A BEGINNER’S GUIDE TO CRYPTOCURRENCIES: EXPLAINING THE TECHNOLOGIES BEHIND CRYPTOCURRENCIES, HOW THE UNITED STATES TAXES AND REGULATES THEM, AND OFFERING CHANGES TO THE EXISTING TAXATION AND REGULATION SCHEMES

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The United States federal government has attempted to use its existing regulatory and taxation schemes to regulate and tax cryptocurrencies, while many individuals are still unsure as to what cryptocurrency really is. The Securities and Exchange Commission and the Commodities Future Trading Commission have both asserted their jurisdiction over cryptocurrency, resulting in unclear guidance for developers in the cryptocurrency space and a failure to adequately protect investors. Further, the Internal Revenue Service taxes cryptocurrency like a security rather than a currency, which disincentivizes adopting cryptocurrency as a form of payment. Nevertheless, although cryptocurrencies are taxed like securities, there are tax breaks for securities and commodities activities that are not currently available for cryptocurrency activities. Under the United States’ current approach, investors will remain vulnerable to fraud, and businesses and individuals using cryptocurrencies for goods and services will be subject to an extra level of taxation.

This paper’s initial purpose is to provide readers with sufficient background knowledge on the architecture underlying a blockchain network. The paper then endorses creating a joint self-regulatory organization and providing the organization with original jurisdiction over all cryptocurrency activities to provide uniform registration and reporting requirements. Further, the paper offers suggestions on how the United States can change its approach to taxing cryptocurrencies, so they are treated more like currencies when used for goods or services, and treated more like securities when the taxpayer is an active trader or participant node on the blockchain network.
I. INTRODUCTION

[1] Whether you saw a crypto.com commercial with Matt Damon or heard about the FTX bankruptcy, you have likely heard about cryptocurrency. Even though most people have heard about cryptocurrency, there seems to be a general lack of understanding about what cryptocurrency really is. This lack of understanding cryptocurrency is common in all stages of life, from middle schoolers to senior citizens, and is common amongst all walks of life, from teachers to attorneys and congresspeople. Some members of Congress do not understand the first thing about cryptocurrency, while others actively trade cryptocurrency.¹

[2] The technology underlying cryptocurrency, blockchain technology, is complicated on its own. People are reluctant to allocate their time and energy to learn about digital currencies when they have paper dollars in their pockets and bank accounts that work just fine. Beyond the complex technology underlying crypto, some people fail to understand its macroeconomics and potential efficacy on a global scale.² Nonetheless, with so much institutional money in the cryptocurrency market and the potential applications of cryptocurrency, it is not going anywhere anytime soon.


The cryptocurrency market cap went from $0 in 2011 to about $3 trillion in November 2021.\(^3\) The crypto market cap then lost over $2 trillion in the last year due to scandals and hacks, among other things, and the crypto market cap currently sits at about $1.26 trillion at the time of this writing.\(^4\) United States federal agencies and officials have responded slowly in regulating the new technology since the market’s inception, taking a “regulation through litigation,” ad hoc approach.\(^5\) Some investors have made more money than they could have imagined from crypto, while others have taken unfathomable losses. Either way, the United States government has been there to prosecute wrongdoers and tax the fortunes earned along the way.\(^6\) The United States’ ad hoc approach has been effective in prosecuting fraudsters, but it has failed in providing clear guidance to developers in the space and protecting investors before their injuries occur. Most people purchasing cryptocurrencies have hopes of earning profit, but it is unclear whether they are purchasing a commodity, a security, or something entirely different. With the recent FTX bankruptcy, investors and policymakers are calling for clear regulation in the crypto industry more loudly than ever before.\(^7\)

\(^3\) Overall cryptocurrency market capitalization per week from July 2010 to September 2023, STATISTA, https://www.statista.com/statistics/730876/cryptocurrency-market-value/ [https://perma.cc/9NA7-NZJF].

\(^4\) Id.


\(^6\) See id.

This paper attempts to serve three purposes: (1) to explain cryptocurrency and its underlying technologies to the common person; (2) to illustrate the United States’ current regulatory and taxation schemes; and (3) to offer a regulatory and taxation framework that provides a consumer-safe environment and promotes the new technology’s growth in the United States. Section II explains cryptocurrency, blockchain technology, and cryptocurrency exchanges and wallets. Section III examines the United States federal government’s approach to regulating cryptocurrency. Section IV details the United States federal government’s approach to taxing cryptocurrencies. Section V offers regulatory and taxation schemes the United States could adopt for cryptocurrencies. Section VI concludes the paper and gives highlights of the main issues discussed.

II. CRYPTO & BLOCKCHAIN EXPLAINED

Cryptocurrency refers to a digital asset that uses distributed ledger technology, also known as blockchain technology, to enable and process transactions. The term “cryptocurrency” is used because this digital currency uses cryptographic protocols to secure transactions. This section explains why cryptocurrency was invented in the first place, details the technologies and architectures underlying cryptocurrencies, and provides stories and examples of success and loss in the cryptocurrency market. Although there were cryptocurrencies created as early as the 1990s,

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9 See id.

Bitcoin’s origin story illustrates why this industry came to fruition and helps explain how cryptocurrencies function.

A. Bitcoin Origin Story

[6] In 2008, Satoshi Nakamoto published a paper titled, “Bitcoin: A Peer-to-Peer Electronic Cash System.”\(^{11}\) Satoshi begins the paper by noting how internet commerce relies “almost exclusively on financial institutions serving as trusted third parties to process electronic payments[,]” and points out several flaws with this trust-based, third party model.\(^{12}\) First, transactions processed by a trusted third-party are reversible. For example, if a bank’s customer disputes a charge posted to their bank account, the bank might cancel the transaction. When a disagreement over a transaction arises between two parties, the trusted third parties (credit card companies, banks, Paypal, etc.) are forced to mediate the dispute.\(^{13}\) It costs money to mediate these disputes, thereby increasing transaction costs and leading to the second problem: very small transactions (e.g., paying ten cents to read an article or watch a short video) are impractical because the transaction costs involved are too high.\(^{14}\) Lastly, credit card companies can cancel transactions even though some services are nonreversible (e.g., renting and watching a movie online), and no third-party should be able to reverse these transactions. “With the possibility of reversal, the need for trust spreads[,]”

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\(^{12}\) Id.


\(^{14}\) Nakamoto, *supra* note 11.
and merchants are forced to hassle customers for personal information when they only need payment for the goods and services.\textsuperscript{15}

[7] To resolve these issues, Satoshi proposed an electronic payment system where any two parties can transact directly with each other without the need for a trusted third party.\textsuperscript{16} In theory, without the need for a trusted third party to validate and process transactions, transaction costs would be low, no third parties could reverse transactions, and merchants could only require payment rather than personal information from their customers.\textsuperscript{17} Put differently, Bitcoin was designed to be a cash-like payment system that permits electronic transactions but also includes the advantages of physical currencies.\textsuperscript{18} There are three main concepts to understand how Bitcoin and other cryptocurrencies work: blockchain technology, nodes on a peer-to-peer network, and consensus algorithms.

\textbf{B. Blockchain Technology Explained}

[8] Blockchain technology refers to a distributed, decentralized database that keeps records of transactions.\textsuperscript{19} Blockchains are distributed because transactions are viewable by the public; you can go online and view all transactions on the Bitcoin blockchain.\textsuperscript{20} Blockchains are decentralized because there is no central authority, such as a bank, to validate and verify

\textsuperscript{15} \textit{Id.}

\textsuperscript{16} \textit{Id.}

\textsuperscript{17} Meyer, \textit{supra} note 13.

\textsuperscript{18} \textit{See} Nakamoto, \textit{supra} note 11.

\textsuperscript{19} \textit{See} Digital Assets, \textit{supra} note 8.

transactions. Transactions are validated and processed by a peer-to-peer network of computers called nodes. It may be helpful to think of blockchains like a bank ledger, but instead of an individual working at a bank processing and recording transactions, computers around the world do all the work. Blockchains are more than a way to process and validate transactions; blockchains are also a registry and inventory for all assets on the blockchain.

The second element essential to understanding cryptocurrency and blockchain technology is the concept of nodes working together on a peer-to-peer network. In this context, nodes are computers located around the world owned by businesses and individuals that are running the respective blockchain’s software. The nodes operating on the peer-to-peer network give blockchains their decentralized feature because there is no single computer storing and recording transactions—unlike a bank. The nodes all work together to confirm the history of all transactions on the blockchain and prevent the “double-spending” problem. The double-spending problem is when an individual attempts to make a transaction and they lack sufficient funds, similar to an individual using a check to purchase goods when they do not have the money in their account to cover the check’s promised amount. The nodes effectively communicate together to say,

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21 See Digital Assets, supra note 8.

