

BENJAMIN MOLLOY*

Taxing the Blockchain: How Cryptocurrencies Thwart International Tax Policy

Introduction.....	623
I. Blockchain Technology	625
A. Mining.....	627
B. Exchanges	629
II. Regulatory Challenges	631
A. Anonymous Transactions	631
B. Identifying and Locating Specific Cryptocurrency Coins	633
C. Lack of a “Physical” Asset	635
III. Legal Status of Cryptocurrencies	637
A. 2014 IRS Classification	637
IV. China’s Cryptocurrency Ban.....	638
A. U.S.-China Tax Treaty.....	640
B. Legal Implications	641
C. Relocating Cryptocurrency Exchanges.....	642
D. Loss of Tax Revenue	643
E. Future Policy Implications.....	644
Conclusion	647

INTRODUCTION

Over the past decade, cryptocurrencies (also called “virtual currencies”) have steadily increased in value, acceptance, and use

* Bachelor of Science, Economics and Political Science, University of Oregon, June 2015. Juris Doctor, University of Oregon, May 2019. The author would like to thank Professor Richard Winchester for sparking his interest in tax law. The author would also like to thank the staff of the *Oregon Review of International Law* for their assistance with the development of this Comment and for the thoughtful comments the staff provided the author during the editing process.

amongst taxpayers. In December 2017, Bitcoin, the world's most popular cryptocurrency, surpassed US \$19,000 per coin in value.¹ The United States and China, much like in other aspects of trade and finance, are the two largest markets for cryptocurrency mining, trading, and investment. As investor interest, mainstream acceptance, and value of cryptocurrencies increase, new regulatory and tax issues are emerging for both countries as each determines how cryptocurrencies fit into the current regulatory landscape.

In September 2017, China banned all domestic cryptocurrency markets and initial coin offerings (ICOs).² This decision by the Chinese government sent shockwaves throughout the cryptocurrency markets and sent the values of these currencies plunging when compared to traditional fiat currencies, because it signaled how national governments might attempt to regulate and tax cryptocurrency transactions moving forward.³

First, this Comment will examine the underlying technology behind cryptocurrencies and the inherent regulatory challenges the technology produces. It will focus primarily upon the anonymous nature of cryptocurrency transactions, the international structure of cryptocurrency markets, and the current tax framework governing cryptocurrencies.

Second, this Comment will focus on the United States and China and the effects of each country's cryptocurrency regulations. Specifically, it will examine the U.S.-China Tax Treaty and issues between the U.S. tax framework and China's recent ban on domestic cryptocurrency businesses.

Finally, this Comment will discuss policy solutions to cryptocurrency regulations and how governments could protect the inherent interest of cryptocurrency users while shifting these markets into a regulatory framework that enables governments to generate tax revenue from these transactions.

¹ David Z. Morris, *Bitcoin Hits a New Record High, But Stops Short of \$20,000*, FORTUNE (Dec. 17, 2017), <http://fortune.com/2017/12/17/bitcoin-record-high-short-of-20000/>. Throughout this Comment, all monetary amounts are in U.S. dollars.

² Brenda Goh, *China's Bitcoin Market Alive and Well as Traders Defy Crackdown*, REUTERS (Sept. 29, 2017), <https://www.reuters.com/article/us-china-bitcoin/chinas-bitcoin-market-alive-and-well-as-traders-defy-crackdown-idUSKCN1C40QD/>.

³ *Id.*

I

BLOCKCHAIN TECHNOLOGY

“Blockchain” technology provides the underlying technological basis for all cryptocurrencies. A blockchain is a perpetual, continuous list that records each individual transaction between users of a cryptocurrency.⁴ Individual segments of the continuous blockchain records are called “blocks” and commonly refer to a completed list of transactions.⁵ Every time a user sells or transfers a “coin” (an individual cryptocurrency unit), the blockchain logs and records that transaction.⁶ Thus, the blockchain contains the payment and transaction history of every single coin in circulation and every user who once possessed a coin.⁷

The blockchain acts as a bank ledger for cryptocurrencies.⁸ However, blockchain technology differs from a bank ledger because no central authority monitors and verifies each transaction.⁹ Instead of an authorizing banking or government authority to monitor transactions, the blockchain makes the ledger publicly available.¹⁰ The blockchain is instantaneously replicated and stored on thousands of computers (“nodes”) around the world as cryptocurrency transactions occur.¹¹ At any point in time, any user around the world can access and view the entire blockchain ledger.¹²

⁴ *Blockchain—The Next Big Thing*, THE ECONOMIST (May 9, 2015), <https://www.economist.com/news/special-report/21650295-or-it-next-big-thing>.

⁵ *Id.*

⁶ Cryptocurrency transactions do not need to include an entire coin and can include pieces of coins. Owning a cryptocurrency coin, or piece of coin, means simply owning a piece of information on the blockchain. *See id.*

⁷ *Id.*

⁸ *Id.*

⁹ *The Trust Machine*, THE ECONOMIST (Oct. 31, 2015), <https://www.economist.com/news/leaders/21677198-technology-behind-bitcoin-could-transform-how-economy-works-trust-machine>.

¹⁰ Zach Church, *Blockchain, Explained*, MIT SLOAN MGMT. (May 25, 2017), <http://mitsloan.mit.edu/newsroom/articles/blockchain-explained/>. *See also Blockchain—The Next Big Thing*, *supra* note 4.

¹¹ *The Great Chain of Being Sure About Things*, THE ECONOMIST (Oct. 31, 2015), <https://www.economist.com/news/briefing/21677228-technology-behind-bitcoin-lets-people-who-do-not-know-or-trust-each-other-build-dependable> [hereinafter *Great Chain*].

¹² *Id.*

In addition to recording each transaction, the blockchain also verifies and records each transaction between cryptocurrency users.¹³ When users buy or sell cryptocurrency coins, the blockchain verifies the transaction and records the transaction into a block.¹⁴ Once the block is completed, the transaction data is “hashed” (encrypted) into a series of letters and numbers by a predetermined mathematical function.¹⁵ This deterministic function will produce the same result every time the same input (e.g., the transaction data) is used.¹⁶ Even the smallest change, one single digit, would result in the function producing a completely different hash.¹⁷ Once one block of transactions is completed, the next block begins with the hash formula produced by the previous block.¹⁸ Thus, the blockchain creates a link between each piece of the ledger. This ensures that users cannot alter the record of past transactions.¹⁹

Due to the mathematical link between each piece of the blockchain, users cannot retroactively apply transaction information without altering the record of blockchain transactions stored on every node around the world.²⁰ If a previous transaction is altered—even by a single digit—it would not only alter the hash produced by that block but trickle through every block that follows the altered transaction.²¹ If a single transaction is altered, then the underlying mathematical formula would produce a new result that would permanently alter every future block in the blockchain.²² Because every node around the world simultaneously updates and stores the blockchain ledger, users would notice any retroactive changes to a specific block.²³ The mathematical

¹³ *Blockchain*, INVESTOPEDIA, <https://www.investopedia.com/terms/b/blockchain.asp> (last visited Mar. 27, 2018).

¹⁴ *Great Chain*, *supra* note 11.

¹⁵ *Id.*

¹⁶ *Id.*

¹⁷ *Id.*

¹⁸ *Id.*

¹⁹ *Id.*

²⁰ See also *How Blockchain Technology Works, Guide for Beginners*, COINTELEGRAPH, <https://cointelegraph.com/bitcoin-for-beginners/how-blockchain-technology-works-guide-for-beginners> (last visited Mar. 27, 2018); *Great Chain*, *supra* note 11; see *The Trust Machine*, *supra* note 9.

