want to code.”¹⁶ Some early uses of the Ethereum platform include real property deed transactions.¹⁷ The Ethereum system is built around use of its currency token, known as “Ether,” to regulate the use of the network. The valuation of Ether has grown exponentially to its current total valuation of over \$75 billion, nearly half that of Bitcoin.¹⁸

Just as Bitcoin has many competitors as a currency-type cryptoasset, Ethereum is also one of many competing platform cryptoassets. The Neo “smart economy” blockchain,¹⁹ for example, has rapidly increased in total valuation from under \$6 million in early 2017 to a peak of over \$10 billion in early 2018.²⁰ Neo offers many of the same distributed computing and smart contract capabilities as the Ethereum platform, but also provides several advantages such as superior transaction processing speed and being cryptographically secure even after the eventual development of quantum computing that threatens to make the encryption algorithms used by other cryptoassets obsolete.²¹ But while Neo and Ethereum are two of the larger platform cryptoassets, there are many other competitors.²²

One of the more innovative and controversial features of platform cryptoassets is the ability to conduct “Initial Coin Offerings” (ICO) where developers will launch a new cryptoasset within the, for example, Ethereum network and conduct an initial distribution of tokens for the

¹⁵ See *What is Ethereum?*, ETHEREUM HOMESTEAD DOCUMENTATION, <https://buildmedia.readthedocs.org/media/pdf/ethereum-homestead/latest/ethereum-homestead.pdf> (last visited Sept. 26, 2018).

¹⁶ Vitalik Buterin, *What is Ethereum?*, COIN CENTER (Mar. 9, 2018), <https://coincenter.org/entry/what-is-ethereum>.

¹⁷ SMART LAW, <https://smartlaw.io> (last visited Sept. 26, 2018).

¹⁸ See *Ethereum (ETH) Price, Charts, Market Cap, and Other Metrics*, COINMARKETCAP, <https://coinmarketcap.com/currencies/ethereum/> (last visited Sept. 26, 2018); see also *Bitcoin (BTC) Price, Charts, Market Cap, and Other Metrics*, COINMARKETCAP, <https://coinmarketcap.com/currencies/bitcoin/> (last visited Sept. 26, 2018).

¹⁹ *NEO Smart Economy*, <https://neo.org/> (last visited Sept. 9, 2018).

²⁰ See *NEO (NEO) Price, Charts, Market Cap, and Other Metrics*, COINMARKETCAP, <https://coinmarketcap.com/currencies/neo/> (last visited Sept. 26, 2018).

²¹ Kaustav, *Reasons Why NEO Could Be the Strongest Cryptocurrency of 2018*, GLOBAL COIN REPORT (Apr. 17, 2018), <https://globalcoinreport.com/reasons-why-neo-could-be-the-strongest-cryptocurrency-of-2018/>.

²² See Tapscott, *supra* note 3.

new cryptoasset in exchange for Ether tokens at a set exchange rate.²³ Ethereum, Neo, and other platforms have facilitated numerous ICOs, some which have been well-received innovations²⁴ while others have been nothing more than thinly veiled attempts to defraud unwitting investors.²⁵ Because ICOs can often resemble Initial Public Offerings (IPO) but outside the extensive regulatory IPO framework, many governments have taken swift action to regulate the use of ICOs.²⁶ In the U.S., the Securities and Exchange Commission, which has ruled broadly in the past that cryptoassets are not securities, has stated that most assets distributed through ICOs probably are.²⁷ Still, the ICO framework has a legitimate and innovative function provided by platform cryptoassets to launch new cryptoasset projects and promote innovation.

ii. Privacy Oriented Cryptocurrencies

It is often pointed out, due to common misunderstanding by the general public, that Bitcoin is not anonymous.²⁸ Despite the common perception of Bitcoin as covert and anonymous, law enforcement often is able to easily track Bitcoin payments due to the immutable public ledger framework.²⁹ However, with some care and effort is possible to use Bitcoin anonymously through the use of transaction mixing applications, Virtual Private Networks, or the Tor anonymity network.³⁰ Still, since Bitcoin,

²³ *What Is an ICO?*, BITCOIN MAGAZINE, <https://bitcoinmagazine.com/guides/what-ico> (last visited Oct. 10, 2019).

²⁴ See Jonnie Emsley, *10 Most Successful ICOs of All Time*, INVEST IN BLOCKCHAIN (Mar. 12, 2018), <https://www.investinblockchain.com/10-most-successful-icos/>.

²⁵ Ana Alexandre, *New Study Says 80 Percent of ICOs Conducted in 2017 Were Scams*, COINTELEGRAPH (July 13, 2018), <https://cointelegraph.com/news/new-study-says-80-percent-of-icos-conducted-in-2017-were-scams>.

²⁶ Kenneth Rapoza, *After Crackdown, Nearly Every Chinese ICO Returns Cash to Investors*, FORBES (Sept. 25, 2017), <https://www.forbes.com/sites/kenrapoza/2017/09/25/after-crackdown-nearly-every-chinese-ico-returns-cash-to-investors/#51510bce19ff>.

²⁷ SEC: *Some Crypto Coins Are Securities (Not Bitcoin)*, PYMNTS (June 14, 2018), <https://www.pymnts.com/news/regulation/2018/cryptocurrency-bitcoin-ethereum-securities/>.

²⁸ *Some Things You Need to Know*, BITCOIN.ORG, <https://bitcoin.org/en/you-need-to-know> (last visited Sept. 26, 2018).

²⁹ Margi Murphy, *Bitcoin Is Not Anonymous and Is Easy to Track, Says Met Police Chief*, THE TELEGRAPH (Mar. 7, 2018, 10:22 AM), <https://www.telegraph.co.uk/technology/2018/03/07/bitcoin-not-anonymous-easy-track-says-met-police-chief/>.

³⁰ *6 Ways to Guarantee Anonymity When Making Bitcoin Transactions*, COINSUTRA (June 9, 2019), <https://coinsutra.com/anonymous-bitcoin-transactions/>.

other cryptoassets have been developed that aim to be truly anonymous while transactions and balances are just as secure, but mathematically impossible to trace or analyze.³¹ For example, Monero and ZCash are two such privacy-based cryptocurrencies and have gained in popularity and valuation.³² These privacy oriented assets generally provide currency-like features similar to Bitcoin, but with the added benefit of being truly anonymous.

iii. Commodity & Property Tokens

Blockchain technology can also be used to create tokens to record and transfer ownership of non-virtual assets. For example, the U.K. company The Royal Mint Limited (RM) uses blockchain tokens to allow digital trading of gold held in reserve by the company by using the token as a certificate of ownership of the physical gold.³³ Customers purchase the Royal Mint Gold (RMG), and each RMG token is backed by one gram of gold bullion physically held by RM.³⁴ This allows customers to transfer ownership of physical gold throughout the world without using any third-party facilitators, exchange accounts, or the like that would be required to perform more typical commodity trading. This same principle can also be applied to commodity trading generally. Similarly, there are other blockchain projects to create land registries in which the legal ownership of property is more clearly defined and “issues such as who is the legal owner of a property can be remedied.”³⁵

iv. Utility Tokens

Many cryptoassets increasing in value are tokens created for a particular, usually non-transactional, purpose. For example, the digital tokens for blockchain-based decentralized cloud storage blockchains have become more valuable recently. These tokens from several similar projects,

³¹ See Justin Connell, *The Race Towards Truly Anonymous Cryptocurrency Is On*, BITCOIN.COM (Feb. 17, 2017), <https://news.bitcoin.com/the-race-towards-truly-anonymous-cryptocurrency/>.

³² *Id.*

³³ PHYSICAL GOLD DIGITALLY TRADED, THE ROYAL MINT, <https://www.royalmint.com/invest/bullion/digital-gold/> (last visited Sept. 29, 2018).

³⁴ *Id.*

³⁵ Frederick Reese, *Land Registry: A Big Blockchain Use Case Explored*, COINDESK (Apr. 19, 2017), <https://www.coindesk.com/blockchain-land-registry-solution-seeking-problem/>.

such as Sia,³⁶ Filecoin,³⁷ and Storj,³⁸ “leverage[] blockchain technology to create a data storage marketplace that is more robust and more affordable than traditional cloud storage providers.”³⁹ Essentially, these platforms use their respective token to regulate and structure incentives for maintenance and usage of decentralized cloud storage. This scheme allows users to store data in traditional centralized cloud storage services,⁴⁰ but without the privacy concerns of a centralized provider having access to the data⁴¹ and at a lower cost.⁴²

Another example of a utility-based project is Ripple,⁴³ which uses its XRP token to “to facilitate fiat money transfer in an economical and highly efficient manner, ripple is used by multiple banks and institutions.”⁴⁴ Ripple also claims to have working partnerships with major banking and financial firms including “UBS, Santander, BMO and American Express.”⁴⁵ Unlike many other cryptoasset projects, Ripple is not decentralized and focuses on integration with the established banking and financial industry rather than creating a decentralized, trustless utility.⁴⁶ This has not prevented investors from accumulating XRP in hopes of

³⁶ SIA, <https://sia.tech/> (last visited Sept. 27, 2018).

³⁷ FILECOIN, <https://filecoin.io/> (last visited Sept. 27, 2018).

³⁸ STORJ, <https://storj.io/> (last visited Sept. 27, 2018).

³⁹ SIA, <https://sia.tech/> (last visited Sept. 27, 2018).

⁴⁰ See, e.g., GOOGLE ONE, <https://one.google.com/about> (last visited Sept. 27, 2018) (providing cloud storage service for \$1.99 per month for 100 GB of data storage, or \$0.02 per GB of data per month).

⁴¹ See, e.g., Joseph Turow, *Google Still Doesn't Care About Your Privacy*, FORTUNE (June 28, 2017),

<http://fortune.com/2017/06/28/gmail-google-account-ads-privacy-concerns-home-settings-policy/> (last visited Sept. 27, 2018).

⁴² See, e.g., SIASTATS, https://siastats.info/storage_pricing (last visited Oct. 10, 2019) (listing storage price of \$0.39 per terabyte per month—or \$0.039 per 100 GB of storage per month—on the Sia platform).

⁴³ RIPPLE, <https://ripple.com/> (last visited Sept. 27, 2018).