22 Id. at 17.


24 Id.

25 See id.

26 Nakamoto, supra note 11, at 8.

27 Meyer, supra note 13.
“yes, this wallet contains five Bitcoins, and this user has four Bitcoins to send.”

[10] To send a transaction on the Bitcoin blockchain, an individual must log into their wallet with a password, input the Bitcoin amount and recipient, then input another password to confirm the transaction.\(^{28}\) When the Bitcoin network processes the transaction, the transaction data is bundled together with the data of 2,000 other transactions, on average.\(^{29}\) When a Bitcoin block reaches its data storage capacity (approximately 2,000 transactions), the block of data is added onto the chain, thereby creating the blockchain.\(^{30}\) The nodes receive an updated list of all transactions on the blockchain, which preserves the history of all transactions on the blockchain.\(^{31}\) The following picture demonstrates how transactions are processed, validated, and recorded by nodes on a blockchain’s peer-to-peer network:


\(^{31}\) See id.
For a node to approve a transaction, the node must satisfy the blockchain’s respective consensus algorithm.\(^\text{33}\)

C. How Nodes Approve Transactions: Consensus Algorithms

A consensus algorithm is a core part of any blockchain network.\(^\text{34}\) It is the procedure through which all of the participant nodes on a blockchain network reach a common agreement about the present state of the

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34 Id.
Consensus algorithms force the nodes to work together to achieve reliability in a blockchain, thereby eliminating the double-spending problem. When a node satisfies a blockchain’s consensus algorithm, the blockchain transaction is processed and added to the blockchain’s history, and the node is rewarded with cryptocurrency. There are two types of consensus algorithms this paper will cover: Proof of Work and Proof of Stake.

1. Proof of Work Consensus Algorithms

On blockchains using Proof of Work (PoW) consensus algorithms, the participant nodes on the peer-to-peer network, referred to as crypto miners, download the blockchain’s entire transaction history. When a transaction is sent on the blockchain, the nodes run the full blockchain transaction history through a complex mathematical function called a “hash” puzzle. When a node solves a hash puzzle, the transaction is added to the blockchain, and the node is rewarded by being selected to mine a block, which is the privilege of adding a valid block onto the blockchain.

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35 See id.
36 See id.
39 See Ibeawuchi, supra note 33; see Napoletano, supra note 38.
40 Napoletano, supra note 38.
The node earns cryptocurrency as mining rewards for helping run the blockchain network, which is why PoW blockchain nodes are called “crypto miners”.41

[14] The Bitcoin blockchain is an example of a blockchain employing a PoW consensus algorithm with hash puzzles. When an individual sends Bitcoin to someone, nodes around the world race to solve the hash puzzle, the answer to which is called a hash.42 For example, the hash for Bitcoin block #660000 is 0000000000000000000000000000000008eddcaf078f12c69a439ddee30db5a4c3d9d94e9c18f6.43 When the crypto miner’s node solved the hash for Bitcoin block #660000, the Bitcoin transactions were added to the ledger and the node received 6.25 Bitcoin,44 which was worth approximately $117,370 at the time.45 The crypto miner of Bitcoin block #660000 could sell or hold the Bitcoin it earned after running their node on the Bitcoin network, thereby helping the network operate.46 The most successful cryptocurrency miners on a PoW blockchain solve hash puzzles more quickly than other miners, which requires an immense amount of computing power.47

41 See id.

42 See id.


44 Id.

45 Id.

46 See Napoletano, supra note 38.

One of blockchain’s most redeeming qualities is that it is immutable; once a transaction processes on a blockchain, it’s practically irreversible, just as Satoshi intended.\(^48\) The nodes work together to maintain an updated record of all the transactions on the blockchain, thereby maintaining consensus and integrity in the network’s transaction history.\(^49\) PoW consensus algorithms make it almost impossible to alter any aspect of the blockchain because it requires an impracticable amount of computing power to rewrite the blockchain’s history.\(^50\) To illustrate: consider a bad actor who seeks to infiltrate the Bitcoin blockchain and rewrite the blockchain’s transaction history to give themself all the Bitcoin. The hacker would need a computer powerful enough to overpower at least half the nodes on the Bitcoin network.\(^51\) If the hacker could overpower at least half the nodes on the Bitcoin network, then the hacker could rewrite the Bitcoin transaction history to make themself own all the Bitcoin, a majority of nodes on the network (all in control of the hacker) would come into consensus with each other, and the minority of other nodes (not in control of the hacker) would follow suit. Overpowering half the nodes on the Bitcoin network, however, would require approximately 317 million to 1.9 billion


\(^{51}\) Id.
qubits of computing power,\textsuperscript{52} while IBM’s record-breaking quantum computer has only 127 qubits of computing power.\textsuperscript{53} Thus, the hacker’s computer would have to be (at least) approximately 2.5 million times more powerful than the current world’s best computer. Bitcoin’s immutability is one of the reasons it has a market cap of over half a trillion dollars: investors trust the math behind the cash-like payment system where computers keep perfect record of transactions rather than trusting third parties.\textsuperscript{54}

\[16\quad\text{Although blockchains employing PoW consensus algorithms are extremely effective at preserving and securing blockchains, PoW blockchains require nodes around the world to exert immense amounts of computing power, which comes at a cost to the environment.}\textsuperscript{55} Ethereum, another highly touted and popular cryptocurrency blockchain, initially employed a PoW consensus algorithm.\textsuperscript{56} The nodes operating on Ethereum’s blockchain consumed around 73.2 terawatt hour (TWh) annually, which is the energy equivalent of a medium-sized country like Austria.\textsuperscript{57} Tesla, at one point, accepted Bitcoin to purchase its vehicles, but

\textsuperscript{52} Matthew Sparkes, Quantum computers are a million times too small to hack bitcoin, NEW SCIENTIST (Jan. 25, 2022), https://www.newscientist.com/article/2305646-quantum-computers-are-a-million-times-too-small-to-hack-bitcoin/ [https://perma.cc/ADR5-T44F].

\textsuperscript{53} Id.


\textsuperscript{55} See Amy Castor, Why Ethereum is switching to proof of stake and how it will work, MIT TECH. REV. (Mar. 4, 2022), https://www.technologyreview.com/2022/03/04/1046636/ethereum-blockchain-proof-of-stake/ [https://perma.cc/NM68-5E7C].

\textsuperscript{56} Id.


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suspended vehicle purchases using Bitcoin due to climate change concerns.\textsuperscript{58} Elon Musk elaborated on the decision in a tweet, saying, “[c]ryptocurrency is a good idea on many levels and we believe it has a promising future, but this cannot come at great cost to the environment.”\textsuperscript{59} In response to the PoW blockchains’ negative externalities, the Proof of Stake (PoS) consensus algorithm was created as an environmentally friendly alternative.\textsuperscript{60}

2. Proof of Stake Consensus Algorithms

[17] As discussed above, PoW consensus algorithms require nodes around the world to race each other to solve a complex mathematical function (the hash puzzle)—the winner of the race being rewarded with mining a block.\textsuperscript{61} Consequently, PoW consensus algorithms allocate block mining proportionally to the relative computing power a node has (i.e., the nodes that can prove their work the most).\textsuperscript{62} PoS consensus algorithms, on the other hand, use game theory and randomization to choose which node


\textsuperscript{59} Id.


\textsuperscript{61} Napoletano, \textit{supra} note 38.

gets to validate the new block.\textsuperscript{63} Blockchains employing a PoS consensus algorithm include Cardano (ADA), Tezos (XTZ), Binance Coin (BNB), Avalanche (AVAX), and Algorand (ALGO).\textsuperscript{64} PoS blockchains consume substantially less energy than PoW blockchains because selecting nodes to validate transactions is a significantly less energy-intensive process than nodes around the world racing to solve a hash puzzle.\textsuperscript{65} The Cardano blockchain, for example, is 47,000 times more energy-efficient than Bitcoin.\textsuperscript{66}

[18] Under a PoS consensus algorithm, crypto holders can “stake” their coins with nodes operating on the blockchain, and those nodes have a chance to validate new blocks on the blockchain.\textsuperscript{67} When the node validates a new block on the blockchain, the node and the individuals staking their crypto with the node earn “staking rewards.”\textsuperscript{68} PoS blockchains have their own distinct ways of operating and titling things, but there are three common activities and functions necessary to understand PoS blockchains: staking, the nodes on a PoS network, and staking rewards. This paper will


\textsuperscript{65} See Proof-of-stake vs. proof-of-work, supra note 63.

\textsuperscript{66} Jordan Major, Cardano is 47,000x more energy-efficient than Bitcoin, data shows, FINBOLD (Feb. 22, 2022), https://finbold.com/cardano-is-47000x-more-energy-efficient-than-bitcoin-data-shows/ [https://perma.cc/GP7A-FKNE].

\textsuperscript{67} Napoletano, supra note 38.

use the Cardano blockchain and its native cryptocurrency, ADA, as an example.

[19] Consider an individual possessing 1,000 ADA in their wallet. The individual could let the ADA sit in their wallet, or they could stake their ADA with a node on the Cardano network to earn staking rewards (nodes on the Cardano network are referred to as “stake pool operators”). Staking ADA is a passive investment that yields staking rewards, which are similar to the interest payments on savings accounts in the traditional world of finance. As of this writing, staking ADA yields an estimated 3.3% annual return on the principal ADA invested. Cardano offers self-custodian staking, which allows users to stake their ADA with a stake pool operator without the crypto even leaving their wallet. To stake their 1,000 ADA with self-custodian staking, the individual would log into their wallet, select the stake pool operator they want to stake their ADA with, and hit “stake.” Cardano’s PoS consensus algorithm, titled Ouroboros, yields staking rewards every five days. Individuals are permitted to either “claim” their


staking rewards from the stake pool operators or leave them unclaimed, and unclaimed staking rewards are added to the principal ADA amount staked.\(^7\) So here, the individual could stake their 1,000 ADA with a stake pool operator on January 1 and log into their wallet on December 31 to see 1,033 ADA.