²¹ *Great Chain*, *supra* note 11.

²² *Id.*

²³ *Id.*

formula enables blockchain technology to serve as its own insurance policy against theft or fraudulent transactions.²⁴

Blockchain technology's decentralized network enables cryptocurrency users to build trust with other users even though they might not know each other.²⁵ Every user buying or selling a cryptocurrency can verify the legitimacy of the coins because no single user can manipulate the past transaction history of each coin.²⁶ As a result, cryptocurrencies create value for users because the users can verify that the coins they purchased or sold have value and legitimacy.

A. Mining

The decentralized network underlying blockchain technology maintains the value of cryptocurrencies for users without the oversight of a central banking authority. However, the lack of a central banking authority also poses issues for introducing new currency into circulation.²⁷ A central banking authority, such as the United States Treasury or the Federal Reserve Bank, mints and distributes fiat currencies into circulation.²⁸ By controlling how much currency circulates into the economy, central banking authorities maintain control and oversight of the currency's value.²⁹ Without a central banking authority, cryptocurrency coins must enter circulation through the blockchain's decentralized network. The process for creating and circulating new cryptocurrency coins is referred to as "mining."³⁰

Mining is a process that creates new cryptocurrency coins through computers connected to the blockchain network.³¹ These computers verify and authenticate cryptocurrency transactions and log those transactions into the blockchain ledger.³² As transactions occur, the "mining" computers essentially build the most recent "block" in the

²⁴ *How Bitcoin Mining Works*, THE ECONOMIST (Jan. 20, 2015), <https://www.economist.com/blogs/economist-explains/2015/01/economist-explains-11>.

²⁵ See *The Trust Machine*, *supra* note 9.

²⁶ *Id.*

²⁷ See *Great Chain*, *supra* note 11.

²⁸ *Currency and Coin Services: The Role of the Federal Reserve*, BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM (last updated Feb. 3, 2017), https://www.federalreserve.gov/paymentsystems/coin_about.htm.

²⁹ *Id.*

³⁰ See *Blockchain—The Next Big Thing*, *supra* note 4.

³¹ *Id.*

³² *Id.*

blockchain.³³ To compensate these computers for verifying and authenticating these transactions (and essentially serving as a central banking authority), the blockchain provides people who operate computers to mine cryptocurrencies with cryptocurrency coins derived from transaction fees as a reward for completing the current block.³⁴

The same mathematical formula that links each block in the blockchain also determines how the blockchain compensates miners for authenticating transactions.³⁵ As explained earlier, each block produces a distinct output based upon a predetermined mathematical formula.³⁶ As computers verify cryptocurrency transactions, each computer is attempting to solve the mathematical formula produced by the current block.³⁷ Each computer connected to the network competes to verify as many transactions as possible and complete the block first.³⁸ The most powerful computers can verify transactions faster and enable miners to receive higher profits.³⁹ Once a single computer solves that equation, the block is completed and the blockchain compensates that specific computer with an amount of cryptocurrency coins.⁴⁰ The current reward for completing a block of Bitcoin (BTC), the most well-known cryptocurrency, is 12.5 bitcoins per block.⁴¹ Therefore, if a computer mining Bitcoin solves the mathematical formula that completed a Bitcoin block, the owner of that computer would receive 12.5 bitcoins—currently valued at \$200,000 (this fluctuates based upon the current price of BTC/\$).⁴²

Mining rewards individual cryptocurrency users for acting as a central bank that mines currency and audits transactions. Because the blockchain operates on a decentralized network, miners provide the necessary computing power to ensure that other users can engage in

³³ *Id.*

³⁴ *How Bitcoin Mining Works*, *supra* note 24.

³⁵ *See How Bitcoin Mining Works*, *supra* note 24. *See also Bitcoin Mining*, INVESTOPEDIA, <https://www.investopedia.com/terms/b/bitcoin-mining.asp> (last visited Mar. 27, 2018).

³⁶ *See How Bitcoin Mining Works*, *supra* note 24.

³⁷ *Id.*

³⁸ *Id.*

³⁹ *Id.*

⁴⁰ *Id.*

⁴¹ *Id.*

⁴² As of December 7, 2018, one Bitcoin was worth \$19,643. After reaching that all-time high value, Bitcoin's value in U.S. dollars dropped and has fluctuated between \$6,000 and \$12,500 for most of 2018. *See Bitcoin (USD) Price*, COINDESK, <https://www.coindesk.com/price/> (last visited Aug. 1, 2018).

transactions involving cryptocurrencies quickly and efficiently.⁴³ The mining process also ensures that cryptocurrencies enter circulation and grow at a regular rate. Once a block is complete and the computer solves the mathematical formula, the blockchain network releases a predetermined amount of coins into circulation. The controlled release of coins into circulation prevents inflation and ensures that cryptocurrencies maintain value over time.

B. Exchanges

The recent surge in popularity of major cryptocurrencies was largely due to increased trading of coins on exchanges.⁴⁴ Because cryptocurrencies enter circulation at a predetermined rate, the increased demand for cryptocurrency coins resulted in a major spike in value.⁴⁵

The most popular cryptocurrency, Bitcoin, peaked at \$20,000 per coin.⁴⁶ In contrast, the second most popular cryptocurrency, Ethereum, surged from \$17 to \$1,200 per coin in twelve months.⁴⁷ The sale and exchange of cryptocurrencies occurs on digital exchanges similar to how stock markets and other currency exchanges operate. On cryptocurrency exchanges, users can exchange traditional fiat currencies (such as the U.S. Dollar or Euro) for cryptocurrencies (such as Bitcoin or Ethereum).⁴⁸ Compared to fiat currencies, which maintain relatively stable values, cryptocurrencies fluctuate in value daily, hourly, and even on a per-minute basis. In 2017, Ethereum exchanges saw a one-time spike in coin sales that led to the cryptocurrency losing

⁴³ *How Bitcoin Mining Works*, *supra* note 24.

⁴⁴ See also Joseph Young, *Exponential Growth: Cryptocurrency Exchanges Are Adding 100,000+ Users Per Day*, COINTELEGRAPH (Jan. 7, 2018), <https://cointelegraph.com/news/exponential-growth-cryptocurrency-exchanges-are-adding-100000-users-per-day>. See Shafi Musaddique, *Binance: World's Top Cryptocurrency Exchange Adds 240,000 Users in Just One Hour*, INDEPENDENT (Jan. 11, 2018), <https://www.independent.co.uk/news/business/news/binance-bitcoin-latest-cryptocurrency-exchange-trading-users-increase-numbers-hong-kong-a8153496.html>.

⁴⁵ David Goodboy, *3 Cryptocurrencies You Need to Know*, NASDAQ (Dec. 6, 2017), <https://www.nasdaq.com/article/3-cryptocurrencies-you-need-to-know-cm887924>.

⁴⁶ See *Bitcoin (USD) Price*, *supra* note 42.

⁴⁷ *Id.*; see also *Ethereum (ETH) Price*, COINDESK, <https://www.coindesk.com/ethereum-price/> (last visited Apr. 1, 2018).