⁴⁴ David Goodboy, *3 Types of Cryptocurrencies You Need to Know*, NASDAQ (Jan. 15, 2018), <https://www.nasdaq.com/article/3-types-of-cryptocurrencies-you-need-to-know-cm905488> (last visited Sept. 27, 2018).

⁴⁵ *Id.*

⁴⁶ Mike Orcutt, *No, Ripple Isn't the Next Bitcoin*, MIT TECH. REV. (Jan. 11, 2018), <https://www.technologyreview.com/s/609958/no-ripple-isnt-the-next-bitcoin/> (explaining that the Ripple project's goal is “become a “bridge currency” that many financial institutions use to settle cross-border payments faster and more cheaply than they do now using global payment networks, which can be slow and involve multiple middlemen” and “was never meant to be another Bitcoin”).

increased valuation, and this speculation has led to spectacular price increases and volatility.⁴⁷

The preceding examples are merely illustrative and certainly insufficient to give the full picture of the vast and diverse innovation ongoing in the cryptoasset market. It should also be noted that these categories are not mutually exclusive and some cryptoassets may have attributes of multiple categories; for example, a platform token can be used as a currency type asset, utility token, or commodity or property token depending on how it is used. There are now thousands of emerging projects in the market that range from unscrupulous copies of the Bitcoin program to completely reinvented concepts for decentralization using blockchain and other paradigms.⁴⁸ But what must be emphasized is just how recent and rapid this innovation has been. Even the first alternative to Bitcoin (essentially just a copy of the open source Bitcoin program) was not created until 2011, and more innovative projects, like Ethereum launched in 2015, were created much more recently.⁴⁹ This explosion of innovation may be merely the ‘big bang’ and infancy of the Cryptoverse.

B. Bitcoin’s Role as Reserve Currency of the Cryptoverse

Amid the explosion of innovation (and speculation) in the Cryptoverse, Bitcoin has come to be a de facto reserve currency for exchanging between different cryptoassets. Due to a lack of regulation and rapid innovation, cryptoassets are obtained most commonly through an enormous collection of exchange websites scattered around the globe. There are hundreds of these largely unregulated—though increasingly regulated—exchanges which facilitate the swapping of cryptoassets for national currencies and other cryptoassets; the daily exchange volume on top exchanges routinely range in the billions or hundreds of millions of

⁴⁷ *Id.* (discussing XRP’s price increase of over 700% in January 2018).

⁴⁸ See Garrick Hileman & Michel Rauchs, *Global Cryptocurrency Benchmarking Study*, CAMBRIDGE CTR. FOR ALT. FIN. 13, 16 (2017), https://www.jbs.cam.ac.uk/fileadmin/user_upload/research/centres/alternative-finance/downloads/2018-12-ccaf-2nd-global-cryptoasset-benchmarking.pdf.

⁴⁹ See *id.* at 15.

U.S. dollars while dozens of smaller exchanges have daily volumes in the millions.⁵⁰

These exchanges are based around trading pairs, very similar to traditional currency exchange trading pairs,⁵¹ which facilitate the trading between governmental fiat currencies and various cryptoassets.⁵² For example, two of the largest exchanges, Coinbase⁵³ and Bitstamp,⁵⁴ each offer trading pairs between U.S. dollars (USD) and Bitcoin, Litecoin, and Ether among other cryptoassets. This allows in a single transaction for the buyer to receive cryptoassets by paying USD to the seller in direct exchange, with a small percentage fee paid to the exchange. As exchanges are dispersed globally, the trading pairs with fiat currencies differ depending on where the exchanges are located; but USD and Euros are unsurprisingly the most common fiat currencies used in such trading pairs.⁵⁵

When it comes to trading one cryptoasset for another, the situation becomes more complicated. Exchanges frequently offer trading pairs for cryptoassets only through Bitcoin, though this has been changing recently.⁵⁶ This means that, for example, someone who has Litecoin tokens wanting to obtain Ether tokens will, on many exchanges, must first trade the Litecoin for Bitcoin and then trade the Bitcoin for Ether. Complicating

⁵⁰ See *Is Coinbase Regulated?*, COINBASE, <https://support.coinbase.com/customer/en/portal/articles/2689172-is-coinbase-regulated> (last visited Feb. 20, 2019) (explaining that Coinbase is licensed to engage in money transmission in most U.S. jurisdictions); *24 Hour Volume Rankings*, COINMARKETCAP, <https://coinmarketcap.com/exchanges/volume/24-hour/> (last visited Sept. 27, 2018) (providing data on trading volumes on exchange sites).

⁵¹ See *Currency Pair*, INVESTOPEDIA, <https://www.investopedia.com/terms/c/currency-pair.asp> (last visited Oct. 10, 2019).

⁵² See generally Prableen Bajpai, *A Look at The Most Popular Bitcoin Exchanges*, INVESTOPEDIA (June 25, 2019), <https://www.investopedia.com/articles/investing/111914/look-most-popular-bitcoin-exchanges.asp>.

⁵³ COINBASE, <https://www.coinbase.com/> (last visited Sept. 27, 2018).

⁵⁴ BITSTAMP, <https://www.bitstamp.net/> (last visited Sept. 27, 2018).

⁵⁵ See *Most Active Cryptocurrency Pairs*, INVESTING.COM, <https://www.investing.com/crypto/top-pairs> (last visited Sept. 27, 2018).

⁵⁶ See Daily Hodl Staff, *Bitcoin Reliance Breakaway: Bittrex Launching Cardano (ADA) and Zcash (ZEC) Fiat Pairs*, THE DAILY HODL (Aug. 29, 2018), <https://dailyhodl.com/2018/08/29/bitcoin-reliance-breakaway-bittrex-launching-cardano-ada-and-zcash-zec-fiat-pairs/> (“Currently, [exchange] customers need to deposit fiat into their accounts, buy a gateway coin, such as Bitcoin (BTC), and then purchase the vast majority of altcoins that are listed on the exchange. This is the case for numerous exchanges that list altcoins in addition to Bitcoin, where BTC-ADA and BTC-ZEC are common trading pairs.”).

matters further are the ever-shifting exchange rates of cryptoassets and notorious volatility of cryptoasset prices.⁵⁷ This means that the hypothetical trade of Litecoin for Ether requires a minimum of two transactions (and two often substantial exchange fees⁵⁸) and may require several smaller transactions at varying exchange rates, possibly spread over hours or days. This also means that demand for Bitcoin is increased merely by its reserve currency role driving a significant portion of the demand for Bitcoin, which both increases the price of Bitcoin and tends to tie demand in the wider Cryptoverse with Bitcoin specifically. This also tends to reinforce the public perception that Bitcoin is the only cryptoasset of significance, to the exclusion of the vast amount of innovation in the rest of the market. For example, Bittrex,⁵⁹ another large exchange site with trading pairs for “nearly 200 different digital coins” has operated for years without offering any trading pairs with USD and relying heavily on Bitcoin as the reserve currency for the exchange.⁶⁰ As discussed below, this creates a very complex challenge for cryptoasset investors and users to comply with prevailing U.S. tax law and Internal Revenue Service (IRS) guidance.

C. Early Impact of Cryptoassets

Despite criticism that Bitcoin and cryptoassets have limited utility,⁶¹ there have been several notable early uses of cryptoassets. The cases of use range from providing a relatively stable currency, to people living under repressive and unstable governments, to facilitating illicit activities such as

⁵⁷ Arthur Inuma, *Why Is the Cryptocurrency Market So Volatile: Expert Take*, COINTELEGRAPH (Feb. 27, 2018), <https://cointelegraph.com/news/why-is-the-cryptocurrency-market-so-volatile-expert-take>.

⁵⁸ See, e.g., *Coinbase Pricing & Fees Disclosures*, COINBASE, https://support.coinbase.com/customer/en/portal/articles/2109597-coinbase-pricing-fees-disclosures?b_id=13521 (last visited Nov. 3, 2019) (detailing the Coinbase fee structure that can reach close to 15% for small purchases or be as low as 1.49% for larger transactions).

⁵⁹ BITTREX, <https://bittrex.com/> (last visited Nov. 3, 2019).

⁶⁰ Lily Katz, *Bittrex Gets Bank Agreement to Help You Buy Bitcoin with Dollars*, BLOOMBERG (May 31, 2018, 8:04 AM), <https://www.bloomberg.com/news/articles/2018-05-31/bittrex-gets-bank-agreement-to-help-you-buy-bitcoin-withdollars?srnd=cryptocurrencies> (explaining that Bittrex has recently “forged banking agreements that will allow some customers to trade in U.S. dollars after years of operation without direct USD trading pairs.”).

⁶¹ See, e.g., Paul Krugman, *Transaction Costs and Tethers: Why I’m a Crypto Skeptic*, N.Y. TIMES (July 31, 2018), <https://www.nytimes.com/2018/07/31/opinion/transaction-costs-and-tethers-why-im-a-crypto-skeptic.html>.

organized crime and covert state espionage, to some adoption in the commercial financial industry. These uses for cryptoassets, while still in the infancy of the Cryptoverse, have been far from trivial.

i. Economic Turmoil in Venezuela

The ongoing instability and increasingly likely collapse of the Venezuelan state⁶² exemplifies one of the most often-touted advantages of a decentralized, private, and virtual currency option like Bitcoin. Amid rampant inflation and state-imposed price controls, Venezuelans have turned to Bitcoin as a means of survival.⁶³ In many cases, Bitcoin is the only way for people of Venezuela to pay for basic needs like medication, food, and basic household goods; “[w]hile the price of bitcoin has been highly volatile, Venezuelans with few or no other means of converting their bolivars into another currency believe it is a safer bet than the Venezuelan bills that steadily depreciate from one day to the next.”⁶⁴ Indeed, the Venezuelan Bolivar lost over 99.9% of its value over 2016–17, making the price volatility of Bitcoin attractive by comparison.⁶⁵ The Venezuelan government fixes official exchange rates that are a mere fraction of black market exchange rates, meaning that the people are faced with the choice between using black markets to exchange Bolivars for

⁶² See generally Alan Taylor, *Fleeing Venezuela's Crushing Economic Crisis*, THE ATLANTIC (Aug. 21, 2018), <https://www.theatlantic.com/photo/2018/08/fleeing-venezuelas-crushing-economic-crisis/568021/>; *Signs of Fraying in Military Support for Venezuela President*, THE ASSOCIATED PRESS (Jan. 21, 2019), <https://www.apnews.com/82563347aa414f1fab9c80ac87e607e9>.