[20] The nodes on the Cardano network are called stake pool operators because they pool other peoples’ staked ADA together to help run the blockchain.\(^5\) Operating a stake pool on the Cardano network does not require the expensive hardware required to mine Bitcoin, but stake pool operators must administer, maintain, and secure their own server.\(^6\) While Ouroboros utilizes game theory and randomization to choose which nodes validate new blocks,\(^7\) on average, stake pool operators are selected to validate new blocks in proportion to the node’s current holdings (i.e., the amount the node proves it has at stake).\(^8\) For example, if a Cardano stake pool operator holds 1% of all ADA, the stake pool operator will be selected to validate, on average, 1% of all new blocks on the Cardano blockchain.\(^9\) The stake pool operator gets their cut of the staking rewards, which is

\(^7\) See Stake ADA, supra note 71.

\(^5\) Kammerer, (Re)introduction to Cardano, supra note 73.


\(^7\) Aggelos Kiayias et al., Ouroboros: A Provably Secure Proof-of-Stake Blockchain Protocol, CRYPTOLOGY EPRINT ARCHIVE at 3 (July 20, 2019), https://eprint.iacr.org/2016/889.pdf [https://perma.cc/3X9N-ZGPY] (describing the use of coin-flipping as protocol for randomization); see Stake ADA, supra note 71 (stating that Ouroboros uses a game-theoretic approach).

\(^8\) Id. at 1–2.

\(^9\) See id. at 1.
around 4.3% annual return on the ADA staked, and the rest of the rewards go to the individuals who staked their ADA with the node (around 3.3% annual return).

[21] In short, PoS blockchains consume substantially less energy than PoW blockchains because the PoS block validation process consumes less energy. The individuals operating nodes on a PoW blockchain are called “crypto miners,” and they compete amongst each other to solve hash puzzles and earn crypto mining rewards. Nodes on a PoS blockchain are called “stake pool operators” and are selected to validate new blocks in a randomized order. On average, however, PoS consensus algorithms select nodes to validate new blocks in proportion to the amount of cryptocurrency the nodes have staked.

[22] The PoW consensus algorithm was created first, and the United States federal government has had more time to issue guidance and rulings on activities in PoW blockchains. As discussed in Sections III, IV and V, PoS blockchains and the activities surrounding staking are becoming a point of emphasis for the United States federal government.

80 *Stake ADA, supra* note 71.

81 *Id.*


84 Kiayias et al., *supra* note 77 at 1; Kammerer, *(Re)introduction to Cardano*, *supra* note 73.

85 Kiayias et al., *supra* note 77 at 1–2.
This paper’s purpose is, in part, to explain cryptocurrency to the common person. With a better understanding of the technologies underlying cryptocurrency, it is equally helpful to explain how people purchase and hold cryptocurrencies.

D. How Investors Purchase and Hold Cryptocurrency

As a practical matter, regardless of what type of cryptocurrencies investors purchase, there are established methods of purchasing and holding cryptocurrencies. First, people mostly purchase cryptocurrencies on centralized exchanges such as Binance, Coinbase, and KuCoin. Many crypto investors leave their crypto holdings on centralized exchanges, but this will change in the future as more people are increasingly using crypto wallets.

1. Storing Cryptocurrency on a Centralized Exchange

Leaving crypto on a centralized exchange allows investors to sell and purchase crypto assets quickly, and investors can exchange crypto assets for cash or another crypto asset, all on the exchange. Further, investors can watch the value of their entire crypto portfolio, which may

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88 See Reiff, Centralized Cryptocurrency Exchanges, supra note 86.
consist of dozens of different cryptos, all on the exchange. However, when someone purchases cryptocurrency and leaves it on a centralized exchange, they do not own the cryptocurrency itself—rather, what they own is a redeemable ticket for the right to their cryptocurrency.

[26] There is a popular phrase amongst cryptocurrency enthusiasts: “not your keys, not your coins.” Each crypto token has a cryptographic key associated with it, and possessing the keys represents actual ownership of the cryptocurrency. As such, the person or exchange possessing the crypto keys is the sole custodian of the cryptocurrency, which means they can sell it, trade it, or send it as they please. When cryptocurrency is left on a centralized exchange, the exchange possesses the keys to your crypto, and you are entrusting a third party with custody of your funds. Contrarily, crypto was created, in part, to establish a payment system where no third party has control over your funds. A minority of crypto is stored off exchanges in crypto wallets, where the wallet owner possesses the crypto keys.

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89 See generally id. (comparing the centralized exchange to the stock market where instead of stocks, the portfolio compromises of various cryptos).


91 Id.

92 See id.

93 Id.

94 Nakamoto, supra note 11.

95 See Why and How to Withdraw Your Bitcoin from Exchanges, supra note 90.
2. Storing Cryptocurrency on a Wallet

[27] There are dozens of different brands of crypto wallets available, and crypto wallets vary in which cryptocurrencies they are compatible with. Sending crypto from an exchange to a wallet is a fairly simple process: users input the amount of crypto they are sending and the recipient’s crypto wallet address, and hit send.\(^9^6\) Blockchains vary in how quickly they process transactions, but the crypto could be in the recipient’s wallet within seconds.\(^9^7\) Crypto wallets can be bifurcated into two general categories: software wallets and hardware wallets.

a. Software Wallets

[28] A software wallet is an entirely digital crypto wallet.\(^9^8\) Software wallets are applications you can use on your computer or, in some instances, mobile phone.\(^9^9\) MetaMask is a popular software wallet compatible with all Ethereum network cryptos.\(^1^0^0\) MetaMask is free, takes only minutes to set up, and is a downloadable application on your internet browser and mobile


\(^9^9\) Id.

phone. In November of 2021, the MetaMask creator issued a press release claiming MetaMask surpassed 21 million monthly active users. Users creating a new MetaMask wallet receive a “seed phrase,” which is a series of 12 to 24 randomly generated words that provides the data needed to recover a lost or broken crypto wallet. Users will choose a password, which must be input every time the user logs into the wallet or tries to send funds from the wallet. 

[29] A notable benefit of software wallets is that they provide users with the keys to their crypto; you can only access the crypto if you know a wallet owner’s login information. Further, software wallets are very accessible, and it is easy to send or receive crypto on them (if you know the login information). For this reason, software wallets are often called “hot”

101 See id.
104 Id.
105 See id.
106 See id.
The biggest disadvantage of software wallets is that the wallets are connected to the internet, which exposes them to viruses or hackers. Hardware wallets, often called “cold” wallets, are the most secure option available for holding and storing crypto.

b. Hardware Wallets

Hardware wallets are physical devices used to store your crypto’s keys offline. Ledger and Trezor are among the highest respected hardware wallet manufacturers. The Ledger Nano X is similar in size and appearance to a thumb drive, and the offline storage can be accessed with a Bluetooth or USB connection on a computer or mobile phone. The Trezor Model T is regarded as one of the most secure hardware wallets and is compatible with over 1,000 different cryptocurrencies, including Bitcoin. The greatest advantage hardware wallets have over software wallets is the additional security from storing your crypto offline. Hardware wallets are typically left entirely disconnected from a computer, which is why people...


110 CFI Team, supra note 108.

111 McGimpsey, supra note 109.

112 Id.


refer to them as “cold” wallets. However, software wallets are free, while the Ledger Nano X and Trezor Model T currently cost $149.00 and $219.00, respectively.

[31] The global crypto wallet market size was valued at $8.42 billion in 2022, and some projections indicate that figure will grow at 24.8% per year from 2023 to 2030. Increasingly, individuals are opting to hold their crypto in their own wallets rather than leaving it on a centralized exchange, and there is one person in particular to thank for that: Sam Bankman-Fried, founder of the once-popular crypto exchange, FTX.