⁴⁸ *Bitcoin Exchange*, INVESTOPEDIA, <https://www.investopedia.com/terms/b/bitcoin-exchange.asp> (last visited Mar. 27, 2018).

its entire value in seconds.⁴⁹ Within the hour, Ethereum had rebounded to recover nearly its entire lost value.⁵⁰

The volatile nature of cryptocurrency exchanges reflects a lack of governmental regulation. Similar to stock exchanges, cryptocurrencies maintain value to traditional fiat currencies based upon how many users seek to exchange fiat currencies for the finite supply of available cryptocurrency.⁵¹ However, unlike stock markets, when cryptocurrency prices fluctuate, no government agency intervenes to maintain stable prices.⁵² Thus, a cryptocurrency's value reflects the demand users have for that specific cryptocurrency at any point in time.⁵³

Although exchanges currently serve as a mechanism for users to acquire cryptocurrencies, blockchain enthusiasts advocate for cryptocurrency use to expand to everyday transactions such as grocery purchases or paying a friend back for dinner.⁵⁴ If cryptocurrencies become more accepted for everyday transactions, consumers might use exchanges more like Paypal rather than trading currencies on a stock exchange.⁵⁵ However, users remain wary of converting large sums of fiat currency into cryptocurrency due to how commonly the values of cryptocurrencies fluctuate. Thus, in the current market, exchanges merely provide a separate mechanism to acquire cryptocurrencies outside of engaging in mining. As blockchain technology evolves, exchanges should consider conducting business in a manner more similar to financial service companies that process payments, rather than as exchange platforms for trading currencies.

⁴⁹ Arjun Kharpal, *Ethereum Briefly Crashed from \$319 to 10 Cents in Seconds on One Exchange After "Multimillion Dollar" Trade*, CNBC (June 22, 2017), <https://www.cnbc.com/2017/06/22/ethereum-price-crash-10-cents-gdax-exchange-after-multimillion-dollar-trade.html>.

⁵⁰ *Id.*

⁵¹ *Id.*

⁵² Tom Aspray, *A Technical Lesson in Bitcoin*, FORBES (Mar. 27, 2018), <https://www.forbes.com/sites/tomaspray/2018/03/27/a-technical-lesson-in-bitcoin/#3a989dd41364>.

⁵³ *Id.*

⁵⁴ PayPal recently applied for a patent for a method to expedite the processing of cryptocurrency transactions between consumers and merchants. This technology could make processing cryptocurrency payments faster than other peer-to-peer services, which use fiat currency (such as PayPal or Venmo). See Nikhilesh De, *PayPal Is Seeking Faster Crypto Payments Tech*, COINDESK (Mar. 5, 2018), <https://www.coindesk.com/paypal-eyes-instant-crypto-payments-tech/>.

⁵⁵ *Id.*

II REGULATORY CHALLENGES

Due to the blockchain's decentralized structure, its technology presents numerous challenges to governments seeking to regulate and control cryptocurrency use. When users trade cryptocurrencies, these transactions occur across an international network; governments often lack the ability to identify the users trading these currencies.⁵⁶ Additionally, regulatory agencies lack the ability to track exactly when new coins enter circulation or to identify when specific coins (or pieces of coins) move between users.⁵⁷ As governments begin to consider how to regulate cryptocurrencies in an international digital economy, they must address these issues. However, while contemplating these policies, the governments must also consider how these challenges directly counter some of the inherent features of cryptocurrencies that spurred the recent growth and popularity of blockchain technology.⁵⁸

A. Anonymous Transactions

Although the blockchain identifies, verifies, and records each transaction, the ledger records little to no identifying information.⁵⁹ Miners verify only the address and quantity of coin that users transfer.⁶⁰ The owner of the address, geolocation of the wallet, or other key identifying information is not included in the ledger.⁶¹ Thus, unlike other electronic transactions, cryptocurrencies enable users to send and receive money and valuable property anonymously.⁶²

⁵⁶ Tyler Lacombe, *Cryptocurrency Explainer: Everything You Need to Know*, DIGITAL TRENDS (Apr. 16, 2017), <https://www.digitaltrends.com/computing/everything-you-need-to-know-cryptocurrency-bitcoin/>.

⁵⁷ *Id.*

⁵⁸ Many cryptocurrency users state that they like that cryptocurrencies have no central authority to block or control transactions. Of course, the lack of a central authority also implies that many of these users might be using cryptocurrencies for illegal transactions that a central authority might block. Any government agency seeking to regulate cryptocurrencies must balance user privacy with the government's interest in preventing fraudulent and illegal transactions. See Sean Illing, *Why Bitcoin Is Bullshit, Explained By an Expert*, VOX (Apr. 11, 2018), <https://www.vox.com/conversations/2018/4/11/17206018/bitcoin-blockchain-cryptocurrency-weaver>.

⁵⁹ *How Bitcoin Mining Works*, *supra* note 24.

⁶⁰ *Id.*

⁶¹ *Id.*

⁶² *Id.*

Similar to cash, cryptocurrencies provide users with a sense of secrecy and anonymity in their transactions and dealings. The obvious implications are that these cryptocurrencies could support a digital black market for illegal goods.⁶³ However, anonymous cryptocurrency transactions also facilitate the collection of tax revenue.⁶⁴ In the United States, for example, cryptocurrency is classified as property rather than currency.⁶⁵ If a taxpayer sells property for more than he acquired it, then the taxpayer realizes a taxable gain on the sale or disposition of property.⁶⁶ The taxpayer would then pay a tax on the amount of the gain realized in the transaction.⁶⁷ Thus, if a taxpayer sold an amount of cryptocurrency and realized a gain on that transaction, then he would pay income tax on the amount realized.⁶⁸

If a taxpayer sells an amount of cryptocurrency, but fails to report it on his tax return, the Internal Revenue Service (IRS) has limited mechanisms to identify the gain on the transaction.⁶⁹ In recent months, the IRS won a court case to gain user data from large cryptocurrency exchanges.⁷⁰ In *United States v. Coinbase*, the IRS sought user data that belonged to users who sold, sent, or received more than \$20,000 worth of cryptocurrency.⁷¹ Beyond gaining user data from digital exchanges, the IRS also receives bank reports on cash deposits of more than \$10,000.⁷² If the IRS receives notice of large bank deposits, then the Agency may audit a taxpayer.⁷³ To track large cryptocurrency transactions, the IRS recently created a virtual currency team and hired

⁶³ Aatif Sulleyman, *Bitcoin Price Is So High Because Criminals Are Using It for Illegal Trades, Research Suggests*, INDEPENDENT (Jan. 24, 2018), <https://www.independent.co.uk/life-style/gadgets-and-tech/news/bitcoin-price-fall-criminals-blockchain-anonymous-cryptocurrency-zcash-monero-dash-a8174716.html>.

⁶⁴ See Omri Marian, *Are Cryptocurrencies Super Tax Havens?*, 112 MICH. L. REV. FIRST IMPRESSIONS 38 (2013).

⁶⁵ I.R.S. Notice 2014-21, § 4 A-1 (Apr. 14, 2014), <https://www.irs.gov/pub/irs-drop/n-14-21.pdf>.

⁶⁶ I.R.C. § 1001 (2018).

⁶⁷ I.R.C. §§ 61, 63 (2018).

⁶⁸ See I.R.S. Notice 2014-21, *supra* note 65.

⁶⁹ Marian, *supra* note 64, at 45.

⁷⁰ Taylor Hatmaker, *Coinbase Ordered to Give the IRS Data on Users Trading More Than \$20,000*, TECHCRUNCH (Nov. 29, 2017), <https://techcrunch.com/2017/11/29/coinbase-internal-revenue-service-taxation/>.

⁷¹ See *United States v. Coinbase, Inc.*, 2017 WL 5890052 (N.D. Cal. Nov. 28, 2017).