⁶³ Christine Armario & Fabiola Sanchez, *Venezuelans Seeing Bitcoin Boom as Survival, Not Speculation*, THE ASSOCIATED PRESS (Dec. 13, 2017), <https://www.apnews.com/f7ccc4ea283746f28b261cabeaf8f0c5>.

⁶⁴ *Id.*

⁶⁵ *Bolívar Blues: Venezuela's Currency Plumbs Unknown Depths*, THE ECONOMIST (Jan. 25, 2018), <https://www.economist.com/finance-and-economics/2018/01/25/venezuelas-currency-plumbs-unknown-depths>.

other currencies or finding an alternative means of storing value if they wish to save.⁶⁶

ii. Escaping Sanctions in Iran

Ahead of the U.S. withdrawal from the 2015 nuclear deal with Iran, the Iranian government began to explore the possibility of launching its own oil-backed cryptoasset in a move that mirrored previous efforts by the Venezuelan government in the face the ongoing collapse of its currency.⁶⁷ Like the Venezuelan “petro,” the Iranian state-backed cryptoasset is not likely to have success in being accepted in exchange for fiat currencies.⁶⁸ However, Iranian citizens seeking to preserve the value of their assets in the face of the rapid depreciation of the Iranian rial have been turning to Bitcoin and other cryptoassets to send funds across borders.⁶⁹ The chairman of Iran’s economic commission acknowledged the following:

Despite the fact that a minority of the people of our country are customers of virtual currencies and their new markets, more than \$2.5 billion have fled the country following their purchase while a majority of people active in this area are in it for speculative activities and macro profits.⁷⁰

iii. Runaway Monetary Inflation in Argentina

Though not yet to the same extent as Venezuela, Argentina has struggled with inflation, with the Argentinian peso losing more than half its value compared to the United States Dollar in 2018 and inflation estimated to exceed forty percent in 2018 alone.⁷¹ In response,

⁶⁶ Fred Imbert, *Venezuela Announces a New Exchange Rate—But This One Probably Won’t Help, Either*, CNBC (Mar. 28, 2017, 2:13 PM), <https://www.cnbc.com/2017/03/28/venezuelan-just-announced-a-new-currency-rate--and-nobody-cares.html?&qsearchterm=Venezuela%20announces%20a%20new%20exchange%20rate>.

⁶⁷ Billy Bambrough, *Iran Sanctions: People Are Turning to Bitcoin to Get Money Out*, FORBES (May 10, 2018), <https://www.forbes.com/sites/billybambrough/2018/05/10/iran-sanctions-people-are-turning-to-bitcoin-to-get-money-out/#45033333613a>.

⁶⁸ *Id.*

⁶⁹ *Id.*

⁷⁰ *Id.*

⁷¹ Maximilian Heath, *Cryptocurrency ATMs Coming to Argentina to Exploit Peso Volatility*, REUTERS (Oct. 3, 2018, 2:13 PM), <https://www.reuters.com/article/us-crypto->

entrepreneurs began installing Bitcoin-enabled ATMs to allow Argentinians to buy and sell Bitcoin with pesos.⁷² U.S. company Athena Bitcoin plans to have 1,600 of these ATMs operating in Argentina during 2019.⁷³ Similarly, while current ATMs are generally only enabled to buy and sell Bitcoin, they “will eventually include other cryptocurrencies like litecoin, ethereum and bitcoin cash.”⁷⁴ The practical implication of these ATMs is to allow people to buy small amounts of Bitcoin to convert their savings from pesos to Bitcoin and at least partially avoid the previously mentioned devaluation of their pesos.

iv. Illicit Uses

The use of cryptoassets to facilitate criminal activities cannot be denied.⁷⁵ For example, the now infamous “WannaCry” ransomware cyberattack in 2017 involved a computer virus that “encrypts the [victim’s] computer, essentially locking the user out of files, folders and drives on that computer,” while the victim is prompted to pay \$300 worth of Bitcoin to the attackers’ address.⁷⁶ Bitcoin and other cryptoassets are routinely involved in a variety of criminal activities, such as “tax evasion, money laundering, contraband transactions, and extortion – not to mention the theft of cryptocurrency itself.”⁷⁷ Some critics claim that criminal activity is responsible for most, if not all, of the current market value of Bitcoin.⁷⁸

currencies-argentina/cryptocurrency-atms-coming-to-argentina-to-exploit-peso-volatility-idUSKCN1MD2FK.

⁷² *Id.*

⁷³ *Id.*

⁷⁴ *Id.*

⁷⁵ See generally Eric Engle, *Is Bitcoin Rat Poison? Cryptocurrency, Crime, and Counterfeiting (CCC)*, 16 J. HIGH TECH. L. 340 (2016); Sarah Gruber, Note, *Trust, Identity, and Disclosure: Are Bitcoin Exchanges the Next Virtual Havens for Money Laundering and Tax Evasion?*, 32 QUINNIPIAC L. REV. 135, 139 (2013).

⁷⁶ Sheera Frenkel, *Global Ransomware Attack: What We Know and Don't Know*, N.Y. TIMES (June 27, 2017), <https://www.nytimes.com/2017/06/27/technology/global-ransomware-hack-what-we-know-and-dont-know.html>.

⁷⁷ Jason Bloomberg, *Using Bitcoin or Other Cryptocurrency to Commit Crimes? Law Enforcement Is onto You*, FORBES (Dec. 28, 2017, 12:18 PM), <https://www.forbes.com/sites/JasonBloomberg/2017/12/28/using-bitcoin-or-other-cryptocurrency-to-commit-crimes-law-enforcement-is-onto-you/#2c97fae23bdc>.

⁷⁸ *Id.*

A 2018 Australian study estimates that nearly half of Bitcoin transactions, and one quarter of Bitcoin users, are associated with illegal activity.⁷⁹

However, there are drawbacks and technical complexities that make using cryptoassets for criminal activity difficult. For example, the public nature of Blockchain ensures that much of the information surrounding illicit transactions is made publicly available.⁸⁰ This opens the door for many new analysis applications that allow law enforcement to track criminal uses of cryptoassets in ways that are not possible for more common illicit transactions with cash.⁸¹ Similarly, the larger cryptoasset exchanges that allow conversion into national currencies can often be identified when suspected criminals try to convert their cryptoassets, allowing authorities to compel the exchanges to release the personal information of the suspected criminals.⁸² Also, illicit use of cryptoassets may be partly due to a broader global trend of moving to cashless transactions, rather than exclusively to the unique advantages of using cryptoassets for criminal activity.⁸³

v. Speculation, Investment, & Public Understanding

Perhaps the most notorious impact of cryptoassets has been speculation and the incredible capital gains (and losses) of investors. The exponential increase in the market value of cryptoassets has created a new class of “Bitcoin billionaires,”⁸⁴ but also many investors have lost huge sums money due to the volatility of cryptoasset prices, prompting

⁷⁹ Sean Foley, Jonathan R. Karlson & Tālis J. Putniņš, *Sex, Drugs, and Bitcoin: How Much Illegal Activity Is Financed Through Cryptocurrencies?*, SSRN ELEC. J. (Dec. 14, 2018), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3102645.

⁸⁰ See Mike Orcutt, *Criminals Thought Bitcoin Was the Perfect Hiding Place, But They Thought Wrong*, MIT TECH. REV. (Sept. 11, 2017), <https://www.technologyreview.com/s/608763/criminals-thought-bitcoin-was-the-perfect-hiding-place-they-thought-wrong/>.

⁸¹ *Id.*

⁸² *Id.*

⁸³ See, e.g., Maddy Savage, *Why Sweden Is Close to Becoming a Cashless Economy*, BBC (Sep. 12, 2017), <https://www.bbc.com/news/business-41095004> (explaining that only approximately 7% of transactions involve cash in the E.U. and U.S. and that “the use of cash will most likely be reduced to ‘a very marginal payment form’ by 2020.” (citation omitted)).

⁸⁴ See Harrison Jacobs, *Meet the Richest People in Bitcoin and Cryptocurrencies, Who Are Worth More Than \$17 Billion Combined*, BUSINESS INSIDER (Feb. 15, 2018, 10:51 AM), <https://www.businessinsider.com/bitcoin-billionaires-forbes-richest-people-in-cryptocurrency-2018-2>.

concerns of suicide.⁸⁵ Amid this uncertainty, there continues to be strong interest among retail investors in Bitcoin and other cryptoassets.⁸⁶ The U.S. Securities and Exchange Commission (“SEC”) continues to evaluate proposals for cryptoasset Exchange Traded Funds (“ETF”),⁸⁷ while several alternative investment instruments are already available to investors through European entities.⁸⁸ Similarly, even more skeptical analysts view cryptoasset as a potential alternative to gold and precious metals as a long-term “hedge-like” asset, even if cryptoassets do not ultimately become widely used as currencies.⁸⁹ Even financial industry giant Goldman Sachs is “moving ahead with plans to set up what appears to be the first Bitcoin trading operation at a Wall Street bank.”⁹⁰

With increased speculation, public understanding of the underlying technology of cryptoassets is lacking.⁹¹ This lack of understanding certainly fuels the speculation bubble effect as people purchase cryptoassets as investments more because of its performance as a financial asset rather than any intended use of the technology.⁹² For example, one

⁸⁵ See Daniel Roberts, *Crypto Market Crash Prompts Suicide Concerns*, YAHOO! FINANCE (Aug. 15, 2018), <https://finance.yahoo.com/news/crypto-market-crash-prompts-suicide-concerns-135248250.html>.

⁸⁶ Joseph Young, *Large Retail Investors See an Opportunity in Bitcoin Despite Price Decline*, CCN (April 11, 2018), <https://www.ccn.com/large-retail-investors-see-an-opportunity-in-bitcoin-despite-price-decline/>; see generally Edmund Mokhtarian & Alexander Lindgren, *Rise of the Crypto Hedge Fund: Operational Issues and Best Practices for an Emergent Investment Industry*, 23 STAN. J.L. BUS. & FIN. 112 (2018).