3. Not Your Keys, Not Your Coins: Sam Bankman-Fried and FTX

Sam Bankman-Fried is a 31-year-old M.I.T. graduate and convicted felon. In 2017, he exploited an arbitrage in the Bitcoin markets known as the “Kimchi Swap,” where he would purchase Bitcoin on one crypto exchange and sell it on exchanges in other countries posting higher

115 CFI Team, supra note 108.


prices.\textsuperscript{119} Bankman-Fried wanted to scale his operation, so he founded Alameda Research.\textsuperscript{120} Alameda Research was wildly successful, and Bankman-Fried used his earnings and lured capital from investors to found his very own crypto exchange, FTX, in 2019.\textsuperscript{121} Alameda Research and FTX operated alongside each other inside FTX’s office headquarters in the Bahamas.\textsuperscript{122}

\[33\] In 2021 alone, FTX facilitated $719 billion in crypto exchanges.\textsuperscript{123} By January of 2022, FTX was the third-largest cryptocurrency exchange in


\textsuperscript{120} Id.


the world and boasted a $32 billion valuation.\textsuperscript{124} FTX struck partnerships with household names like Visa, MLB, Tom Brady, Stephen Curry, and Kevin O’Leary.\textsuperscript{125} Bankman-Fried had a net worth of approximately $16 billion, and people were comparing him to finance magnates like Warren Buffet.\textsuperscript{126} Bankman-Fried was viewed as a visionary; FTX created its own crypto called FTT, which reached an all-time-high price of $85.02 per coin in September 2021, representing a $12.73 billion market cap.\textsuperscript{127} People felt comfortable leaving their funds on FTX because they trusted Bankman-Fried with the keys to their crypto.\textsuperscript{128} FTX, and Bankman-Fried’s public


\textsuperscript{126} Kim, supra note 121.


perception, came crashing down within hours after a few tweets from Changpeng Zhao (CZ), the CEO of FTX’s rival crypto exchange, Binance.\footnote{See Sigalos, \textit{supra} note 119.}

Bankman-Fried’s original business venture, Alameda Research, was in a $10 billion hole as a result of speculative venture investments, lavish real estate investments, and large political donations.\footnote{See Complaint at 2, SEC v. Sam Bankman-Fried, No. 22-cv-10501 (S.D.N.Y. Dec. 13, 2022), https://www.sec.gov/files/litigation/complaints/2023/comp25616.pdf [https://perma.cc/UR8X-N8F8].} In an effort to keep Alameda Research afloat, Bankman-Fried misappropriated FTX’s customers’ funds to Alameda Research.\footnote{\textit{Id.}} Binance held a minority stake in FTX, but exited the investment in 2021 and received $2.1 billion in cryptocurrencies in return, including FTT coins worth $529 million.\footnote{Olga Kharif, \textit{Binance to Sell $529 Million of Bankman-Fried’s FTT Token}, BLOOMBERG (Nov. 6, 2022, 2:12 PM), https://www.bloomberg.com/news/articles/202211-06/binance-to-sell-529-million-of-ftt-token-amids-revelations#xj4y7vzkg [https://perma.cc/47CB-D4BM].} On November 6, 2022—allegedly after CZ realized Bankman-Fried was misappropriating customer funds—CZ tweeted his intention to sell Binance’s $529 million worth of FTT coins.\footnote{Sigalos, \textit{supra} note 119.} After CZ’s ominous tweet, many investors began withdrawing their funds from FTX as quickly as possible, which led to a multi-billion dollar liquidity crisis.\footnote{Samantha Delouya, \textit{Sam Bankman-Fried reportedly said it was a mistake to pick a fight with Binance CEO Changpeng Zhao: ‘not a good strategic move on my part’}, BUS. INSIDER (Nov. 14, 2022, 8:15 PM), https://www.businessinsider.com/sam-bankman-fried-ftx-binance-changpeng-zhao-cz-crypto-report-2022-11 [https://perma.cc/UKX8-8QRF].} FTX lacked the solvency to fulfill its customers’ withdrawals, so FTX suspended operations shortly thereafter.

\footnote{See Sigalos, \textit{supra} note 119.}


\footnote{\textit{Id.}}


\footnote{Sigalos, \textit{supra} note 119.}

withdrawals, and customers could not get their funds back out of the exchange.\textsuperscript{135}

[35] FTX filed for bankruptcy on November 11, 2022, just five days after CZ’s tweet.\textsuperscript{136} On December 12, 2022, Bankman-Fried was arrested in the Bahamas after the United States Department of Justice indicted him on eight counts, including conspiracy to commit wire fraud, wire fraud, conspiracy to commit commodities fraud, conspiracy to commit securities fraud, conspiracy to commit money laundering, and conspiracy to defraud the Federal Election Commission and commit campaign finance violations.\textsuperscript{137} Sam Bankman-Fried was ordered to remain on house arrest after posting a $250 million bond, but was remanded to jail after being accused of witness tampering.\textsuperscript{138} And on November 2, 2023, a jury found Sam Bankman-Fried guilty of two counts of wire fraud and five counts charging conspiracies to commit wire fraud, securities fraud, commodities fraud, and money


laundering.\textsuperscript{139} He is facing up to 115 years in prison and will be sentenced in March of 2024.\textsuperscript{140}

[36] Crypto investors who did not transfer their assets to their own wallets and instead left their funds on the FTX exchange became creditors to a bankruptcy proceeding rather than customers of a trusted exchange.\textsuperscript{141} According to a September 11, 2023 bankruptcy filing, bankruptcy advisors have recovered approximately $7 billion of FTX assets, which pales in comparison to the $16 billion in customer claims and $65 billion of non-customer claims filed with FTX’s bankruptcy advisors.\textsuperscript{142}

[37] In short, when a crypto investor leaves their crypto on a centralized exchange, the centralized exchange has actual possession of the crypto because they retain possession over the crypto keys.\textsuperscript{143} To have actual possession of their crypto’s keys, investors must transfer the crypto from an exchange to a hardware or software wallet.\textsuperscript{144} Bankman-Fried was able to

\textsuperscript{139} McKenzie Sigalos, \textit{Sam Bankman-Fried found guilty on all seven criminal fraud counts}, CNBC (Nov. 2, 2023 at 7:51 PM), https://www.cnbc.com/2023/11/02/sam-bankman-fried-found-guilty-on-all-seven-criminal-fraud-counts.html [https://perma.cc/Q59S-KKD4].

\textsuperscript{140} Id.

\textsuperscript{141} Id.

\textsuperscript{142} Notice of Presentation to Stakeholders at 8-9, In re FTX Trading LTD., No. 22-11068 (Bankr. D. Del. Sep. 11, 2023), https://assets.bwbx.io/documents/users/iqjWHBFdxfIU/rGgfh7D1z_38/v0 [https://perma.cc/7MWC-87GH].


steal billions of dollars from FTX’s customers because they entrusted FTX with their crypto’s keys.\textsuperscript{145}

[38] The FTX bankruptcy and Bankman-Fried’s thefts had a chilling effect on the crypto industry, as evidenced by the crypto market cap falling by $183 billion in the days following CZ’s tweet.\textsuperscript{146} Investors were left questioning how Bankman-Fried could steal billions of dollars from customers without a government agency first uncovering the scam. Crypto exchanges across the world had to regain their customers’ trust. One exchange, Coinbase, acted quickly to tell the world how it was different from FTX.\textsuperscript{147}


[39] Coinbase, the largest crypto exchange in the United States, has approximately 110 million verified users and close to $80 billion in assets on the platform.\textsuperscript{148} In the days following the FTX bankruptcy, Coinbase went on the offensive by obtaining a full-page advertisement in the Wall


Street Journal that read, “Trust us.” in a prominent typeface.149 Below the eye-catching plea for trust, Coinbase explained to its audience that:

We are headquartered in the United States; We hold our customers’ assets 1:1; We don’t trade against our customers, and we don’t leverage their funds without consent; We provide the transparent accounting and audits that are required of a public company[].150

[40] In short, Coinbase relied on its United States roots, promised to never touch or interfere with its customers’ funds without consent, and noted the regulations and reporting requirements United States public corporations must follow.151 So, what are the regulations surrounding a public company in the United States operating a crypto exchange, and how is crypto regulated if it is in someone’s wallet? Who in the United States federal government should have known about FTX’s scheme and protected investors, if anyone? Section III addresses these questions.

III. HOW THE UNITED STATES REGULATES CRYPTOCURRENCY

[41] United States federal agencies have attempted to apply an already-existing regulatory framework to a brand-new technology.152 In some cases, cryptocurrency is categorized as a commodity, the same asset-type as eggs and wheat, and subject to the Commodity Futures Trading Commission’s


150 Max Erdenberger, Coinbase – Trust Us, ERDENBERGER, https://www.erdenerberger.me/project/coinbase-trust-us [https://perma.cc/A7GH-86QF].

151 Id.

152 Id.
(CFTC) jurisdiction. In other cases, cryptocurrency is categorized as a security and treated like stock in a company, which is regulated by the Securities and Exchange Commission (SEC). Both the CFTC and SEC have exerted their jurisdiction over cryptocurrencies in different circumstances, even though cryptocurrencies have qualities distinct from both commodities and securities. Thus, the answer to the question of how the United States regulates cryptocurrency is “it depends.”

A. Congressional Power Under the Constitution: The SEC and the CFTC

The U.S. Constitution grants Congress with the power “to regulate commerce with foreign nations, among States . . . .” This Constitutional provision, known as the Commerce Clause, has been interpreted broadly and grants Congress the power to regulate a wide range of activities. The Constitution also grants Congress the power to create its own agencies and

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154 Id.


156 U.S. CONST. art. I, § 8, cl. 3.

delegate those agencies law-making power over certain issues.\textsuperscript{158} Congress used its Commerce Clause and delegation powers to protect investors and avoid fraud on markets when it established the SEC and CFTC.\textsuperscript{159}

After the stock market crash of 1929, Congress passed the Securities Act of 1933 and the Securities Exchange Act of 1934.\textsuperscript{160} Together, the securities laws require publicly traded companies to register with the SEC; disclose financial and other important information; and refrain from engaging in certain types of fraud, deceit, and misrepresentation.\textsuperscript{161} The Securities Act of 1933 regulates companies selling their securities directly to the public,\textsuperscript{162} while the Securities Exchange Act of 1934 regulates securities transactions on secondary markets.\textsuperscript{163} The 1934 Act also

\textsuperscript{158} U.S. \textit{Const.} art. I, \S 1.


established the SEC, which is tasked with enforcing both Acts and aims to ensure a transparent and fair environment for investors.\textsuperscript{164}

[44] In 1936, Congress created the Commodity Exchange Commission (CEC) when it passed the Commodity Exchange Act (CEA).\textsuperscript{165} Congress tasked the CEC with regulating the commodities enumerated in the CEA: cotton, rice, mill feeds, butter, eggs, Irish potatoes, and grains.\textsuperscript{166} Congress also tasked the CEC with overseeing futures contracts of the enumerated commodities, and the Commodity Exchange Administration was formed under the Department of Agriculture.\textsuperscript{167} In 1974, Congress amended the CEA when it passed the Commodity Futures Trading Commission Act of 1974, and the CEA turned into its own independent agency, the CFTC.\textsuperscript{168} Congress granted the CFTC with “powers greater than those of its predecessor agency” by giving it exclusive jurisdiction over futures trading in all commodities—beyond those specifically enumerated in the 1936 Act.\textsuperscript{169}

\textsuperscript{164} Id.