⁷² *Form 8300 and Reporting Cash Payments of Over \$10,000*, IRS, <https://www.irs.gov/businesses/small-businesses-self-employed/form-8300-and-reporting-cash-payments-of-over-10000> (last updated Jan. 8, 2018).

⁷³ See *IRS Form 8300 Reference Guide*, IRS, <https://www.irs.gov/businesses/small-businesses-self-employed/irs-form-8300-reference-guide> (last updated Sept. 6, 2018).

a software company.⁷⁴ As cryptocurrencies surged in value and popularity over the past several years, the IRS increased the Agency enforcement of digital transactions and stated the Agency's continued commitment to this issue moving forward.⁷⁵

Because cryptocurrency transactions are inherently anonymous, users seeking to avoid taxation might invest large sums in cryptocurrencies rather than in stocks, bonds, or other investments.⁷⁶ Some argue that cryptocurrencies create "super tax havens."⁷⁷ Even on a smaller scale, some investors use cryptocurrencies as "savings accounts" that receive cryptocurrencies but never spend any.⁷⁸ Because traditional anti-tax evasion policies cannot successfully address cryptocurrency tax evasion, the IRS must develop new mechanisms to identify cryptocurrency income tax evaders specifically.⁷⁹

B. Identifying and Locating Specific Cryptocurrency Coins

Miners gain possession of new cryptocurrency coins on the decentralized blockchain network. After miners verify transactions and computers solve the hash formula for the current block on the blockchain, the blockchain mints new coins and distributes them to miners.⁸⁰ Because the blockchain operates on an international computer network, a cryptocurrency user could hide assets abroad to avoid taxation in his country of residence.⁸¹ Furthermore, due to the frequent fluctuations in the value of cryptocurrencies, a taxpayer could easily dispute his cost basis in the coins to minimize any gain realized when he disposes of the property.⁸²

⁷⁴ David Voreacos, *IRS Cops Are Scouring Crypto Accounts to Build Tax Evasion Cases*, BLOOMBERG (Feb. 8, 2018), https://www.bloomberg.com/amp/news/articles/2018-02-08/irs-cops-scouring-crypto-accounts-to-build-tax-evasion-cases?__twitter_impression=true.

⁷⁵ *Id.*

⁷⁶ See Marian, *supra* note 64, at 46.

⁷⁷ *Id.* at 43.

⁷⁸ *Id.*

⁷⁹ *Id.* at 42.

⁸⁰ See *How Bitcoin Mining Works*, *supra* note 24. See also *How Does Bitcoin Mining Work?*, INVESTOPEDIA (last updated Oct. 31, 2018), <https://www.investopedia.com/tech/how-does-bitcoin-mining-work/>.

⁸¹ Marian, *supra* note 64, at 42.

⁸² The IRS has developed procedures to address the price fluctuations in cryptocurrencies. See I.R.S. Notice 2014-21, *supra* note 65, § A-8.

A government can tax its citizens, resident aliens, or nonresidents on any gain realized on the sale or disposition of property.⁸³ To avoid double taxation, the IRS enacted tax treaties with numerous countries. The IRS also drafted a model tax treaty with example provisions. Under the U.S. Model Tax Treaty, a taxpayer is taxed only on gains from the sale or disposition of personal property in the contracting state where the taxpayer is a resident. If a foreign taxpayer resides in the United States but realizes a gain from a cryptocurrency transaction in their native country, then the taxpayer is taxed in the United States.⁸⁴ Thus, a taxpayer can easily shield any gains on the sale or disposition of cryptocurrency by engaging in a transaction or an exchange or by mining coins on a server farm that is located in a nation without a tax treaty or a less strict regulatory structure.⁸⁵

The decentralized blockchain network effectively prevents any regulatory agency from determining when a cryptocurrency coin is mined or where the coin is located. Furthermore, unlike traditional fiat currencies, cryptocurrency users exchange coins on a network that transcends international borders, tax treaties, and regulatory control.⁸⁶ To address this issue, the IRS recently closed a loophole that allowed users to exchange one cryptocurrency for another without having to pay taxes on that currency.⁸⁷ However, unless a user exchanges cryptocurrency for a traditional fiat currency, taxpayers can still effectively shield their wealth by moving assets between cryptocurrencies.⁸⁸ Therefore, the blockchain's inherent technological features effectively

⁸³ For example, the IRS taxes income and gains realized by nonresident aliens. *See* I.R.C. § 871 (2018).

⁸⁴ Victoria Turk, *An Offshore Tax Haven Plans to Become the World's First Bitcoin Island*, VICE (Jan. 23, 2014), https://motherboard.vice.com/en_us/article/mgb3qx/an-offshore-tax-haven-plans-to-become-the-worlds-first-bitcoin-island. *See also* I.R.C. §§ 862, 7701, and I.R.S. Notice 2014-21 (both stating that Bitcoin is a property, not a currency, and is taxed if a U.S. taxpayer recognizes a gain).

⁸⁵ Robert W. Wood, *Loophole Allows Tax-Free Bitcoin Exchanges into 2018*, FORBES (Dec. 28, 2017), <https://www.forbes.com/sites/robertwood/2017/12/28/loophole-allows-tax-free-bitcoin-exchanges-into-2018/#79f3dff012fa>.

⁸⁶ Francine Mckenna, *Here's How the U.S. and the World Regulate Bitcoin and Other Cryptocurrencies*, MARKETWATCH (Dec. 28, 2017), <https://www.marketwatch.com/story/heres-how-the-us-and-the-world-are-regulating-bitcoin-and-cryptocurrency-2017-12-18>.

⁸⁷ David Floyd, *How the New Tax Law Impacts Cryptocurrencies*, INVESTOPEDIA (Jan. 8, 2018), <https://www.investopedia.com/news/how-new-tax-law-impacts-cryptocurrencies-trump/>.

⁸⁸ *Id.*

safeguard taxpayers and enable cryptocurrencies to remain outside the control of any government or regulatory agency.⁸⁹

C. Lack of a “Physical” Asset

Similar to securities and other financial instruments, the IRS has classified cryptocurrencies as intangible personal property.⁹⁰ Intangible personal property includes any property that has no intrinsic value but has value in the rights conveyed.⁹¹ Taxpayers who hold intangible personal property do not realize gains on the property until the taxpayer sells or otherwise disposes of it.⁹² Therefore, to determine the tax on the sale of intangible personal property such as stock, the taxpayer must determine the cost basis of the property and the amount of money or property received in exchange.⁹³

In theory, taxing the gains of cryptocurrencies should follow the same simple formula. However, cryptocurrencies differ from other items of intangible personal property because of numerous challenges in calculating the cost basis of cryptocurrency.⁹⁴ Because the IRS main tax enforcement mechanism is taxpayers reporting their own income,⁹⁵ taxpayers who sell cryptocurrencies determine their tax basis in the coins by recording the transaction value at the time they acquired the property.⁹⁶ Furthermore, the price and value of any given cryptocurrency fluctuates regularly and in much larger amounts than stocks, bonds, or other financial instruments.⁹⁷ In 2017, Bitcoin saw gains and losses of several thousands of dollars in a single day.⁹⁸ Therefore, a taxpayer could have acquired a Bitcoin at a high point on that day, but

⁸⁹ *Id.*

⁹⁰ See Robert A. Green, *Cryptocurrency Traders Risk IRS Trouble with Like-Kind Exchanges*, FORBES (Aug. 15, 2017), <https://www.forbes.com/sites/greatspeculations/2017/08/15/cryptocurrency-traders-risk-irs-trouble-with-like-kind-exchanges/#4023323026a8>. See also I.R.S. Notice 2014-21, *supra* note 65.