⁸⁷ See Muyao Shen, *The SEC Will Decide on 9 Bitcoin ETFs in the Next 2 Months*, COINDESK (Aug. 8, 2018, 9:10 PM), <https://www.coindesk.com/the-sec-will-decide-on-9-bitcoin-etfs-in-the-next-2-months/>.

⁸⁸ See generally Joseph Young, *Forget the Bitcoin ETF, an ETN Already Allows US Investors to Invest in BTC*, CRYPTOSLATE (Aug. 18, 2018, 4:00 AM), <https://cryptoslate.com/forget-the-bitcoin-etf-an-etn-already-allows-us-investors-to-invest-in-btc/> (discussing a Swedish bitcoin ETN and its move into United States market); GRAYSCALE, <https://grayscale.co/> (last visited Sept. 27, 2018).

⁸⁹ See Crystal Kim, *Bitcoin: The New Gold?*, BARRON'S (Jan. 11, 2018, 9:13 AM), <https://www.barrons.com/articles/bitcoin-is-the-new-gold-says-goldman-1515624448>.

⁹⁰ Nathaniel Popper, *Goldman Sachs to Open a Bitcoin Trading Operation*, N.Y. TIMES (May 2, 2018), <https://www.nytimes.com/2018/05/02/technology/bitcoin-goldman-sachs.html>.

⁹¹ See Jameson Lopp, *Nobody Understands Bitcoin (And That's OK)*, COINDESK (Mar. 11, 2017), <https://www.coindesk.com/nobody-understands-bitcoin-thats-ok>.

⁹² See Adrian Zmudzinski, *90% of Bitcoin Usage is Speculation — 10% Transactions Says Luno CEO*, COINTELEGRAPH (Aug. 26, 2019), <https://cointelegraph.com/news/90-of-bitcoin-usage-is-speculation-10-transactions-says-luno-ceo>.

of the most curious successes of the early Cryptoverse has been Dogecoin, a currency-like asset created in 2013 explicitly as a joke based on a popular internet meme at the time.⁹³ Despite its inauspicious origin, Dogecoin continues to maintain a market value generally parallel to the wider cryptoasset market, reaching a total valuation of over \$2 billion in early 2018 when most cryptoassets also reached their most recent peak price levels.⁹⁴ This success appears to be almost entirely due to name recognition and speculation in the cryptoasset market generally, exemplified recently when the popular zero fee stock investment application Robinhood included Dogecoin among the cryptoassets to be made available for trading on the Robinhood platform.⁹⁵

While proponents maintain that cryptoassets are merely the infancy of a technological revolution on par with the development of the Internet,⁹⁶ critics and mainstream media outlets have proclaimed with increasing frequency that the industry is finally dead.⁹⁷ One of the most common refrains against Bitcoin and cryptoassets generally is a comparison⁹⁸ to the infamous Dutch tulip speculation bubble and crash of 1637.⁹⁹ Regardless of whether cryptoassets are truly going to revolutionize the economy or are merely a passing speculation bubble, income tax policy must grapple with the implications of the cryptoasset phenomenon.

⁹³ Frank Chaparro, *A Cryptocurrency Created as a Joke About a Dog Meme Now Has a Market Cap Above \$2 billion*, BUSINESS INSIDER (Jan. 7, 2018), <https://www.businessinsider.com/dogecoin-cryptocurrency-has-market-cap-above-2-billion-2018-1>.

⁹⁴ *Id.*

⁹⁵ Mike Brown, *Why Is Dogecoin Rising? Cryptocurrency Parody Soars After Robinhood Support*, INVERSE (July 19, 2018), <https://www.inverse.com/article/47201-why-is-dogecoin-rising-cryptocurrency-parody-soars-after-robinhood-support>.

⁹⁶ See Ari Paul, *It's 1994 In Cryptocurrency*, FORBES (Nov. 27, 2017, 12:51 PM), <https://www.forbes.com/sites/apaul/2017/11/27/its-1994-in-cryptocurrency/#fe25931b28a3>.

⁹⁷ See, e.g., Gareth Jenkinson, *Tulips, Bubbles, Obituaries: Peering Through the FUD About Crypto*, COINTELEGRAPH (June 24, 2018), <https://cointelegraph.com/news/tulips-bubbles-obituaries-peering-through-the-fud-about-crypto>.

⁹⁸ Fred Imbert, *JPMorgan CEO Jamie Dimon Says Bitcoin is a 'Fraud' that Will Eventually Blow Up*, CNBC (Sept. 12, 2017, 3:47 PM) <https://www.cnbc.com/2017/09/12/jpmorgan-ceo-jamie-dimon-raises-flag-on-trading-revenue-sees-20-percent-fall-for-the-third-quarter.html>.

⁹⁹ See generally ANNE GOLDDGAR, *TULIPMANIA: MONEY, HONOR, AND KNOWLEDGE IN THE DUTCH GOLDEN AGE* (U. Chicago Press 2007) (detailing the crash of the tulip market).

D. Predominant Types of Cryptoasset Transactions

From a taxation perspective, cryptoasset transactions tend to fall into three main categories.¹⁰⁰ First and most commonly associated with Bitcoin and cryptoassets is a currency-type transaction, where the cryptoasset is exchanged for a good or service of some kind.¹⁰¹ The obvious example is the use of Bitcoin for a point of sale purchase for goods or similar purchase over the internet. Even the tokens used in platform and utility-based cryptoassets function as a sort of currency to accomplish tasks on their respective decentralized networks.¹⁰² For example, the token for a cloud storage blockchain application is used to purchase storage capacity on the network; similarly, cryptoassets are also used to transfer value, akin to a wire transfer.¹⁰³ As discussed above, residents of Venezuela and Iran to receive aid from family members abroad when wire transfers of traditional currency are not possible due to governmental constraints.

The second major transaction type is a like-kind exchange where one cryptoasset is traded for another.¹⁰⁴ This occurs, as discussed above, very commonly on online exchanges where users trade cryptoassets. Further, because many exchanges only allow customers to purchase a prominent cryptoasset (usually Bitcoin) with traditional currency directly, to convert traditional currency to a less prominent cryptoasset a customer will have to conduct an additional like kind exchange.¹⁰⁵ So routinely, exchange customers will, for example, must purchase Bitcoin with USD from a bank account or through a credit card, then perform a like kind exchange of the Bitcoin for the less prominent cryptoasset desired.¹⁰⁶ Similarly, ICOs, discussed above, generally involve a like kind exchange.¹⁰⁷ For example, when an ICO is conducted on the Ethereum network, developers of the

¹⁰⁰ See I.R.S. Notice 2014-21, 2014-16 IRB 938-940 (providing guidance on tax treatment of the predominant types of transactions for which virtual currencies are used).

¹⁰¹ See *id.* (providing guidance on tax treatment of transactions where virtual currency is exchanged for goods, services, or other property).

¹⁰² See section II(a) above for analysis of these kinds of cryptoassets.

¹⁰³ See section II(a) above for analysis of these kinds of cryptoassets.

¹⁰⁴ See I.R.S. Notice 2014-21, 2014-16 IRB 938-940 (providing guidance on tax treatment of transactions where virtual currencies are exchanged or sold).

¹⁰⁵ See *supra* II(b).

¹⁰⁶ See *supra* II(b).

¹⁰⁷ See *supra* II(a)(i).

new cryptoasset will offer the new tokens in exchange for ether in a like kind exchange.¹⁰⁸

The third prominent transaction type involves the generation of new units of cryptoassets.¹⁰⁹ New units are generally created through the respective “mining” software algorithm for the asset.¹¹⁰ However, new units can also be created through software “forks,” where a group of developers decides to alter the software for a cryptoasset and create a distinct variation as a separate cryptoasset. Essentially, a fork means that the blockchain for an existing cryptoasset is duplicated and some of the features of the algorithm are changed. Thus, after the fork, there will still be the original legacy version of the cryptoasset with the same features and blockchain, as well as a new modified version of the cryptoasset with a separate blockchain after the time of the fork. For example, a 2017 fork of the Bitcoin blockchain created a new cryptoasset known as “Bitcoin Cash” with both having the same historical blockchain ledger.¹¹¹ In effect, every Bitcoin wallet balance and identity was duplicated to create two distinct blockchains with identical ledgers before the fork and unique ledgers after. In either case, a new cryptoasset is created.

Tax policy should take account of these main three ways that people use cryptoassets to create effective tax policy. Just as a matter of practicality, tax policy needs to be consistent with how taxpayers use cryptoassets to be effective. But beyond practicality, tax policy should also serve larger public policy goals. The above discussed innovation, diversity, and potential of the cryptoasset market should also inform the taxing authority to promote broader public policy goals.

¹⁰⁸ See *supra* II(a)(i).

¹⁰⁹ See I.R.S. Notice 2014-21, 2014-16 IRB 938, 939 (providing guidance on tax treatment for “mining” virtual currency)

¹¹⁰ Bitcoin Magazine, *What is Bitcoin Mining?*, BITCOIN MAGAZINE, <https://bitcoinmagazine.com/guides/what-bitcoin-mining/> (last visited Oct. 1, 2018).

¹¹¹ See generally Mike Orcutt, *Wait, Bitcoin Just Did What?*, MIT TECH. R. (Aug. 1, 2017), <https://www.technologyreview.com/s/608483/wait-bitcoin-just-did-what/> (discussing the politics and technical details of the Bitcoin-Bitcoin Cash fork of 2017).

III. Prevailing Income Tax Policy for Cryptoassets

A. The Property Classification & Its Implications

The most recent guidance from the IRS on the treatment of cryptoassets for tax purposes was released in 2014.¹¹² The IRS acknowledges that cryptoassets, referred to as “virtual currency,” often “operate[] like ‘real’ currency – i.e., the coin and paper money of the United States . . . ,” may be “held for investment,” and are “a digital representation of value that functions as a medium of exchange, a unit of account, and/or a store of value.”¹¹³ Using Bitcoin as an example, the IRS notes that cryptoassets “can be digitally traded between users and can be purchased for, or exchanged into, U.S. dollars, Euros, and other real or virtual currencies.”¹¹⁴ In regards to tax treatment, the IRS provides flatly that “[f]or federal tax purposes, virtual currency is treated as property” and that the “[g]eneral tax principles applicable to property transactions apply to transactions using virtual currency.”¹¹⁵ Courts have also adopted a simple property classification.¹¹⁶ The motivating force behind this now five-year-old policy seems to have been the narrow need to define a way for speculators in the early days of Bitcoin to report their returns.¹¹⁷ Despite the incredible growth and changes in the cryptoasset market since, the policy has not been modified.