\textsuperscript{166} Id.

\textsuperscript{167} Id.


The CFTC decided that cryptocurrencies are commodities in some contexts and are thus subject to CFTC regulatory oversight. On the other hand, the SEC decided that cryptocurrencies are securities in some contexts and thus are subject to SEC regulatory oversight. Solutions to regulating cryptocurrencies will continue to develop in the future, but the United States federal government has employed a bifurcated approach to resolving this novel issue thus far.

### B. Regulating Cryptocurrencies as Commodities

The Commodity Exchange Act defines a commodity as “wheat, cotton, rice, corn, oats . . . butter, eggs, . . . and all other goods and articles, . . . and all services, rights, and interests . . . in which contracts for future delivery are presently or in the future dealt in.” At first glance, it appears cryptocurrencies would not fall within this definition of “commodity”—especially considering the CEA’s original purpose was to regulate agricultural commodities. However, the CFTC employed this definition and argued that Bitcoin was a commodity in *In the Matter of Coinflip, Inc.*

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173 *US Futures Trading and Regulation*, supra note 165.

1. In the Matter of Coinflip

[47] Coinflip, owned and operated by Francisco Riordan, was a Delaware corporation operating in San Francisco, California.175 Coinflip operated a website, derivabit.com, which connected buyers and sellers of standardized Bitcoin options and futures contracts.176 Coinflip users were first required to register an account and deposit Bitcoin.177 After that, Coinflip users could post bids and offers for Bitcoin options contracts or accept other users’ Bitcoin put and call options.178 At the conclusion of an option contract, premiums and payments of settlement were paid using Bitcoin at a spot rate determined by a third-party Bitcoin exchange.179 Under the CEA, platforms offering futures contracts on commodities must be registered with the CFTC as an exchange.180 The CFTC alleged that Coinflip:

violated Sections 4c(b) and 5h(a)(l) of the Act and Commission Regulations 32.2 and 37.3(a)(l) by conducting activity related to commodity options contrary to Commission Regulations and by operating a facility for the trading or processing of swaps without being registered as a swap execution facility or designated contract market.181

175 Id.
176 Id.
177 Id. at 3.
178 Id. at 2–3.
180 Id. at 4.
181 Id. at 2.
Thus, in determining whether Coinflip violated the CEA and CFTC Regulations, the sole issue was whether Bitcoin classified as a commodity.\footnote{Id. at 3.}

In the CFTC’s Order in \textit{Coinflip}, the CFTC stated that “Virtual Currencies Such as Bitcoin are Commodities[,]” and provided that:

Section 1a(9) of the Act defines "commodity" to include, among other things, "all services, rights, and interests in which contracts for future delivery are presently or in the future dealt in." 7 U.S.C. § 1a(9). The definition of a "commodity" is broad . . . Bitcoin and other virtual currencies are encompassed in the definition and properly defined as commodities.\footnote{Id.}

In short, the CFTC relied on case law, which held that the definition of commodity is “broad,” and concluded that Bitcoin and other virtual currencies are properly defined as commodities.\footnote{Coinflip, Inc., supra note 174.} That is the extent of the CFTC’s legal analysis in its Order in \textit{Coinflip}.

Coinflip submitted an offer to the CFTC waiving its right to a trial and agreed to cease its operations as an unregistered swap execution facility.\footnote{Id. at 1.} This was the first time the CFTC characterized a cryptocurrency as a commodity.\footnote{Matt Clinch, \textit{Bitcoin now classed as a commodity in the US}, CNBC, https://www.cnbc.com/2015/09/18/bitcoin-now-classed-as-a-commodity-in-the-us.html [https://perma.cc/DP65-V57L] (last updated Sep. 18, 2015, 3:48 PM).} However, it was a proper case for the CFTC to exert its
jurisdiction over cryptocurrencies because Coinflip was offering futures contracts on Bitcoin, thus falling within the CFTC’s jurisdiction over futures contracts dealing in “goods.” It was unclear whether the CFTC would exert its jurisdiction over cryptocurrencies outside the context of futures contracts until the CFTC charged Patrick McDonnell in 2018 for his role with his fraudulent company, Coin Drop Markets.

2. CFTC v. Patrick K. McDonnell and Cabbage Tech, Corp. d/b/a Coin Drop Markets

Coin Drop Markets advertised itself as a team of Wall Street crypto trading advisors and offered membership subscriptions where members would receive expert trading advice and investment services. In reality, McDonnell was operating Coin Drop Markets alone in his Staten Island basement, he never provided any expert crypto trading advice to his customers, and he lied about his investing experience. Some members only purchased memberships from McDonnell to receive investing advice. Other investors were lured by McDonnell’s promises of 200 to 300% daily returns and thus transferred their crypto to Coin Drop Markets. After receiving $290,429.29 from members, McDonnell deleted Coin Drop Markets’ social media accounts and websites and ceased

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189 Id. at *7.

190 Id. at *8.

191 Id. at *29.

192 Id. at *31.

communications with investors (also known as a “rug pull” in the cryptocurrency market). The CFTC alleged that Coin Drop Market operated “a deceptive and fraudulent virtual currency scheme . . . for purported virtual currency trading advice” and “for virtual currency purchases and trading . . . and simply misappropriated [investor] funds.”

The CFTC filed charges against McDonnell in the United States District Court of the Eastern District of New York, seeking a preliminary injunction. McDonnell (who represented himself) filed a motion to dismiss and argued the CFTC lacked jurisdiction over the Coin Drop Market scheme because crypto was not a commodity. The court had to decide two questions presented in order to determine whether the CFTC had jurisdiction over McDonnell: (1) whether virtual currency may be regulated by the CFTC as a commodity; and (2) whether the amendments to the CEA under the Dodd-Frank Act permit the CFTC to exercise its jurisdiction over fraud that does not directly involve the sale of futures or derivatives contracts. In granting the CFTC’s preliminary injunction, the court held that “[b]oth questions are answered in the affirmative.”

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198 Id. at 217.

199 Id.
its opinion by saying: “Until Congress clarifies the matter, the CFTC has concurrent authority, along with other state and federal administrative agencies . . . over dealings in virtual currency.”

[54] In answering the first question presented, the McDonnell court relied on the CEA’s broad definition of “commodity,” holding that “[a] ‘commodity’ encompasses virtual currency both in economic function and in the language of the statute.” According to the court, cryptocurrencies are “goods” exchanged in a market for a uniform quality and value, falling within both the common definition of “commodity” and the CEA’s definition of “commodities” as broadly encompassing “all . . . goods”

[55] Addressing the second question presented, the court held that the CFTC’s “broad [statutory] authority . . . extends to fraud or manipulation in the virtual currency derivatives market and its underlying spot market[,]” and that the CFTC “may exercise its enforcement power over fraud related to virtual currencies transacted in interstate commerce.” In the end, the court held McDonnell liable for violating CEA § 6(c)(1) and CFTC Regulation 180.1 for engaging in fraudulent activity in connection with commodities. The CFTC obtained a judgment against McDonnell

200 Id.
201 Id.
202 McDonnell, 287 F. Supp. 3d at 217 (showing that the CEA defines “commodity” as agricultural products and “all other goods and articles . . . and all services, rights, and interests . . . in which contracts for future delivery are presently or in the future dealt in.”).
203 Id. at 228.
204 Id. at 217.
205 Id.
206 Id. at 234.
totaling over $1.1 million, of which $290,429.29 was awarded as restitution as well as a civil monetary penalty of $871,287.87 (which was three times the amount McDonnell stole from customers under the statute’s treble damages provision). Further, McDonnell was permanently banned from trading in cryptocurrencies.

[56] The McDonnell case was the first time a federal district court held that cryptocurrency fell under the definition of a commodity. As a result, some crypto exchanges (including FTX) filed with the CFTC as required under the Commodities Exchange Act. However, the SEC defined and regulated cryptocurrencies differently. Before the CFTC asserted its jurisdiction over cryptocurrencies as commodities, the SEC exerted its jurisdiction over investment contracts dealing in cryptocurrencies.

C. Regulating Cryptocurrencies as Securities

[57] As previously mentioned, the SEC is charged with enforcing the Securities Act of 1933 and the Securities Exchange Act of 1934, which


208 Id.

209 Id.


211 Fast Answers: CFTC, supra note 187.

212 Isaac et al., supra note 155.
together comprise the nation’s securities laws. The Securities Act of 1933 defines a “security” as “any note, stock, treasury stock, security future, security-based swap, bond . . . [or] investment contract” (emphasis added). To determine whether an investment contract exists, courts apply a four-prong inquiry called the Howey test.