⁹¹ See *Texas Instruments, Inc. v. United States*, 551 F.2d 599 (5th Cir. 1977).

⁹² I.R.C. § 1001.

⁹³ Ryan Selkis, *Bitcoin IRS Tax Guide for Individual Filers*, INVESTOPEDIA (Oct. 25, 2017), <https://www.investopedia.com/university/definitive-bitcoin-tax-guide-dont-let-irs-snow-you/>.

⁹⁴ *Id.*

⁹⁵ I.R.C. § 6012.

⁹⁶ Selkis, *supra* note 93.

⁹⁷ BITCOIN VOLATILITY INDEX, <https://bitvol.info/> (last visited Apr. 1, 2018).

⁹⁸ *Bitcoin (USD) Price*, *supra* note 42.

the fair market value of such holdings could be significantly lower at the end of the day.⁹⁹

Beyond regular cryptocurrency traders, the volatility also provides significant tax consequences for taxpayers who receive cryptocurrencies in exchange for goods or services.¹⁰⁰ If a taxpayer receives property in exchange for goods or services, then the taxpayer's basis is the fair market value of the property at the time of the transaction.¹⁰¹ Because of how volatile cryptocurrency values are, taxpayers could see the value of the coins received in exchange for their services plummet in hours.¹⁰² To provide taxpayers with a consistent method of reporting their costs basis and to account for the large fluctuations in cryptocurrency value, the IRS requires that taxpayers estimate the fair market value of any cryptocurrency holdings the day the taxpayer acquires the asset.¹⁰³ When estimating a coin's value, a taxpayer could over- or under report the cost basis in a cryptocurrency in order to minimize the amount of gain realized in a transaction or to maximize the amount of loss realized.¹⁰⁴ The consistency might provide traders engaged in long-term transactions some consistency, but for day traders or users who receive cryptocurrencies as payment, this formula could effectively shield gains or maximize tax losses.¹⁰⁵

When a taxpayer later disposes of cryptocurrency coins, the IRS has several mechanisms to determine the taxpayer's basis if the reported cost differs from the fair market value.¹⁰⁶ These enforcement mechanisms are time consuming, and recently the IRS has taken legal action to force cryptocurrency exchanges to report transaction data for high-volume users.¹⁰⁷ Due in part to the anonymous nature of such

⁹⁹ See BITCOIN VOLATILITY INDEX, *supra* note 97.

¹⁰⁰ I.R.S. Notice 2014-21, *supra* note 65, § A-3.

¹⁰¹ I.R.C. § 1012.

¹⁰² Kharpal, *supra* note 49.

¹⁰³ I.R.S. Notice 2014-21, *supra* note 65, § A-4.

¹⁰⁴ The taxpayer can buy a cryptocurrency at a low point in the day, and the value could increase tremendously during that time and cause the fair market value of the cryptocurrency to rise for that day. See BITCOIN VOLATILITY INDEX, *supra* note 97. See also I.R.S. Notice 2014-21, *supra* note 65, § A-3.

¹⁰⁵ Selkis, *supra* note 93.

¹⁰⁶ One possible solution for the IRS and taxpayers is cross-referencing the time stamps of transactions with the listed prices on cryptocurrency exchanges at that time. However, because there are more than 100 operating cryptocurrency exchanges, each with different prices, this could lead to different calculations. See Darla Mercado, *Got Crypto? Here's How to Avoid an Audit from the IRS*, CNBC, <https://www.cnbc.com/2018/04/02/got-crypto-heres-how-to-avoid-an-audit-from-the-irs.html> (last updated Apr. 3, 2018).

¹⁰⁷ See *United States v. Coinbase, Inc.*, 2017 WL 5890052 (N.D. Cal. Nov. 28, 2017).

transactions and the volatility of cryptocurrency markets, the IRS likely views such actions as necessary to ensure taxpayers pay their entire tax obligation.¹⁰⁸ The IRS appears to consider cryptocurrencies to be like any other intangible physical asset, and it is implementing procedures to address the lack of a proper method to verify the recording of coin and transaction data.¹⁰⁹

III

LEGAL STATUS OF CRYPTOCURRENCIES

Cryptocurrencies currently exist in a legal gray area. Although individuals may legally possess and use cryptocurrencies, many traditional tax enforcement mechanisms do not effectively capture or regulate cryptocurrency transactions.¹¹⁰ Without effective enforcement mechanisms, regulatory agencies such as the IRS cannot fully capture the tax on income derived in cryptocurrency transactions.¹¹¹

A. 2014 IRS Classification

In 2014, the IRS issued a notice to clarify how the existing tax law applied to transactions using virtual currency.¹¹² The notice clarified that cryptocurrencies are not treated as a currency that generates foreign currency gain or loss.¹¹³ For tax purposes, the IRS identifies cryptocurrencies as property.¹¹⁴ If a taxpayer acquires cryptocurrency, the basis of the cryptocurrency is the fair market value of the currency when the transaction occurs.¹¹⁵ If the cryptocurrency is listed on an exchange, then the fair market value of any coin is found by converting the currency into U.S. dollars at the listed rate on the exchange.¹¹⁶ If the exchange rate is not published on an exchange, the taxpayer must calculate the fair market value himself based upon the average cryptocurrency value on the day the taxpayer acquires the currency.

¹⁰⁸ Hatmaker, *supra* note 70.

¹⁰⁹ *Id.*

¹¹⁰ Marian, *supra* note 64, at 45.

¹¹¹ *Id.*

¹¹² I.R.S. Notice 2014-21, *supra* note 65.

¹¹³ *Id.* at § A-2.

¹¹⁴ *Id.* at § A-1.

¹¹⁵ *Id.* at § A-3.

¹¹⁶ *Id.* at § A-5.

The IRS further clarified that if an individual mines coins of a specific cryptocurrency, then the basis in the property is the fair market value the day it is created.¹¹⁷ However, if an individual mines a cryptocurrency coin for use in trade or business, then any income received constitutes self-employment income.¹¹⁸ A taxpayer could deduct any expenses incurred for mining as an ordinary or necessary business expense.¹¹⁹ If an individual incurs an ordinary and necessary business expense, then the person must enter into the transaction with the intent to make a profit.¹²⁰

Therefore, if the fair market value of the property received in exchange for cryptocurrency exceeds the basis in the currency, the taxpayer has a taxable gain.¹²¹ In this situation, or a situation where a taxpayer receives cryptocurrency in exchange for goods and services, the taxpayer must include the gain from the transaction as gross income for the taxable year.¹²² A taxpayer must include all gains from any cryptocurrency transactions as gross income, whether the taxpayer purchases a currency, mines it, or converts it to U.S. dollars or another fiat currency.¹²³

IV CHINA'S CRYPTOCURRENCY BAN

The United States and China, two of the largest nations in the cryptocurrency market,¹²⁴ took divergent approaches toward regulating cryptocurrencies. Prior to 2017, the Chinese government allowed cryptocurrency exchanges and mining businesses to operate fully in China. However, on November 1, 2017, the Chinese government banned all cryptocurrency exchanges and ICOs.¹²⁵ After this date,

¹¹⁷ *Id.* at § A-8.

¹¹⁸ *Id.* at § A-9.

¹¹⁹ *Id.*

¹²⁰ I.R.C. § 162.

¹²¹ I.R.C. § 1001.

¹²² I.R.C. § 61.