This tax treatment means that every time a person exchanges any amount of a cryptoasset for another cryptoasset, a national currency, or any good or service, it creates a recognized gain or loss for tax purposes. This is the general tax treatment for sales and exchanges of property, which requires that the seller of the property calculate the taxable gain or loss on the transaction by subtracting the “adjusted cost basis” paid to acquire the property from the “amount realized” in exchange for the

¹¹² I.R.S. Notice 2014-21, 2014-16 IRB 938 (Apr. 14, 2014).

¹¹³ *Id.*

¹¹⁴ *Id.*

¹¹⁵ *Id.*

¹¹⁶ *See, e.g.*, Hashfast Technologies LLC v. Lowe, 2016 WL 8460756 at *5 (Bankr. N.D. Cal. Feb. 5, 2016) (treating Bitcoin as property and not currency in the context of a bankruptcy proceeding).

¹¹⁷ *See* Sam Hampton, Note, *Undermining Bitcoin*, 11 WASH. J.L. TECH. & ARTS 331, 332–33 (2016).

property (e.g. the dollar amount received as payment or the fair market value of property received as payment).¹¹⁸

For example, when a person purchases an amount of Bitcoin from an online exchange for a total cost of \$1,000 and then later exchanges that same amount Bitcoin for a piece of property with a fair market value of \$1,100, this transaction creates a positive recognized amount (or a gain)¹¹⁹¹⁰⁶ of \$100 which “must be included in gross income” for tax purposes.¹²⁰¹⁰⁷ This calculation must be done for every transaction where a taxpayer sells any amount of a cryptoasset or exchanges it for any good, service, or other asset (including a different cryptoasset) to determine the net gain or loss from all recognized amounts in sum. Therefore, because of how cryptoassets are used, especially in currency-type transactions and like-kind exchanges, individual taxpayers could have thousands of individual transactions involving several different cryptoassets, creating a substantial record-keeping burden to determine a cost basis and gain or loss on each transaction.

In response to this complex record-keeping burden, firms like CoinTracker offer tax software to analyze all of a taxpayer’s cryptoasset transactions for the year to calculate cost basis and capital gains.¹²¹ This service purports to greatly reduce the onerous record-keeping burden of recording and calculating gains and losses for every transaction, but service plans also cost up to \$1,000 for the 2018 tax year.¹²² This leaves taxpayers with the choice between grappling with onerous record-keeping on their own or paying an additional fee for professional tax preparation.

B. Taxation of Mining & Software Forks

Generation of cryptoasset units through mining and blockchain forks, discussed above, create additional complexity and ambiguity for taxpayers. Mining is explicitly addressed in the current IRS guidance which requires that “fair market value of the virtual currency as of the date of receipt is

¹¹⁸ Sales and Other Disposition of Assets, I.R.S. Pub. 544, 3–4 (2017).

¹¹⁹ See Capital Gains and Losses, I.R.S. Topic No. 409 (Mar. 13, 2018), <https://www.irs.gov/taxtopics/tc409> (explaining that this gain will be either a short-term or long-term capital gain depending on the length of time between the purchase of the cryptoasset and the sale).

¹²⁰ Sales and Other Disposition of Assets, I.R.S. Pub. 544, 3 (2017).

¹²¹ COINTRACKER, <https://www.cointracker.io/> (last visited Oct. 31, 2018).

¹²² COINTRACKER PLANS, <https://www.cointracker.io/tax/2018/plans> (last visited Oct. 31, 2018).

includible in gross income.”¹²³ More simply put, when a taxpayer successfully performs the mining process and creates new units of a cryptoasset, the fair market value of each new unit is recognized as taxable income at the time it is generated. To determine “fair market value,” the IRS guidance provides that “taxpayers will be required to determine the fair market value of virtual currency in U.S. dollars as of the date of payment or receipt” which may be done by reference to the contemporaneous exchange rates on exchanges that trade the virtual currency for USD.¹²⁴ This is can be especially complex because, due to the volatility of cryptoasset prices and variation between exchanges, there may be no clear way to determine what a reasonable fair market value is at the time of a specific mining operation.

In the case of software forks, however, the IRS has provided no clear guidance despite the fact that “[t]he need for IRS guidance on this topic is increasing in urgency as cryptocurrency forks become more common.”¹²⁵ Applying current tax law to cryptoasset forks indicates that the IRS would likely view forks similar to “[t]reasure troves” which, like “prizes, awards, and similar forms of income trigger immediate realizations under the law.”¹²⁶ For example, when Bitcoin was forked to create Bitcoin cash, this created a valuable asset, which likely created a realized and recognized taxable event for every person with a non-zero balance in a Bitcoin wallet at the time of the fork.¹²⁷ When “realiz[ing] the income of treasure troves, the amount realized should equal the fair market value at the time of acquisition.”¹²⁸ In the case of the Bitcoin Cash fork, the onus is likely on the taxpayer to have determined the fair market value of the newly created Bitcoin Cash and reported it as income.

However, along with the general difficulty in determining a precise fair market value, the case of income from a software fork creates additional complexity because it is not clear under current tax law at what time the

¹²³ Virtual Currency Guidance, I.R.S. Notice 2014-21 § 4 (Apr. 14, 2014), <https://www.irs.gov/pub/irs-drop/n-14-21.pdf>.

¹²⁴ *Id.*

¹²⁵ Brad Polizzano, *Cryptocurrency: Compliance Challenges and IRS Enforcement*, THE TAX ADVISOR, <https://www.thetaxadviser.com/issues/2018/oct/cryptocurrency-compliance-challenges-irs-enforcement.html> (last visited Oct. 1, 2019).

¹²⁶ Nick Webb, *A Fork in the Blockchain: Income Tax and the Bitcoin/Bitcoin Cash Hard Fork*, 19 N.C. J.L. & TECH. ON. 283, 304 (2018).

¹²⁷ *Id.* at 304–305.

¹²⁸ *Id.* at 304.

cryptoasset is actually acquired. If the taxpayer is to assume that the acquisition was the instant of the first transaction on the Bitcoin Cash blockchain, then determining fair market value is quite ambiguous as there were no exchanges trading Bitcoin Cash for several days after the fork. Similarly, the price on exchanges fluctuated wildly in the first days being listed on exchanges, so determining a fair market value presents a challenge.

Acquisition most likely occurs “only if and when the taxpayer demonstrates his intent to exercise dominion and control over” the forked cryptoasset.¹²⁹ This provides a clear time for acquisition, but still leaves the ambiguity of calculating a fair market value.

C. Attempts at Reform

The complexities and ambiguities inherent in the prevailing IRS guidance have not gone unnoticed by legislators. In the 113th Congress, Representative Steve Stockton (Texas) sponsored the Online Market Protection Act of 2014 which proposed to reclassify virtual currencies as currency for a moratorium period of five years, doing away with the property classification.¹³⁰ This proposal was explicitly aimed to overturn the guidance of IRS Notice 2014–21 and require that the Federal Government not disfavor the use of virtual currencies.¹³¹ Congress, however, declined to enact the Act, leaving IRS Notice 2014–21 and the property classification as the prevailing rule for cryptoasset tax treatment.¹³²

During the drafting of the major 2017 tax reform package (known as the “Tax Cuts and Jobs Act”¹³³), Representatives Jared Polis (Colorado) and David Schweikert (Arizona) sponsored the Cryptocurrency Tax Fairness Act of 2017 to create an exemption to the IRS code for *de minimis*

¹²⁹ Deloitte, *When (and If) Income is Realized from Bitcoin Chain-Splits*, at 04, <https://www.deloitte.com/content/dam/Deloitte/us/Documents/financial-services/us-fsi-tax-bitcoin-chain.pdf> (last visited Feb. 21, 2019).

¹³⁰ Online Market Protection Act of 2014, H.R. 5892, 113th Cong. § 5(c) (2015).

¹³¹ *Id.* at § 5(b).

¹³² GovTrack, *H.R. 5892 (113th): Online Market Protection Act of 2014*, <https://www.govtrack.us/congress/bills/113/hr5892> (last visited Oct. 13, 2018).

¹³³ William G. Gale, Hilary Gelfond, Aaron Krupkin, Mark Mazur, & Eric Toder, *Effects of the Tax Cuts and Jobs Act: A Preliminary Analysis*, BROOKINGS INSTITUTE (June 14, 2018), <https://www.brookings.edu/research/effects-of-the-tax-cuts-and-jobs-act-a-preliminary-analysis/>.

virtual currency transactions, defined as any transaction in which the otherwise taxable gain does not exceed \$600 USD.¹³⁴ Though not ultimately enacted with the tax reform package, this proposal would have treated gains on cryptoasset transactions very similar to gains on exchanges involving foreign currencies.¹³⁵ Not only would this proposal have greatly reduced the recordkeeping burden for taxpayers who use cryptoassets as a medium of exchange similar to a foreign currency, it would have also greatly reduced taxable events for the trading of one cryptoasset for another on exchanges. However, the act's failure in the legislature again leaves the IRS Notice 2014–21 guidance in place as the prevailing policy for tax treatment of cryptoassets.

D. Tax Treatment Outside the U.S. & International Competition

While many nations have done little more than apply prior tax law to the Cryptoverse, the decision to classify cryptoassets as property by the U.S. is not consistent with the classification by other major developed nations, putting the U.S. at risk of foregoing some of the benefits of this economic and technological innovation.¹³⁶ Major European countries, like the U.K. and Germany, have recently decided to regulate cryptoassets under a currency classification “reflect[ing] a broad international trend which allows companies to leverage Bitcoin’s potential as a rapid cross-border payment system.”¹³⁷ The prevailing IRS guidance deviates from this broad international trend toward uniformity in classifying cryptoassets as currency.¹³⁸

IV. Rules for Non-Recognition & Foreign Currency

A. Non-Recognition Transactions

Under the U.S. tax code, certain transactions are not recognized for tax purposes even when there is an actual gain or loss realized by the

¹³⁴ Cryptocurrency Tax Fairness Act of 2017, H.R. 3708, 115th Cong. § 1 (2017).