[58] In its 1946 decision in SEC v. W.J. Howey Co., the U.S. Supreme Court held that an investment contract exists when there is: (1) an investment of money, (2) in a common enterprise, (3) with the expectation of profit, and (4) the profit is derived from the efforts of others. If these four factors are present in an agreement, the agreement constitutes an investment contract and is subject to the SEC’s rules and regulations. To consider how courts interpret the Howey test, the 2014 case SEC v. Trendon T. Shavers and Bitcoin Savings and Trust is illustrative.

1. SEC v. Trendon T. Shavers and Bitcoin Savings and Trust

[59] Trendon T. Shavers solicited investments in his company, Bitcoin Savings and Trust, promising returns of up to 1% per day or 7% weekly and touting his own skills at trading in Bitcoin. Investors provided Shavers

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213 Kenton, supra note 163.


216 Id. at 298.

217 Id.


219 Id. at *1–2.
with a username, an email address, their investments in Bitcoin, and a Bitcoin wallet address to receive investment withdraws.\textsuperscript{220} With his newly obtained Bitcoin, Shavers built his own Bitcoin mining operation and left a small reserve fund for investors withdrawing their funds.\textsuperscript{221} Soon afterwards, Shavers reduced his promised rate of return from 7\% to 3.9\% and eventually shut down his operation when too many investors withdrew their funds at once.\textsuperscript{222} The SEC determined that Bitcoin Savings and Trust was a Ponzi scheme.\textsuperscript{223} Of the approximately 732,100 Bitcoins investors provided, around 180,819 Bitcoins went towards Shavers’ personal expenses.\textsuperscript{224}

[60] In response to these allegations, Shavers argued federal securities laws did not apply to cryptocurrencies and, accordingly, that the court lacked jurisdiction.\textsuperscript{225} The court examined Shavers’ conduct under the \textit{Howey} test and held that the investments in his company constituted investment contracts because: (1) Bitcoin is a currency or form of money; (2) there was a common enterprise because the investors were dependent on Shavers’ expertise in Bitcoin markets; (3) investors expected to profit because Shavers promised a substantial return on their investments; and (4) the expected profits were to be derived from Shavers’ efforts.\textsuperscript{226} Thus, the court held an investment contract existed as a matter of law between Bitcoin Savings and Trust and its investors, and Bitcoin Savings and Trust fell

\textsuperscript{220} Id.

\textsuperscript{221} Id. at *3.

\textsuperscript{222} Id. at *5

\textsuperscript{223} Shavers, 2014 U.S. Dist. LEXIS 194382, at *2.

\textsuperscript{224} Id. at *9–10.

\textsuperscript{225} Id. at *1.

\textsuperscript{226} Id., at *3.
within the SEC’s jurisdiction. The court held that Shavers violated the Securities Exchange Act of 1934 because:

Section 10(b) of the Exchange Act . . . and Rule 10b-5 . . . make it unlawful for any person, in connection with the purchase or sale of a security, directly or indirectly, to (a) “employ any device, scheme, or artifice to defraud”; (b) “make an untrue statement of a material fact” or a material omission; or (c) “engage in any act, practice, or course of business which operates . . . as a fraud or deceit upon any person.

Further, the court held that Shavers knowingly and intentionally operated a Ponzi scheme and made misrepresentations to investors.

The set of facts surrounding Bitcoin Savings and Trust’s fraudulent operations provided the SEC with a perfect opportunity to exert its jurisdiction over cryptocurrency activities. Shavers accepted Bitcoin as investments in his fraudulent company, forming an investment contract. Shavers was not operating an unregistered exchange dealing in “goods” (unlike the defendant in Coinflip), nor was he offering subscription services for cryptocurrency trading advice (unlike the defendant in Coin Drop Markets). According to the SEC, the investment contracts in Bitcoin Savings and Trust were formed between the investors and the

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227 Id. at *22.


229 Id. at *3; CFTC v. McDonnell, 287 F. Supp. 3d 213, 224, 228 (E.D.N.Y. Mar. 6, 2018).

230 Shavers, 2014 U.S. Dist. LEXIS 194382, at *1; see also McDonnell, 287 F. Supp. 3d at 232.
company itself, but the investments were paid for in Bitcoin.\(^{231}\) As such, rather than address the question of whether Bitcoin itself was a security, the court in *SEC v. Shavers* held more narrowly that the SEC could regulate investment contracts dealing in Bitcoin.\(^{232}\) In fact, the SEC has since provided guidance that Bitcoin and Ether (the native token on the Ethereum blockchain) do not constitute securities under the *Howey* test, which is still being debated today.\(^{233}\)

2. Initial Coin Offerings and the Howey Test

[63] In June 2018, the Director of the SEC’s Division of Corporation Finance, William Hinman, spoke at a summit about cryptocurrency regulation.\(^ {234}\) Hinman told the crowd that Bitcoin and Ether fail the *Howey* test because they both “[lack] a central third party whose efforts are a key determining factor in the enterprise. The network[s] on which Bitcoin [and Ether] function [are] operational and appear[] to have been decentralized for some time, perhaps from inception.”\(^ {235}\) In an interview with CNBC in July 2022, current SEC chair Gary Gensler reaffirmed the SEC’s position that Bitcoin is a commodity, yet he declined to extend that classification to Ether.\(^ {236}\) Commentators (and possibly Gensler himself) believe Ether may

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\(^{231}\) *Shavers*, 2014 U.S. Dist. LEXIS 194382, at *2–3.

\(^{232}\) *Id.* at *22.


\(^{234}\) See *id.*

\(^{235}\) *Id.*

be considered a security because it was first offered to customers in an Initial Coin Offering (ICO).

An ICO is when companies offer their newly created cryptocurrencies to the public for the first time. An ICO in the crypto industry is analogous to an initial public offering in the traditional finance industry.

[64] As previously noted, the SEC initially took the position that Bitcoin and Ether failed the Howey test because both cryptos operate on blockchains that are sufficiently decentralized and thus lack a common enterprise (i.e., Howey’s second prong). However, when Ethereum first launched in 2014, the Ethereum Foundation sold over 60 million tokens in an ICO at roughly $0.31 per coin. The Ethereum Foundation planned on using the funds it raised from the ICO to continue developing the Ethereum blockchain, and the assets were not usable or transferable until the “genesis block” was released to the public. Investors purchasing the tokens during the ICO expected a return on their purchases due to the Ethereum Foundation’s continued development of the Ethereum blockchain. Consequently, when a common enterprise like the Ethereum Foundation

237 See id.


239 See id.

240 See Hinman, supra note 233.


243 See id.; see also Ethereum (ETH) ICO supra note 241.
sells its cryptocurrencies in an ICO, the cryptocurrencies may represent an investment contract between the purchaser and the issuer. In contrast, Bitcoin lacks the centralized common enterprise Ethereum has: There is no Bitcoin foundation continuing to develop the blockchain, and the first Bitcoin was mined by a node on the peer-to-peer, decentralized network rather than sold directly to customers. Accordingly, because Bitcoin lacks a common enterprise, it fails the Howey definition of “investment contract.”

[65] Other cryptocurrencies (e.g., XRP and ATB Coin) have also launched through ICOs. In Balestra v. ATBCOIN LLC, investors in ATB Coin’s ICO sued the company in the United States District Court of the Southern District of New York for selling unregistered securities. ATB Coin filed a motion to dismiss the suit arguing the court lacked jurisdiction on account of its cryptocurrency failing to constitute a security, and the motion was denied. The plaintiffs in the case settled with ATB Coin for

244 See generally Hinman, supra note 233 (discussing the Howey test and the broad nature of investment contracts).


248 Id. at 346.
$250,000, but the fact the court denied ATB Coin’s motion to dismiss indicated it was plausible cryptocurrencies sold through ICOs constitute securities. On its part, the SEC asserted that cryptocurrencies, including those offered through an ICO, constitute securities after it charged Ripple Labs Inc. for selling its cryptocurrency, XRP.

3. SEC v. Ripple Labs, Inc.

[66] In its filing against Ripple Labs, the SEC alleged that Ripple Labs engaged in three types of unregistered XRP offers and sales: (1) “Institutional Sales” to sophisticated buyers (such as hedge funds) under written contracts amounting to $728 million; (2) “Programmatic Sales,” which were $757 million in public sales to public buyers on digital asset exchanges; and (3) “Other Distributions,” which reference $609 million worth of XRP distributions to employees as compensation and to third parties to develop new applications for XRP. Further, the SEC alleged Ripple Labs’ former CEO, Christian Larsen, and current CEO, Bradley Garlinghouse, engaged in the unregistered sale of securities in their individual capacities on digital asset exchanges. And lastly, the SEC also alleged that Larsen and Garlinghouse aided and abetted Ripple’s Section 5 violations.