¹²³ *Id.*

¹²⁴ Joon Ian Wong, *Chinese Money Dominates Bitcoin, Now Its Companies Are Gunning for Blockchain Tech*, QUARTZ (Oct. 1, 2017), <https://qz.com/1072907/why-china-is-so-hot-on-bitcoin/>. See also Rakesh Sharma, *Are Bitcoin and Crypto Prices Totally Dependent on China*, INVESTOPEDIA (Jan. 28, 2018), <https://www.investopedia.com/news/price-cryptocurrencies-totally-dependent-china/>.

¹²⁵ Kenneth Rapoza, *Cryptocurrency Exchanges Officially Dead in China*, FORBES (Nov. 2, 2017), <https://www.forbes.com/sites/kenrapoza/2017/11/02/cryptocurrency-exchanges-officially-dead-in-china/#28ab6baa2a83>.

many exchanges located in the country moved elsewhere and implemented service fees to withdraw funds in the days preceding the ban.¹²⁶ The Chinese government also proposed a ban on cryptocurrency miners.¹²⁷

The Chinese government cites concerns about money laundering and other illegal activity to justify its ban on exchanges.¹²⁸ Because the government action caused many exchanges to shut down, Chinese traders moved any cryptocurrency investments to offshore peer-to-peer marketplaces.¹²⁹ The Chinese government, in an effort to further eliminate cryptocurrency transactions, expanded the ban to eliminate access to offshore exchanges.¹³⁰ However, Chinese investors have expressed little concern about the long-term effect of the ban; these investors plan to move exchanges or mining operations offshore or to illegally connect to cryptocurrencies.¹³¹

Overall, the Chinese ban on cryptocurrency markets had a negligible effect on cryptocurrency prices.¹³² Bitcoin fell eight percent the day that the Chinese government announced the ban but has since continued its record-breaking surge.¹³³ Although Chinese regulators shut down exchanges to guard against financial risk posed by a cryptocurrency

¹²⁶ Xie Yu, *China to Stamp Out Cryptocurrency Trading Completely with Ban on Foreign Platforms*, SOUTH CHINA MORNING POST (Feb. 7, 2018), <http://www.scmp.com/business/banking-finance/article/2132009/china-stamp-out-cryptocurrency-trading-completely-ban>.

¹²⁷ *China Escalates Crackdown on Cryptocurrency Trading*, BLOOMBERG (Jan. 15, 2018), <https://www.bloomberg.com/news/articles/2018-01-15/china-is-said-to-escalate-crackdown-on-cryptocurrency-trading>.

¹²⁸ Goh, *supra* note 2.

¹²⁹ Yu, *supra* note 126.

¹³⁰ *China to Crack Down on Cryptocurrency Trading Loophole*, BLOOMBERG (Feb. 27, 2018), <https://www.bloomberg.com/news/articles/2018-02-27/china-is-said-to-crack-down-on-cryptocurrency-trading-loophole>.

¹³¹ In August 2018, the Chinese government poised to block access to more than 120 offshore exchanges which provided cryptocurrency trading services to individuals located in mainland China. This policy indicates the Chinese government observed that the government's decision to shut down exchanges was not effective in preventing access to cryptocurrency marketplaces. See Zheping Huang, *China to Block More than 120 Offshore Cryptocurrency Exchanges as Crackdown Escalates*, SOUTH CHINA MORNING POST (Aug. 23, 2018), <https://www.scmp.com/tech/enterprises/article/2161014/china-block-more-120-offshore-cryptocurrency-exchanges-crackdown>.

¹³² *Bitcoin (USD) Price*, *supra* note 42.

¹³³ *Id.*

bubble, investors believe that cryptocurrency will continue to provide investment value.¹³⁴

A. U.S.-China Tax Treaty

The United States and China entered into the U.S.-China Tax Treaty on January 1, 1987.¹³⁵

The treaty governs income derived by residents of either the United States, China, or dual residents of both nations.¹³⁶ The treaty establishes policies and terms to avoid double taxation of American and Chinese residents and to prevent income tax evasion in both nations.¹³⁷

To prevent double taxation, the United States and China both provide a tax credit to residents (the crediting country is not always the country where a taxpayer is a citizen) against a tax paid to the other country for income tax.¹³⁸ A Chinese taxpayer, who realizes a gain on cryptocurrency income in the United States, would therefore receive a tax credit in China to offset any income tax paid.¹³⁹ This policy encourages residents of each country to report their taxable gains from property and income earned in the other country.

In addition to preventing double taxation, the U.S.-China Tax Treaty also provides mechanisms to prevent residents of each country from evading taxes. Specifically, the tax treaty provides that “gains derived from the alienation of a property . . . arising in the other Contracting State may be taxed in that other Contracting State.”¹⁴⁰ Therefore, a Chinese citizen who disposes of cryptocurrency in the United States may be taxed in the United States.¹⁴¹ This policy prevents residents of one country from shifting assets between the two nations to avoid taxation.¹⁴²

Although the U.S.-China Tax Treaty provides effective tax mechanisms to prevent double taxation and tax evasion, the two countries have implemented divergent policies on where cryptocurrencies exist in their respective tax structures. As a result,

¹³⁴ See Wong, *supra* note 124.

¹³⁵ Income Tax Convention, U.S.-China (Jan. 1, 1987), <https://www.irs.gov/pub/irs-trty/china.pdf> [hereinafter U.S.-China Tax Treaty].

¹³⁶ *Id.* at art. 4.

¹³⁷ *Id.* at art. 22, 25.

¹³⁸ *Id.* at art. 22.

¹³⁹ *Id.*

¹⁴⁰ *Id.* at art. 12.

¹⁴¹ *Id.*

¹⁴² *Id.*

cryptocurrency exchanges have relocated to other countries.¹⁴³ Cryptocurrency users, similarly, have effectively hidden cryptocurrency assets from government taxation.¹⁴⁴ As both countries continue to govern in the evolving cryptocurrency market, a more uniform tax policy regarding these currencies will allow governments to generate more tax revenue while maintaining the benefits of cryptocurrencies.

B. Legal Implications

China's ban on cryptocurrencies affected the market for cryptocurrency prices across the globe.¹⁴⁵ Because Chinese investors can no longer trade cryptocurrency on marketplace exchanges, many Chinese investors have missed the opportunity to take advantage of the surging value of cryptocurrencies.¹⁴⁶ Domestic Chinese investors recently held almost forty-five percent of current Bitcoin in circulation.¹⁴⁷ Thus, China's ban limits the ability of a significant number of investors from directly engaging in cryptocurrency markets.

In spite of Chinese investors being shut off from cryptocurrency markets, the global rate of cryptocurrency trading has not slowed. Since Bitcoin's initial eight percent fall, it has rallied to record heights.¹⁴⁸ Even though the market price of many cryptocurrencies fell after reaching record heights, cryptocurrencies continue to retain value in spite of strict Chinese government regulation.¹⁴⁹ Without access to exchanges, investors seemed undeterred by the Chinese government action because of how blockchain technology allows users to send and receive money anonymously through other mechanisms in the absence of formal markets.¹⁵⁰

Furthermore, China's desire to eliminate financial risk has effectively eliminated the government's ability to tax or regulate

¹⁴³ Goh, *supra* note 2.

¹⁴⁴ *Id.*

¹⁴⁵ Lucinda Shen, *Here's Why Bitcoin's Value Dropped Over the Weekend*, FORTUNE (Sept. 11, 2017), <http://fortune.com/2017/09/11/bitcoin-price-value-usd-china/>.

¹⁴⁶ Rapoza, *supra* note 125.

¹⁴⁷ Shannon Liao, *China Is Shutting Down Domestic Cryptocurrency Exchanges*, THE VERGE (Sept. 11, 2017), <https://www.theverge.com/2017/9/11/16288898/china-shutdown-rumored-bitcoin-exchanges-crackdown>.