¹³⁵ I.R.C. § 988(e)(2) (2012) (providing for *de minimis* exemptions for gains or losses on foreign currency transactions where the gain or loss is less than \$200 USD).

¹³⁶ See Ficcgaglia, Gregory V., Note, *Heads or Tails: How Europe Will Become the Global Hub for Bitcoin Business if the United States Does Not Reexamine its Current Regulation of Virtual Currency*, 40 SUFFOLK TRANSNAT’L L. REV. 103 (2017).

¹³⁷ *Id.* at 136.

¹³⁸ *Id.* at 136-37.

transaction. Transactions that receive non-recognition treatment fall under two general categories: (1) like kind transactions and (2) the involuntary conversion transactions.¹³⁹ The latter category, not generally analogous to cryptoasset transactions, primarily involves situations where property is stolen, destroyed, or condemned and proceeds from the conversion are used to purchase “property similar or related in service or use.”¹⁴⁰ Like kind transactions, conversely, are much more comparable cryptoasset transactions on online exchanges where cryptoassets are exchanged for each other. A like kind transaction is eligible for non-recognition when “property held for productive use in the taxpayer’s trade or business or for investment is exchanged for property of a like kind that is also held for productive use in a trade or business or for investment.”¹⁴¹ The trading of one cryptoasset for another is analogous to established like kind transactions under the U.S. tax code. Similarly, non-recognition treatment for like kind cryptoasset transactions would be more consistent with both the traditional policy justifications for valid like kind transactions and fundamental policy concerns of all tax policy than the prevailing tax policy related to cryptoassets.

Nonrecognition applies to like kind transactions of real property,¹⁴² depreciable personal property,¹⁴³ and intangible personal property.¹⁴⁴ The key determination of whether an exchange is of like kind is whether the assets exchanged belong to the same “class” of assets.¹⁴⁵ For real property, “there is seldom an issue of whether the replacement property qualifies as like kind, given that almost all real property is treated as like kind.”¹⁴⁶ Similarly, for both tangible and intangible personal property, the class determinations are very broad with, for example, “[i]nformation systems (computers and peripheral equipment)” being a single class within which any two assets could be exchanged for each other and receive non-

¹³⁹ Fred B. Brown, *Proposal to Reform the Like Kind and Involuntary Conversion Rules in Light of Fundamental Tax Policies: A Simpler, More Rational and More Unified Approach*, 67 MO. L. REV. 705 (2002).

¹⁴⁰ *Id.* at 706.

¹⁴¹ *Id.*

¹⁴² See I.R.C. § 1031 (2012).

¹⁴³ 26 C.F.R. § 1.1031(a)-2(b) (2019).

¹⁴⁴ 26 C.F.R. § 1.1031(a)-2(c) (2019).

¹⁴⁵ 26 C.F.R. § 1.1031(a)-2(a) (2019).

¹⁴⁶ Brown, *supra* note 139, at 729.

recognition.¹⁴⁷ For intangible property, the class determinations are similarly broad and pertain to the underlying property such that an exchange of one patent for another is in like kind so long as the subject matter of the two patents belong to the same general class.¹⁴⁸ Conversely, if a copyright to a song is exchanged for a copyright to a novel, this would not be considered a like kind transaction as the underlying subject matter are not of the same class.¹⁴⁹ Notably however, the tax code does not allow for non-recognition of “exchanges of inventory property and other property held primarily for sale, nor does it apply to financial assets such as stocks, bonds, [or] partnership interests.”¹⁵⁰

The main policy justification for specific non-recognition of like kind transactions has been based on a “continuity of investment” rationale.¹⁵¹ That is, when a taxpayer makes a like kind transaction for continuing business or investment reasons, she has “not effectively realized a profit on the disposition” of the asset and the situation is “similar in effect to the taxpayer continuing to hold the original property.”¹⁵² In short, the policy intuition is that when a taxpayer exchanges two substantially similar assets with comparable interests in the assets, then the situation is treated as one continuing investment.

The predominant behavior of cryptoasset users engaging in like kind exchanges is somewhat analogous to like kind transactions subject to non-recognition under the current tax code. Like kind cryptoasset transactions comply with the requirement that the assets be in “productive use in[] trade or business or for investment.”¹⁵³ The clear parallel is for cases where taxpayers are exchanging cryptoassets for their perceived value as investments. This is directly analogous to the existing tax rules for exchanges of real property held for investment use.

Similarly, these like kind exchanges also comply with the requirement that the assets not be primarily “inventory property and other property held primarily for sale.”¹⁵⁴ Cryptoassets are not generally treated like an

¹⁴⁷ 26 C.F.R. § 1.1031(a)-2 (2019); *see also* Brown, *supra* note 139, at 730 (explaining that “a personal computer and a printer are of like kind because they are in the same asset class”).

¹⁴⁸ Brown, *supra* note 139, at 730.

¹⁴⁹ *Id.*

¹⁵⁰ *Id.* at 706.

¹⁵¹ *Id.* at 714.

¹⁵² *Id.*

¹⁵³ *Id.* at 706.

¹⁵⁴ *Id.*

inventory or property for sale. The price volatility of cryptoassets makes it absurd to treat them as inventory rather than as an investment. Similarly, notwithstanding the diversity and innovation in the cryptoasset market, cryptoassets must be viewed as belonging to the same broad asset class. If, as discussed above, a personal computer and a printer are considered like kind assets, even the two most distinct cryptoassets would almost certainly be in the same class. Lastly, the trading of cryptoassets for one another is strongly supported by the continuity of investment rationale because presumably the motivation to exchange one cryptoasset for another is a preference for the investment value or technological features between the two assets.

Another related, but distinct, principle in the tax code is how gains and losses from gambling are recognized. While a gambler may have thousands of individual gambling transactions throughout the year, these gains or losses are taxed on net transactions for the year rather than each hand of poker, pull of the slot machine handle, and roll of the dice being individually recognized.¹⁵⁵ This scheme is similar to other non-recognized transactions in that no gains or losses are recognized except the net monetized amount for the year. The current tax rules for cryptoassets are analogous to requiring a gambler to report a gain or loss on every bet. Taxpayers who often trade cryptoassets on exchanges may have thousands of individual transactions per year that, under the current rules, must each be reported with the cost basis, current fair market value, and corresponding gain or loss. The absurdity of recognizing gambling losses and gains at every transaction should be obvious, yet this is essentially how cryptoassets are taxed under prevailing tax policy.

As noted above, there is an exception to the like kind non-recognition rules for financial assets such as stocks and bonds. The reason for this exception is that these types of assets are regulated as securities, which entails a highly specialized and complex regulatory scheme for assets that meet the definition of a “security.”¹⁵⁶ Thus, an exchange of securities, for

¹⁵⁵ I.R.C. § 165(d) (2012) (providing that taxation of gambling gains and losses are recorded on net with no need to record each gambling transaction as a gain or loss).

¹⁵⁶ 15 U.S.C. § 77b(a)(1) (2012) (defining a “security” as: “any note, stock, treasury stock, security future, security-based swap, bond, debenture, evidence of indebtedness, certificate of interest or participation in any profit-sharing agreement, collateral-trust certificate, preorganization certificate or subscription, transferable share, **investment contract**, voting-trust certificate, certificate of deposit for a security, fractional undivided interest in oil, gas, or other mineral rights, any put, call, straddle, option, or privilege on

example, shares of stock in one company for shares in another company, must be recognized at the time of the transaction and comply with other securities regulations even though otherwise bearing the characteristics of a like kind exchange of assets held for investment. As discussed above, the SEC has scrutinized the method of distributing cryptoassets through ICOs, concluding that in many cases ICOs meet the definition of a securities offering as an “investment contract.”¹⁵⁷ This determination is particular to the method of distribution where there is “an investment of money in a common enterprise with an expectation of profit derived from the efforts of others” and is not particular to cryptoassets in themselves.¹⁵⁸

While this rule is applicable to certain ICOs that are highly centralized with a single enterprise distributing tokens for sale, cryptoassets themselves are not securities in that they do not in any sense represent equity or debt to satisfy the definition of a security. Indeed, “investment contracts can be made out of virtually any asset (including virtual assets), provided the investor is reasonably expecting profits from the promoter’s efforts.”¹⁵⁹ SEC officials have accordingly acknowledged that “[a]pplying the disclosure regime of the federal securities laws to the offer and resale of Bitcoin” or “to current transactions in Ether would seem to add little value.”¹⁶⁰ This means simply that cryptoassets, like any other type of asset, can be regulated as securities if distributed in the specific manner of an investment contract. Other than in investment contract circumstances, securities are not analogous to cryptoassets and rules for securities do not provide guidance for crafting tax policy.

Thus, the general rules for non-recognition of like kind exchanges and for taxation of gambling income are closely analogous to like kind

any security, certificate of deposit, or group or index of securities (including any interest therein or based on the value thereof), or any put, call, straddle, option, or privilege entered into on a national securities exchange relating to foreign currency, or, in general, any interest or instrument commonly known as a “security”, or any certificate of interest or participation in, temporary or interim certificate for, receipt for, guarantee of, or warrant or right to subscribe to or purchase, any of the foregoing.”) (emphasis added).

¹⁵⁷ William Hinman, Dir., Div. Corp. Fin., U.S. SEC. EXCH. COMM’N, *Digital Asset Transactions: When Hovey Met Gary (Plastic)*, (June 14, 2018), <https://www.sec.gov/news/speech/speech-hinman-061418> (applying the *Hovey* test to determine whether an investment contract has been created, articulated by the Supreme Court in *S.E.C. v. W.J. Hovey Co.*, 328 U.S. 293, 298-99 (1946)).