251 SEC Press Release, supra note 171.


253 Id.

254 Id.
Ripple Labs responded to the allegations by making a nuanced argument, asserting that XRP failed to constitute a security under the Howey test because it lacked the “essential ingredients.” According to Ripple Labs, every investment contract case prior to 1933 involved an actual contract, imposed post-sale obligations on the promoter, and gave the investor a right to receive profits (the “essential ingredients”). Ripple Labs argued these characteristics do not apply to XRP and no Supreme Court or Second Circuit Court of Appeals case since Howey has held that an investment contract exists without these three essential characteristics. Ripple Labs—and Larsen and Garlinghouse—also raised a fair notice defense under the Due Process Clause of the Fourteenth and Fifth Amendments to the U.S. Constitution, which requires the language of criminal statutes be sufficiently clear to objectively give fair notice of what is prohibited. Nevertheless, the main issue was whether Ripple Labs’ XRP transactions constituted investment contracts under the Howey test.

On July 13, 2023, the U.S. District Court for the Southern District of New York issued its much anticipated order in response to the cross-motions for summary judgment, granting and denying both motions in part. The court rejected Ripple Labs’ “essential ingredients” analysis, and instead applied the three-prong version of the Howey test to each type of transaction at issue.

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258 Ripple Labs, 2023 U.S. Dist. LEXIS 120486, at *43.

259 Id.

260 Id. at *11–*19.
[69] Under the three-prong version of the Howey test, an investment contract is “a contract, transaction[,] or scheme whereby a person [(1)] invests his money [(2)] in a common enterprise and (3) is led to expect profits solely from the efforts of the promoter or a third party.”\textsuperscript{261} The first prong merely requires a payment by someone to “provide capital” or “put up their money.”\textsuperscript{262} The second prong requires the invested capital to be pooled together, such that the investors and enterprise share risk, and that the “fortunes of each investor are tied to the fortunes of other investors, as well as to the success of the overall enterprise.”\textsuperscript{263} Under the third prong, the court analyzes communications made to investors to determine whether they would reasonably expect to profit from the enterprise’s efforts.\textsuperscript{264}

[70] After considering the “economic reality and totality of circumstances surrounding the offers and sales of the underlying asset[,]”\textsuperscript{265} the court concluded the Institutional Sales constituted investment contracts, while the Programmatic Sales and Other Transactions did not.\textsuperscript{266}

[71] The court first concluded that Ripple Labs’ offers and sales of XRP to Institutional Buyers constituted investment contracts.\textsuperscript{267} As to the first prong, the court held that the institutional buyers’ payments in fiat and other currencies in exchange for XRP constituted an investment, regardless of

\textsuperscript{261} Id. at *18.
\textsuperscript{262} Id.
\textsuperscript{263} Ripple Labs, 2023 U.S. Dist. LEXIS 120486, at *26--*27.
\textsuperscript{264} Id. at *19.
\textsuperscript{265} Id. at *22.
\textsuperscript{266} Id. at *35, *39, *41.
\textsuperscript{267} Id. at *35.
whether the Institutional Buyers had an intent to make an investment.\(^{268}\) Under the second prong of the *Howey* test, a common enterprise existed due to Ripple Labs’ conduct after the sales: Ripple Labs pooled its investors’ assets together by failing to segregate and separately manage investor funds, and Ripple Labs’ success was tied to the Institutional Buyers’ profits.\(^{269}\) And third, the court held that the Institutional Buyers had a reasonable expectation of profits to be derived from Ripple’s efforts based off Ripple’s communications, which involved a marketing campaign for Institutional Buyers and quarterly market reports touting XRP’s potential value.\(^{270}\) By satisfying all three prongs of the *Howey* test, “Ripple’s Institutional Sales of XRP constituted the unregistered offer and sale of investment contracts in violation of Section 5 of the Securities Act.”\(^{271}\)

\(^{[72]}\) The court next examined Ripple’s “Programmatic Sales” of XRP and held that these sales failed to constitute investment contracts under the third prong of the *Howey* test.\(^{272}\) The Programmatic Sales were blind bid/ask transactions on digital asset exchanges. In conducting its Programmatic Sales, “Ripple did not make any promises or offers because Ripple did not know who was buying the XRP, and the purchasers did not know who was selling it.”\(^{273}\) According to the court, even if these investors expected to profit off their investments, such buyers “could not have known if their payments of money went to Ripple, or any other seller of XRP.”\(^{274}\) In this

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\(^{269}\) *Id.* at *27–*28.

\(^{270}\) *Id.* at *30–*31.

\(^{271}\) *Id.* at *35.

\(^{272}\) *Id.*

\(^{273}\) *Ripple Labs*, 2023 U.S. Dist. LEXIS 120486, at *37.

\(^{274}\) *Id.* at *35–*36.
blind, bid/ask transaction context, “the economic reality is that a Programmatic Buyer stood in the same shoes as a secondary market purchaser who did not know to whom or what it was paying its money.”

Thus, the buyers could not reasonably expect for Ripple to use any capital it received to improve the XRP network—thereby increasing the XRP price. And even if some Programmatic Buyers reasonably expected to derive profit from Ripple’s efforts, “[t]he inquiry is an objective one focusing on the promises and offers made to investors; it is not a search for the precise motivation of each individual participant.”

In short, the Programmatic Sales failed to constitute investment contracts under the third prong of the Howey test.

[73] The $609 million worth of “Other Transactions,” which was Ripple Labs’ book value for the XRP it paid to employees and third parties, also failed to constitute investment contracts. These payments failed under the first prong of the Howey test, which requires a payment of money. The SEC argued these payments constituted an indirect public offering because the parties receiving XRP in these Other Transactions were free to transfer their XRP to another holder. Nevertheless, the court rejected this argument because “the payment of money for these XRP sales never traced back to Ripple, and the Court cannot make such a finding.” As a result,

275 Id. at *36.
276 Id. at *37.
277 Id. at *39–*40.
278 Ripple Labs, 2023 U.S. Dist. LEXIS 120486, at *40.
279 Id. at *41.
280 Id.
“Ripple’s Other Distributions did not constitute the offer and sale of investment contracts.”

[74] Lastly, the court applied the Howey test to the XRP sales made by Ripple Labs CEOs, Larsen and Garlinghouse, in their individual capacities. From 2013 to 2020, Larsen sold $450 million worth of XRP he retained after founding the XRP blockchain. Garlinghouse sold $150 million worth of XRP from 2017 to 2020, some of which was earned as compensation. The court concluded that these sales failed under the third Howey prong, like the Programmatic Sales. These sales were conducted on various digital asset exchanges in blind bid/ask transactions—Larsen and Garlinghouse did not know to whom they sold the XRP, and the buyers did not know the identity of the seller. “Thus, as a matter of law, the record cannot establish the third Howey prong as to these transactions.”

[75] In sum, the court concluded Ripple’s sales to Institutional Buyers constituted investment contracts, while neither the Other Transactions nor any of the defendants’ sales on digital asset exchanges constituted investment contracts.

[76] The court rejected the defendants’ fair notice defense as to the Institutional Sales and denied both parties’ motions for summary judgment.

281 Id.
282 Id. at *41–*42.
284 Id.
285 Id. at *42.
286 Id.
287 Id. at *35, *39, *41.
as to the aiding and abetting charges against Larsen and Garlinghouse.\textsuperscript{288} On October 19, 2023, the SEC stipulated and agreed to dismiss the aiding and abetting claims against Garlinghouse and Larsen, which Ripple’s Chief Legal Officer described as a “surrender by the SEC.”\textsuperscript{289} The SEC will likely appeal, but the \textit{Ripple Labs} decision was viewed as a huge win in the crypto industry.

[77] The \textit{Ripple Labs} decision seemed to give a clear answer that cryptocurrencies sold through ICOs constitute investment contracts, whereas cryptocurrencies sold through digital asset exchanges do not. This clarity was short-lived, however. The SEC filed for an interlocutory appeal, and in denying the SEC’s motion, the \textit{Ripple Labs} court asserted that the SEC misconstrued her holding to mean “offers and sales on crypto asset trading platforms cannot create a reasonable expectation of profits based on the efforts of others[].”\textsuperscript{290} Judge Torres made clear that her rulings applied only in the \textit{Ripple} case because they were based on “the totality of the circumstances . . . , including an examination of the facts, circumstances, and economic realities of the transactions[].”\textsuperscript{291}

[78] Thus, the \textit{Ripple Labs} decision can be properly read as requiring judges to examine the facts, circumstances, and economic realities of the transactions to determine whether a cryptocurrency is a security, a commodity, or neither.\textsuperscript{292} This judge-made line drawing fails to provide

\textsuperscript{288} \textit{Ripple Labs}, 2023 U.S. Dist. LEXIS 120486, at *44, *46.
\textsuperscript{291} \textit{Id.} at *13.
\textsuperscript{292} \textit{Id.}
clear guidance to those in the cryptocurrency industry, especially when judges in the same district as the Ripple Labs court have declined to follow the decision. All the while, the SEC and CFTC have continued to assert their jurisdiction over cryptocurrency exchanges, including against Coinbase and Binance. Congressional action is needed.

4. Current Congressional Efforts

[79] The 118th Congress have introduced a number of bills on cryptocurrency, but there are two main pieces of legislation this paper will cover: the Financial Innovation and Technology for the 21st Century Act, and the Lummis-Gillibrand Responsible Financial Innovation Act.

a. The Financial Innovation and Technology for the 21st Century Act

[80] The Financial Innovation and Technology for the 21st Century Act (the “FIT Act”) was introduced on July 20, 2023 by Representatives Glenn

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Thompson, French Hill, and Dusty Johnson. The bill provides a definition for “digital commodity” and establishes certain qualitative and quantitative thresholds for a blockchain network to determine whether a digital asset will be regulated by the SEC or the CFTC. The FIT Act focuses on two key principles, functionality and decentralization, “to clarify how the Supreme Court’s Howey Test applies to digital assets.”