¹⁴⁸ *Bitcoin (USD) Price*, *supra* note 42.

¹⁴⁹ Although Bitcoin fell from its record in December 2017, it continued to maintain a much higher value through 2018. *See id.*

¹⁵⁰ Goh, *supra* note 2.

transactions. Even though cryptocurrency wallets are anonymous, many exchanges are required to report when users trade large quantities of coins.¹⁵¹ In the absence of formal exchanges, users have sent the coins through peer-to-peer systems or other unofficial methods.¹⁵² This effectively eliminates the government's ability to address the concerns of money laundering or tax evasion that it feared when it implemented the ban.¹⁵³

C. Relocating Cryptocurrency Exchanges

In addition to Chinese cryptocurrency traders conducting transactions through means other than official exchanges, the Chinese government's action also pushed cryptocurrency exchanges to move offshore.¹⁵⁴ Given the inherently difficult nature of regulating and taxing cryptocurrency transactions, offshore exchanges pose numerous additional issues. First, many of the countries where the cryptocurrency exchanges relocated already have tax-friendly policies.¹⁵⁵ This effectively creates "super tax havens" where taxpayers can buy and sell cryptocurrencies on exchanges and store the coins in digital wallets in nations with friendly or nonexistent tax laws.¹⁵⁶

In "super tax havens," investors have the ability to conduct cryptocurrency transactions and form cryptocurrency exchanges in nations with a clear regulatory environment.¹⁵⁷ Unlike China or the United States, banks and other financial institutions in these nations work transparently with cryptocurrency companies and investors.¹⁵⁸ This not only provides cryptocurrency a sense of legitimacy but helps

¹⁵¹ Hatmaker, *supra* note 70.

¹⁵² Tanzeel Akhtar, *Bitcoin Start-Ups Are Finding Secret Protection in These Offshore Tax Havens*, THE STREET (Aug. 10, 2017), <https://www.thestreet.com/story/14265580/1/bitcoin-start-ups-find-secret-protection-in-offshore-tax-havens.html>. See also Georgina Lee, *Cryptocurrency Traders in China Find Ways to Get Around State Regulators Despite Tighter Scrutiny*, SOUTH CHINA MORNING POST (Sept. 8, 2018, 2:04 AM), <https://www.scmp.com/business/companies/article/2163194/despite-tighter-scrutiny-crypto-trading-frenzy-proving-hard-douse>.

¹⁵³ *Id.* See http://www.xinhuanet.com/fortune/2018-09/26/c_129961014.htm (explaining how Chinese investors use technology to avoid detection). See also Turk, *supra* note 84.

¹⁵⁴ Goh, *supra* note 2.

¹⁵⁵ Akhtar, *supra* note 152.

¹⁵⁶ Marian, *supra* note 64, at 45.

¹⁵⁷ Akhtar, *supra* note 152.

¹⁵⁸ *Id.*

ease fears that future regulations would hamper any growth in cryptocurrency markets.¹⁵⁹

Although these nations might provide some guidance for creating a regulatory framework for cryptocurrencies, the regulations implemented are not necessarily strictly enforced.¹⁶⁰ In some nations, such as the Isle of Man, the government requires that cryptocurrency businesses follow certain global anti-money laundering laws, but other nations do not have such provisions.¹⁶¹ Moving forward, many of these nations might look for other incentives to keep cryptocurrency exchanges, such as preferential tax treatment for cryptocurrency transactions. However, given that the United States and China do not appear interested in adopting a more lenient regulatory framework, exchanges might remain in these countries out of necessity.

D. Loss of Tax Revenue

When China banned cryptocurrency exchanges, the Chinese government lost an easy mechanism to identify, track, and tax cryptocurrency transactions. Although domestic cryptocurrency exchanges shut down, cryptocurrency users continued to engage in these transactions outside government oversight.¹⁶² Most exchanges do not require users to present identifying information to buy or sell cryptocurrency, but many still report to the government when large sums of money are bought or sold on the exchange.¹⁶³ Furthermore, the government has other mechanisms to track transactions, including tracking the IP address or location of the computer used.¹⁶⁴

As more exchanges move outside Chinese jurisdiction, the United States also loses a significant ability to tax cryptocurrency traders. When a Chinese taxpayer exchanged her coins on an American

¹⁵⁹ *Id.*

¹⁶⁰ *Id.* See Nilesh Maurya, *The “Crypto Ban” in China Seems Ineffective as Businesses Still Accept Cryptocurrency*, COINGAPE (Oct. 2, 2018), <https://coingape.com/china-businesses-still-accept-cryptocurrency/> (explaining how the Chinese ban is ineffective); Joseph Young, *A Heart Beat: China’s Oldest Tech Publication to Accept Bitcoin Payments*, CCN (Oct. 1, 2018, 2:14 PM), <https://www.ccn.com/a-heart-beat-chinas-oldest-tech-publication-to-accept-bitcoin-payments/> (Chinese tech companies accepting bitcoin payments).

¹⁶¹ Akhtar, *supra* note 152.

¹⁶² Goh, *supra* note 2.

¹⁶³ Hatmaker, *supra* note 70. See *IRS Notification*, COINBASE, <https://support.coinbase.com/customer/portal/articles/2924446> (last visited Oct. 14, 2018).

¹⁶⁴ *Id.*

exchange, that exchange would have provided the IRS with some identifying information. Since Chinese traders (who possess a significant amount of cryptocurrency¹⁶⁵) cannot access American-based cryptocurrency exchanges, the IRS lost access to any taxable income on the gain from the sale of those coins.¹⁶⁶

The Chinese government also lost access to the tax revenue of both Chinese and American cryptocurrency users who sold coins on Chinese exchanges or paid into Chinese mining operations.¹⁶⁷ Because these operations moved abroad, users now have a much higher incentive to not pay taxes on their profits because the business operates in tax shelters that do not have tax treaties with the United States or China.¹⁶⁸ By implementing an outright ban on these businesses, the Chinese government effectively made cryptocurrency users more likely to engage in tax evasion.¹⁶⁹

E. Future Policy Implications

Countries attempting to regulate cryptocurrencies have developed two primary regulatory frameworks. The first model is China's primary approach: institute an outright ban on cryptocurrency exchanges, mining, and businesses.¹⁷⁰ The other model is the primary approach of offshore tax shelters: implement regulations to support the growth of cryptocurrencies that encourage financial institutions to invest in

¹⁶⁵ Liao, *supra* note 147.

¹⁶⁶ The IRS can tax any transaction incurred by a Chinese resident who engaged in a transaction in the United States. See U.S.-China Tax Treaty, *supra* note 135, art. 12.

¹⁶⁷ *Id.* See also David Gilbert, *China Plans to Kill Most of the World's Bitcoin Mining Operations*, VICENEWS (Jan. 8, 2018), https://news.vice.com/en_us/article/59w5eb/china-is-about-to-kill-nearly-all-bitcoin-mining-operations-in-the-world; Zheping Huang, *This Could Be the Beginning of the End of China's Dominance in Bitcoin Mining*, QUARTZ (Jan. 5, 2018), <https://qz.com/1172632/chinas-dominance-in-bitcoin-mining-under-threat-as-regulators-hit-where-it-hurts-electricity/>.