¹⁵⁸ *Id.*

¹⁵⁹ *Id.*

¹⁶⁰ *Id.*

exchanges of cryptoassets, such as with online exchanges. Similarly, cryptoassets themselves do not share any of the equity or debt characteristics of securities and can only implicate securities regulations due to the manner of distribution, which is equally true with any kind of asset. Therefore, the general rules for non-recognition of like kind exchanges and individual gambling transactions are instructive for crafting good tax policy for cryptoassets while the unique and highly specialized rules for securities are not.

B. Transactions Involving Foreign Currencies

When taxpayers transact in foreign currencies, the tax code provides for *de minimis* exemptions for gains or losses on foreign currency transactions where the gain or loss is less than \$200 USD.¹⁶¹ Under this policy, when taxpayers use foreign currency to transact, there are rarely occasions for a gain or loss of more than \$200 on any one transaction aside from in very large transactions or in cases of unusual volatility in exchange rates. The alternative to this exemption rule would require a reporting of a gain or loss on each transaction, which would greatly complicate compliance by requiring extensive record keeping. For example, without this exemption, a U.S. taxpayer who travels abroad and uses foreign currency to make purchases would have to calculate the cost basis for the foreign currency when it was acquired (i.e. the exchange rate) and then calculate a gain or loss for every transaction using the foreign currency.

As discussed above, one of the most common uses for cryptoassets is a currency-type transaction. Because current IRS guidance classifies cryptoassets as property, it has been criticized for generally being “contradictory to the view of several other federal stakeholders, including courts and regulatory agencies,” as well as being “contradictory to how users view and use cryptocurrencies, and how the market has accepted cryptocurrencies for the purchase of goods and services.”¹⁶² In addition, the “loopholes and bookkeeping difficulties” created by the current IRS

¹⁶¹ I.R.C. § 988(e)(2) (2012).

¹⁶² Deidre A. Liedel, *The Taxation of Bitcoin: How the IRS Views Cryptocurrencies*, 66 DRAKE L. REV. 107, 145 (2018).

guidance has been criticized.¹⁶³ Underscored by both the Online Market Protection Act of 2014 and the Cryptocurrency Tax Fairness Act of 2017, many commentators have also strongly criticized the general property classification of cryptoassets and recommended a currency classification.¹⁶⁴ Because cryptoassets are notoriously used like currency, it follows logically that they be treated like currency when used as such.

V. Public Policy Evaluation

Taxation policy is generally evaluated by the three fundamental criteria of efficiency, equity, and administrability.¹⁶⁵ The efficiency criterion concerns the “minimizing [of] tax-induced changes in taxpayer behavior or decisions, or what are referred to as ‘substitution effects.’”¹⁶⁶ The equity criterion requires that “similarly situated taxpayers be taxed in a similar manner” and “differently situated taxpayers be treated in an appropriately different manner.”¹⁶⁷ The administrability criterion is concerned with minimizing complexity and reducing ambiguity in the tax system.¹⁶⁸ To judge the adequacy of the tax scheme related to cryptoassets, the three fundamental criteria must be used to analyze the implications of the

¹⁶³ Zachary B. Johnson, Note, *I Got 988 Problems But Bitcoin Ain't One: The Current Problems Presented by the Internal Revenue Service's Guidance on Virtual Currency*, 47 U. MEM. L. REV. 633, 673 (2016).

¹⁶⁴ See, e.g., Liedel, *supra* note 162, at 145 (arguing that the property classification “is contradictory to the view of several other federal stakeholders, including courts and regulatory agencies” and “is also contradictory to how users view and use cryptocurrencies, and how the market has accepted cryptocurrencies for the purchase of goods and services.”); Johnson, *supra* note 163, at 673 (advocating a currency classification to “smooth the path for broader adoption and investment in Bitcoin and virtual currencies generally” and to remedy the “loopholes and bookkeeping difficulties” created by the property classification); Ficcaglia, *supra* note 136, at 136 (“Defining Bitcoin as a currency allows individuals and companies to fully leverage the potentially market changing transfer technology, extending the innovations of the digital era to financial transactions”).

¹⁶⁵ Fred B. Brown, *Proposal to Reform the Like Kind and Involuntary Conversion Rules in Light of Fundamental Tax Policies: A Simpler, More Rational and More Unified Approach*, 67 MO. L. REV. 705, 708 (2002).

¹⁶⁶ *Id.*

¹⁶⁷ *Id.* at 710–11.

¹⁶⁸ *Id.* at 712–13.

scheme for how people use cryptoassets: currency-type transactions, like kind exchanges, and generation of new units, as discussed above.

By each of the three fundamental criteria, the prevailing tax policy on cryptoassets must be judged as seriously defective. In addition to the failure of the prevailing IRS guidance on cryptoassets to serve the three fundamental goals of tax policy, it also fails to promote public policy in three key areas. First, the prevailing policy discourages innovation and economic efficiency. Second, it is difficult to enforce the prevailing policy, leading to massive under-reporting by tax payers and reduced tax receipts. Third, the U.S. is at risk of falling behind global competitors for the economic, technological, and strategic innovations cryptoassets can provide.

A. Efficiency, Equity, & Administrability of the Prevailing Policy

The prevailing policy fails substantially to promote efficiency. For all transaction types, taxpayers are incentivized to forego any transactions if there has been an appreciation in market value for their cryptoassets. In addition to the additional transaction cost from additional tax recognition from a transaction, the requirement to report every currency-type transaction as a gain or loss also adds a substantial record-keeping burden to the transaction cost. Both of these problems create purely tax-based disincentives for the most common ways people transact with cryptoassets.

Similarly, the equity criterion is clearly violated in regard to currency-type and in-kind cryptoasset transactions. The property classification requires these transactions be treated differently than the analogous transactions involving foreign currency and in-kind exchanges subject to non-recognition. Correspondingly, the property classification requires both types of cryptoasset transactions be treated like fundamentally non-analogous transactions such as exchanges of property of different classes or financial instruments. This flatly contradicts the policy goal of equity.

Perhaps most lacking in the prevailing policy is administrability, due to the complexity and ambiguity to which cryptoasset users are subjected. As discussed above, in addition to the burdensome reporting requirements, cryptoasset users also bear the burden of calculating the cost basis of their cryptoassets by means of reasonable fair market value. The problem is especially poignant for taxpayers who have exchanged one type of cryptoasset for another. After the exchange, they then must determine the

reasonable fair market value both of the asset sold and the asset received to comply with current tax guidance. Taxpayers also face the notable holes in IRS guidance with respect to income from software forks, further diminishing the administrability of the prevailing policy.

B. Discouraging Innovation & Economic Efficiency

Due to the property classification, recognizing a gain or loss at every cryptoasset transaction, the current IRS guidance creates unnecessary transaction costs. Beyond the onerous record-keeping burden, this guidance disincentivizes the most efficient allocation of resources because any exchange of one cryptoasset for another requires an additional calculation of the tax liability that might be incurred by making the exchange. While the exchange might be the more optimal use of resources, the additional tax burden can often prevent the exchange from taking place. Similarly, by undermining the broad global trend of classifying cryptoassets as currency, the U.S. is failing to “stabilize the Bitcoin ecosystem, mitigate the risks associated with Bitcoin’s inherent privacy, and help ensure that Bitcoin users will not be subjected to unfair practices by those in the industry seeking to defraud individual users.”¹⁶⁹ Given the rich variety and innovation in the Cryptoverse, tax policy should strive to promote—rather than stifle—the efficient allocation of resources within the market.

C. Enforcement Concerns

The current guidance also creates incentives to simply not report gains or losses related to cryptoasset transactions at all. This problem comes necessarily with the administrability issues discussed above for all transaction types. The record-keeping burden incentivizes intentional non-reporting out of frustration. Additionally, the property classification incentivizes tax evasion out of ignorance because it is counterintuitive to how taxpayers use and think of cryptoassets as a type of currency or a continuous investment. As a result, the vast majority of cryptoasset users in the U.S. likely did not report their related gains and losses on their 2017 income taxes as required by current IRS guidance.¹⁷⁰ This is despite the

¹⁶⁹ Ficcaglia, *supra* note 136, at 133.

¹⁷⁰ Evelyn Cheng, *Hardly Anyone is Paying Taxes on Their Bitcoin Gains as Filing Deadline Nears*, CNBC. (April 13, 2018), <https://www.cnbc.com/2018/04/13/hardly-anyone-is-paying-taxes-on-their-bitcoin-gains-as-filing-deadline-nears.html> (explaining the *vast*

fact that 2017 saw a massive increase in cryptoasset market prices which resulted in an estimated \$25 billion USD in related tax liability.¹⁷¹

The current rules are similarly difficult to enforce. The IRS, for the first time in late 2016, issued a “John Doe Summons” to Coinbase, one of the largest cryptoasset exchanges in the world, attempting to access all user identity and transaction information.¹⁷² This move prompted immediate legal challenges by Coinbase customers alleging a violation of their privacy rights.¹⁷³ Obtaining user and transaction information as a method of enforcement is also likely to be, at best, marginally effective due to the wide variety of cryptoasset exchanges available globally that may be beyond the reach of IRS power.

D. Hampering U.S. Economic & Foreign Policy Interests

The current rules also put the U.S. at a marked disadvantage in the global economy. The U.S. is at a significant disadvantage in the competition for “development of new financial technologies centered around Bitcoin and the blockchain” while also undermining the creation of “a more uniform system of regulations . . . to provide a stable environment for the currency and technology to grow.”¹⁷⁴ This also means U.S. taxpayers will ultimately forego the economic benefits coming from both a more stable cryptoasset market and the U.S. taking a leading role in the development of emerging cryptoasset technologies. Under current policy, other developed nations like the U.K. and Germany are more likely to see the economic benefits of embracing cryptoassets.

Also, a more stable cryptoasset market provides an interesting foreign policy tool from which the U.S. could greatly benefit. As discussed above, in humanitarian and economic crises like that in Venezuela, cryptoassets provide a potent means for an impoverished population to avoid the irrationalities of a corrupt state apparatus and the risk of violence in black markets. If the U.S. fosters, rather than ignores, the growth of the cryptoasset market, a more stable and robust market could make cryptoassets even more effective than they have been for the desperate

majority of tax payers with cryptoasset-related gains or losses are simply not complying with IRS guidance).