¹⁶⁸ Akhtar, *supra* note 152. See also *IRS Announces the Identification and Selection of Five Large Business and International Compliance Campaigns*, IRS (Jul. 2, 2018), <https://www.irs.gov/businesses/irs-announces-the-identification-and-selection-of-five-large-business-and-international-compliance-campaigns>; Victoria Graham, *Offshore Betting via Bitcoin on the Rise*, BLOOMBERG (Jan. 9, 2018), <https://www.bna.com/offshore-betting-via-n73014473957/>.

¹⁶⁹ *Id.* See also C. Edward Kelso, *Bitcoin's Chance at the \$20 Trillion Offshore Tax Haven Market*, BITCOIN (June 3, 2018), <https://news.bitcoin.com/bitcoins-chance-at-the-20-trillion-offshore-tax-haven-market/>; Annette Alstadsaeter et. al., *Who Owns the Wealth in Tax Havens? Macro Evidence and Implications for Global Inequality*, 162 J. PUB. ECON. 89, 97 (2018) (stating generally Chinese use offshore wealth and shell companies to escape regulations in China).

¹⁷⁰ See Goh, *supra* note 2.

blockchain technology.¹⁷¹ Any regulation must recognize the benefits of cryptocurrency that attracted users. Specifically, any future policy must protect user data and provide tax incentives for users to continue to invest in cryptocurrencies.¹⁷²

The first users began to buy cryptocurrencies because they appreciated the anonymous, decentralized nature of the blockchain.¹⁷³ While this technology provides cryptocurrencies with the ability to easily facilitate transactions, it can also enable money laundering, fraud, and illegal transactions.¹⁷⁴ Both the United States and China should work to develop a tax mechanism that eliminates the ability for users to engage in fraudulent transactions while ensuring the user data remains private.

To ensure that anti-money laundering laws are followed, a regulatory framework must require some identification of user data from markets and exchanges.¹⁷⁵ However, given the anonymous features of the blockchain network, this regulation could drive users away from cryptocurrencies.¹⁷⁶ In the absence of requesting explicit

¹⁷¹ See *Belarus Legalizes ICOs, Cryptocurrencies and Smart Contracts*, MARKETSINSIDER (Dec. 22, 2017), <https://markets.businessinsider.com/news/stocks/belarus-legalizes-icos-cryptocurrencies-and-smart-contracts-1001625982>; Tatsiana Kulakevich, *Why Would Authoritarian Belarus Liberalize Cryptocurrencies?*, WASH. POST (Jan. 25, 2017), https://www.washingtonpost.com/news/monkey-cage/wp/2018/01/25/why-would-authoritarian-belarus-liberalize-cryptocurrencies/?utm_term=.5df13496e78e; *Regulation of Cryptocurrency: Belarus*, LIBRARY OF CONGRESS, <https://www.loc.gov/law/help/cryptocurrency/belarus.php> (last updated June 18, 2018).

¹⁷² See Rainey Reitman, *Defending Users: Initial Ideas for Cryptocurrency Exchanges, Payment Processors, and Other Choke Points Within the Blockchain Ecosystem*, ELECTRONIC FRONTIER FOUND, (July 30, 2018), <https://www EFF.ORG/deeplinks/2018/07/five-policy-issues-blockchain-startups-care-about-user-rights-should-think-about>; Steven Ehrlich, *Login with Coinbase: Can the Crypto Giant Protect User Privacy?*, FORBES (Aug. 23, 2018, 11:35 AM), <https://www.forbes.com/sites/stevenehrlich/2018/08/23/login-with-coinbase-can-the-crypto-giant-protect-user-privacy/#69d2d91f5e2e>; Dean Steinbeck, *How New EU Privacy Laws Will Impact Blockchain: Expert Take*, COINTELEGRAPH (Mar. 30, 2018), <https://cointelegraph.com/news/how-new-eu-privacy-laws-will-impact-blockchain-expert-take>.

¹⁷³ *Great Chain*, *supra* note 11. See Jill S. Chanen, *Foley Survey Reveals Cryptocurrency Industry Insiders Favor Regulation*, FOLEY (June 26, 2018), <https://www.foley.com/Foley-Survey-Reveals-Cryptocurrency-Industry-Insiders-Favor-Regulation-06-26-2018/>; *2018 Cryptocurrency Survey*, FOLEY, <https://www.foley.com/files/uploads/Foley-Cryptocurrency-Survey.pdf> (last visited Oct. 14, 2018).

¹⁷⁴ Sam Frizell, *How the Feds Nabbed Alleged Silk Road Drug Kingpin "Dread Pirate Roberts,"* TIME (Jan. 21, 2015), <http://time.com/3673321/silk-road-dread-pirate-roberts/>.

¹⁷⁵ Hatmaker, *supra* note 70.

¹⁷⁶ *Id.*

user data, the governments could request that the firms provide some tracking data about the location of the computer used in the transaction.¹⁷⁷

Beyond user privacy and illegal transactions, tax evasion is the largest legal issue to arise out of the growth of cryptocurrencies. The United States and China have the resources to properly identify and track cryptocurrency transactions. However, cryptocurrency transactions in the United States do not carry any special tax classification, so users have no incentive to report their cryptocurrency income. Furthermore, because traditional tax mechanisms still fail to capture cryptocurrency transactions, relying on taxpayers to report gains or losses does not provide the government a reliable source of tax income.

Both the United States and China should pursue a cryptocurrency tax policy that creates tax incentives for investors to report cryptocurrency transactions. One solution would be to specifically amend the tax code to ensure cryptocurrency transactions receive preferential capital gain taxes. Some specific cryptocurrency situations may generate a short- or long-term capital gain or loss, but many common scenarios do not.¹⁷⁸ By ensuring preferential tax treatment for more cryptocurrency transactions, regulatory agencies might incentivize users to report their transactions.

Beyond preferential tax treatment, governments could also create government-endorsed or -sponsored exchanges or cryptocurrencies to replace or supplement traditional fiat currencies. China's government has recently begun controlled cryptocurrency projects to standardize blockchain technology.¹⁷⁹ A standardized blockchain could enable the government to gain more oversight of cryptocurrency transactions while also protecting user privacy.¹⁸⁰ For example, a unique wallet address owned by each user could protect against identity theft or other crime. If larger financial institutions embrace blockchain technology, then cryptocurrency use could become more widespread and embraced.

¹⁷⁷ Jeff John Roberts, *The IRS Has Special Software to Find Bitcoin Tax Cheats*, FORTUNE (Aug. 22, 2017), <http://fortune.com/2017/08/22/irs-tax-cheats-bitcoin-chainanalysis/>.

¹⁷⁸ Vincenzo Villamena, *Cryptocurrency and Taxes: What You Need to Know*, CNBC (Jan. 30, 2018), <https://www.cnbc.com/2018/01/30/cryptocurrency-and-taxes-what-you-need-to-know.html>.

¹⁷⁹ *An Inside Look at China's Government Controlled Cryptocurrency Project*, CCN (Mar. 31, 2018), <https://www.ccn.com/an-inside-look-at-chinas-government-controlled-cryptocurrency-project/>.

¹⁸⁰ *Id.*

CONCLUSION

Over the past decade, cryptocurrencies have surged into the mainstream discussion about the future of financial transactions. Although cryptocurrencies first gained notoriety as digital cash to facilitate illegal transactions, blockchain technology could help shift the international financial system into the twenty-first century. Rather than imposing strict regulations or banning cryptocurrencies, the Chinese and American governments should embrace the shift toward a digital currency. By implementing preferential tax treatment, adopting standardized rules governing blockchain transactions, and implementing rules to protect user privacy, both countries could reduce the amount of illegal transactions and tax fraud that occurs on cryptocurrency exchanges.