¹⁷¹ *Id.*

¹⁷² Austin Elliott, *Collection of Cryptocurrency Customer-Information: Tax Enforcement Mechanism or Invasion of Privacy?*, 16 DUKE L. & TECH. REV. 1, 11–13 (2017).

¹⁷³ *Id.* at 14–15.

¹⁷⁴ Ficcaglia, *supra* note 136, at 136–37.

citizens of Venezuela. President Trump recently stated, “all options are on the table” for addressing the unfolding humanitarian crisis in Venezuela.¹⁷⁵ Cryptoassets are already providing relief to imperiled Venezuelans, and a more stable global cryptoasset industry would offer even better relief.

VI. Proposed Taxation Model

A more optimal model would include a (1) general currency classification, (2) an increased *de minimis* exemption for gains not exceeding \$600 on cryptoasset transactions as proposed by the Cryptocurrency Tax Fairness Act,¹⁷⁶ and (3) a non-recognition exception to the currency classification for gains realized on all non-monetization¹⁷⁷ cryptoasset transactions. The policy of the first proposal in this model has been advocated many times and incorporates elements of both the Online Markets Protection Act of 2014 and the Cryptocurrency Tax Fairness Act of 2017 to acknowledge how cryptoassets are used in currency-type transactions.¹⁷⁸ This would do much to reduce the record-keeping burden on taxpayers and is much more reasonable than the current rule in light

¹⁷⁵ Elizabeth McLaughlin, *Is Trump Really Leaving Military Option Open for Venezuela?*, ABC NEWS (Sept. 26, 2018), <https://abcnews.go.com/Politics/trump-leaving-military-option-open-venezuela/story?id=58102026>.

¹⁷⁶ Current tax law on foreign currency transactions already provides for a *de minimis* exemption for gains not exceeding \$200. I.R.C. § 988(e)(2)(B) (2012). But the Cryptocurrency Tax Fairness Act increases this exemption to gains or losses less than \$600 on cryptoasset transactions. Cryptocurrency Tax Fairness Act of 2017, H.R. 3708, 115th Cong. § 1 (2017). Given the high volatility of cryptoasset prices, the higher exemption amount seems more prudent which is why this article does not simply propose a currency classification alone.

¹⁷⁷ This includes (1) in-kind transactions of trading of one cryptoasset for another, (2) mining proceeds, and (3) income from Blockchain forks. Essentially, no gain or loss on a cryptoasset transaction would be recognized unless it involves the exchange of a cryptoasset for a fiat currency, goods (other than another cryptoasset), or services. Stated differently, the nonrecognition exemption applies only to transactions that involve *only* cryptoassets and no fiat currency or property being exchanged. Accordingly, if cryptoassets were traded for fiat currencies in currency exchange markets, these transactions would be regulated by the SEC under the well-established rules for “Forex” markets. *See Forex - Foreign Currency Transactions*, SEC. & EXCH. COMM’N, <https://www.sec.gov/answers/forcurr.htm> (last modified Oct. 1, 2013).

¹⁷⁸ *See, e.g.,* Ficcaglia, *supra* note 136, at 119.

of how cryptoasset exchanges work, and Bitcoin's role as a quasi-reserve currency for many exchanges.

The second proposal acknowledges the prominence of like kind exchanges and is slightly more aggressive as it is a new policy not achievable by a simple classification change or exception to existing law. However, this proposal is crucial to supporting optimal tax policy because it further reduces record-keeping burdens, promotes economic efficiency and stability within the Cryptoverse, and incentivizes investment in the U.S. while supporting global regulatory uniformity. This proposal also simplifies taxation of income from cryptoasset mining and software forks by not recognizing the transaction until the assets are exchanged for fiat currency or property. This provides much more definite methods of determining both the time of the transaction and the market value of the transaction. This proposal greatly simplifies tax policy and promotes compliance.

A. Efficiency, Equity, & Administrability of the Proposed Model

First, the proposed model greatly improves efficiency both by removing the record-keeping burden (for like kind and currency-type transactions) and largely eliminating the disincentive to participate in a cryptoasset transactions. This disincentive stems from the appreciation in value of a cryptoasset requiring that any future transaction will increase taxable income. Second, because cryptoasset transactions are analogous to either foreign currency transactions or like kind exchanges, equity demands that they be treated similarly in these circumstances. And, conversely, an equitable policy would not treat cryptoasset transactions the same as generic property transactions where the two are not analogous. The proposed model accomplishes both equity goals by treating cryptoassets as currency when used like currency, and as like kind assets when exchanged for assets in the same class. Third, the proposed model greatly reduces the complexity of the tax system by eliminating the reporting requirements for transactions with a monetized gain of under \$600. This accounts both for usage of cryptoassets as currency, and the higher volatility of cryptoasset prices warranting a higher *de minimis* exemption amount than for foreign currency transactions.

In addition to far surpassing the current tax policy as evaluated by the efficiency, equity, and administrability criteria, the proposed model is likely

to be tax revenue neutral at worst and is more likely to increase tax receipts compared to the current tax environment.

Because of under-reporting of cryptoasset-related income is rampant under the current system, the proposed model would significantly increase net tax receipts even if the nominal tax burden is reduced. Not only would the proposed model be significantly more efficient, equitable, and administrable, it would also likely increase tax receipts.

B. Encouraging Innovation & Economic Efficiency

The proposed taxation model promotes a more efficient allocation of resources within the Cryptoverse by removing tax-related transaction costs and administrative burdens. There would be no concerns about short-term and long-term capital gain categorizations to prevent reallocating resources from one cryptoasset investment to another. A currency classification and *de minimis* exemption accords with how cryptoasset exchanges operate with major cryptoassets like Bitcoin being required to purchase less popular cryptoassets. The intermediate transactions between—for example buying Bitcoin with USD and then trading the Bitcoin for the desired cryptoasset—would no longer create any recognized gain or loss for tax purposes, no matter the amount. This eliminates the added record-keeping burden and removes transaction costs to promote the best allocation of resources within the Cryptoverse.

The non-recognition proposal removes all barriers to efficiently allocating resources by removing any tax liability for in-kind exchanges. This encourages investors to freely exchange cryptoassets, and to seek the best investment without being deterred by tax recognition. The current tax code already recognizes the importance of this principle by adopting a non-recognition policy for certain in-kind real estate transactions when the property is held for productive use or investment.¹⁷⁹ This policy promotes the best use of property by removing the potentially massive transaction cost of a taxable gain on a real estate transaction. The same principle applies to cryptoassets where taxpayers are currently incentivized to hold any cryptoassets that have increased in market value rather than trading for another cryptoasset that might be more innovative and attractive as an investment. Further, the non-recognition proposal is at worst revenue neutral in the long run, because taxable gains will still be recognized

¹⁷⁹ I.R.C. § 1031 (2012) (providing a tax exemption for gains and losses from like kind exchanges of real estate).

whenever the previously realized gains are monetized for the first time. More likely, this policy would add to tax revenue by reducing the currently rampant level of nonreporting.

C. Discouraging Tax Evasion & Simplifying Compliance

The added burden of record-keeping and reporting of every transaction under the current scheme encourages non-reporting and tax evasion, even just by ignorance or error. The proposed model would remove nearly all of the record-keeping burden and make compliance much simpler. First, a *de minimis* exemption would remove the small transactions from the taxpayer's concern, and thus eliminate a common reason for non-reporting out of ignorance. Second, a currency classification would allow cryptoassets to be used for larger purchases under the well-established rules for taxation of gains on foreign currency transactions. Third, the non-recognition for in kind transactions removes the need for any disclosure of gains or losses from transactions of one common cryptoasset for another, greatly reducing the record-keeping burden on taxpayers. Similarly, due to the current level of non-reporting, the scheme would likely produce more tax revenue due to a higher rate of reporting, even if the *de minimis* exemption results in a lower amount of taxable income from cryptoasset transactions.

D. Furthering U.S. Economic & Foreign Policy Interests

As previously discussed, the U.S. is failing to capture the growth and innovation of the cryptoasset market to the benefit of other countries. If the U.S. fails to make sensible policy, other countries will reap more of the benefits from the growing market.¹⁸⁰ Also, the stable decentralized monetary system cryptoassets can provide can be a powerful tool against despotism, corruption, and instability in the developing world. U.S. intelligence agencies could benefit from a stable cryptoasset market similarly to how they have benefitted from Internet privacy technologies. For example, U.S. intelligence agencies have provided covert support for the Tor anonymous Internet browser as a means to undermine the control of authoritarian regimes over the speech and information access of the populace.¹⁸¹ Cryptoassets offer similar tactical potential in allowing

¹⁸⁰ Ficcaglia, *supra* note 136, at 133.

¹⁸¹ YASHA LEVINE, SURVEILLANCE VALLEY: THE SECRET MILITARY HISTORY OF THE INTERNET, at 219-70 (2018) (detailing U.S. intelligence agency backing for the Tor

dissidents to circumvent the banking and monetary systems controlled by authoritarian regimes to receive support from outside and conduct economic transactions privately. Cryptoassets offer exceptional capabilities for dissidents living under authoritarianism to conduct commercial transactions and receive aid from abroad against the will of a repressive regime.

VII. Conclusion

In conclusion, the current IRS guidance on cryptoassets fails to promote good public policy by making compliance more onerous than necessary on the taxpayer, making tax evasion by ignorance likely, and undermining the establishment of a stable global cryptoasset market. A more optimal model would include a (1) general currency classification for cryptoassets; (2) *de minimis* exemption for use of cryptoassets as a medium of exchange, higher than the exemption amount for foreign currency transactions; and (3) non-recognition exemption from the general currency rules for gains realized on all non-monetization cryptoasset transactions. Where the current tax policy in the U.S. tends to undermine the major potential benefits of cryptoassets, this proposed policy would reinforce them and take a significant step toward a stable market for cryptoassets while also serving other important public policy goals.

anonymity browser as a means of advancing U.S. national security interests as a weapon in the global “Internet Freedom conflict” by undermining the ability of foreign regimes to control communications of their citizens); Yasha Levine, *Fact-checking the Tor Project’s Government Ties*, SURVEILLANCE VALLEY BLOG (27, 2018), <https://surveillancevalley.com/blog/fact-checking-the-tor-projects-government-ties>.