[81] The FIT Act provides the CFTC with primary jurisdiction over digital assets and digital asset markets. When a blockchain network is both “functional” and certified as “decentralized,” as those terms are defined in the Act, the asset on the blockchain network constitutes a “digital commodity.” Digital commodity issuers and intermediaries must register with the CFTC. The SEC has jurisdiction over “Restricted Digital Assets,” which are digital assets on blockchain networks lacking functionality or certification of decentralization or are digital assets in the


298 See H.R. 4763. at § 101.

299 Id.


301 See H.R. 4763.

302 Id. at § 101.

303 Id.

304 Id. at § 404.
hands of its issuer.\textsuperscript{305} Thus, the determining factors in applying the FIT Act’s regulatory scheme to digital assets are functionality and decentralization. As explained below, functionality examines whether the blockchain operates, while decentralization focuses on digital asset ownership and control over the blockchain, among other things.\textsuperscript{306}

[82] A “functional network” is a blockchain network that allows participants to either (i) use its network to transmit and store value on the blockchain, (ii) participate in services or applications on the network, or (iii) participate in the decentralized governance of the blockchain system.\textsuperscript{307} Thus, for commodity treatment, a blockchain network must have some functionality in terms of currency, operate services or applications, or provide voting rights.\textsuperscript{308} After constituting a functional network, the digital asset must also be on a “decentralized network,”\textsuperscript{309} as defined below.

[83] Under the FIT Act, a “decentralized network”\textsuperscript{310} is a blockchain network where:

\begin{itemize}
  \item[(i)] during the 12-months prior to issuance, no person had the unilateral authority to control or materially alter the functionality or operation of the blockchain system;
  \item[(ii)] no digital asset issuer or affiliated person (relates to ownership) beneficially owned, in the aggregate,
\end{itemize}

\textsuperscript{305} \textit{Id.} at §§ 101, 301.

\textsuperscript{306} \textit{See} H.R. 4763, at § 101.

\textsuperscript{307} \textit{Id.}

\textsuperscript{308} \textit{Id.}

\textsuperscript{309} \textit{Id.}

\textsuperscript{310} \textit{Id.} at § 101.
20% or more of the total amount of units of such digital asset or had the ability to do so;

(iii) during the 3-month period prior to issuance, the digital asset issuer or any related person has not altered the blockchain’s source code, unless to address vulnerabilities or adopted through consensus (consensus is when token holders approve a software update through a decentralized governance system);

(iv) during the 3-month period prior to issuance, neither any digital asset issuer nor any affiliated person has marketed to the public the digital assets as an investment (focusing on communications made to the public by the enterprise or any affiliated persons); and

(v) during the previous 12-month period, all issuances of units of such digital asset through the programmatic functioning of the blockchain system were end user distributions (end user distributions are issuances involving no money for consideration and are incentive-based; air drops and staking and mining rewards would presumably be end user distributions).311

[84] In toto: the “decentralized network” definition: (i) examines whether someone has unilateral control over the blockchain network’s operability, (ii) establishes ownership thresholds for issuers and affiliated people, (iii) disallows the digital asset issuer or its employees changing the network’s code within three months prior to issuance (with exceptions), (iv) disallows the issuer or any affiliated person to market the asset as an investment for three months before issuance, and (v) permits programmatic issuance through end user distributions, which are presumably air drops and staking

311 See H.R. 4763, at § 101.
and mining rewards.\textsuperscript{312} Once a blockchain network is decentralized, a person can file the certification of decentralization.\textsuperscript{313}

[85] The FIT Act permits digital asset issuers to file a certification of decentralization with either the CFTC or the SEC.\textsuperscript{314} But the Act makes it unlawful to act as a digital commodity broker or dealer without registering with the CFTC, and imposes registration requirements similar to existing securities laws if the asset is a restricted digital asset.\textsuperscript{315} In line with the definition of “decentralized network,” the certification of decentralization details the blockchain network’s activities, development history, and ownership.\textsuperscript{316} After a certification of decentralization is filed, the SEC has thirty days to rebut a certification if they determine the blockchain system is not a decentralized network.\textsuperscript{317} The CFTC has twenty business days to do so (or two days if an intermediary is filing for an asset on a network with certification of decentralization).\textsuperscript{318} If these deadlines are passed and neither commission raises an objection, then the filing becomes effective with the CFTC,\textsuperscript{319} and the SEC considers the network a decentralized network.\textsuperscript{320}

\textsuperscript{312}\textit{Id.}

\textsuperscript{313}\textit{Id.} at §§ 204, 403–04.

\textsuperscript{314}\textit{Id.} at §§ 204, 403.

\textsuperscript{315}\textit{Id.} at §§ 303, 305, 403–04.

\textsuperscript{316} See H.R. 4763, at §§ 204, 403.

\textsuperscript{317} \textit{Id.} at § 204.

\textsuperscript{318} \textit{Id.} at § 403.

\textsuperscript{319} \textit{Id.}

\textsuperscript{320} \textit{Id.} at § 204.
The FIT Act grants the SEC and CFTC broad discretion in determining how frequently—and to what extent—they will require reporting from digital asset brokers and dealers, and from digital commodity brokers and dealers. Digital asset brokers and dealers, as well as digital commodity brokers and dealers, are required to “meet such minimum capital requirements as the Commission may prescribe to ensure” the broker or dealer is able to, at all times, fulfill its customers’ obligations. The reporting requirements’ frequency and intensity are left up to the commissions, but the commissions can require any information they consider necessary, and the digital asset issuers and intermediaries must make continued reporting “as the Commission may require.” Further, the FIT Act requires any intermediary dealing in customer’s restricted digital assets or digital commodities to hold such assets with a qualified custodian, such as a bank.

The FIT Act’s principles in determining whether the SEC and/or the CFTC should have jurisdiction over a digital asset utilizes similar rationale to the court’s holding in Ripple Labs. In theory, if a blockchain network is functional, people purchasing digital assets on the blockchain could purchase the asset to participate in the blockchain system, rather than with an expectation to earn a profit. And even if someone reasonably expected to profit from their purchase, if the blockchain is decentralized, the speculative investor cannot reasonably expect to derive their profit from the efforts of an ongoing common enterprise. Further, end user distributions

322 Id. at §§ 306, 406.
323 Id.
324 Id. at §§ 304, 306, 406.
325 Id. at § 101.
are transactions without money, so these issuances would fail under the first prong of the Howey test.\textsuperscript{326}

[88] Although the rationale is similar, applying the FIT Act to the facts in Ripple Labs would produce a much different result. First, the XRP sold in the Institutional Sales would constitute restricted digital assets under FIT because the Ripple Labs founders retained 20 billion out of the 100 billion (20\%) XRP supply,\textsuperscript{327} so the network lacked decentralization under the FIT Act.\textsuperscript{328} The XRP sold through Programmatic Sales—the transactions conducted on crypto exchanges—would constitute restricted digital assets due to the lack of decentralization, but FIT provides a path to obtaining commodity treatment: functionality, decentralization, and certification of decentralization.\textsuperscript{329} The XRP paid to employees in the Other Distributions would constitute restricted digital assets because the employees and third parties receiving the XRP constitute related persons under the FIT Act.\textsuperscript{330} But, under the FIT Act, the XRP would constitute a restricted asset only for twelve months after receiving the asset, or whenever the XRP Ledger achieves functionality and certification of decentralization.\textsuperscript{331} And lastly, only some of the XRP Garlinghouse and Larsen sold would constitute restricted digital assets due to lack of decentralization: after retaining 20\% of the XRP supply, the aggregate ownership between affiliated persons presumably fell below 20\% after the first wave of sales. Under the FIT Act, Ripple would need to register with the SEC to dispossess any XRP through


\textsuperscript{327} Id. at *6--*7.

\textsuperscript{328} See H.R. 4763, at § 101.

\textsuperscript{329} Id.

\textsuperscript{330} Id.

\textsuperscript{331} Id.
sales or as compensation, or achieve functionality and certification of decentralization and register with the CFTC.\textsuperscript{332}

[89] The FIT Act also contemplates situations when a single intermediary deals in restricted digital assets and digital commodities. Section 105 of the FIT Act directs the SEC and CFTC to issue joint rulemakings to prevent duplicative or unduly burdensome reporting requirements.\textsuperscript{333} Further, Section 503 establishes a CFTC-SEC Joint Advisory Committee on Digital Assets, which would be responsible for issuing rules and regulations to further the regulatory harmonization between the two Commissions.\textsuperscript{334}

[90] The FIT Act is effective in giving objective measures to determine whether a digital asset is regulated by the CFTC or the SEC, rather than applying the \textit{Howey} test to each transaction. It is a comprehensive bill and, on top of providing a clear regulatory framework, it imposes registration and reporting requirements on crypto intermediaries, as well as capital requirements.\textsuperscript{335} With the reporting and capital requirements, the FIT Act grants the CFTC and SEC with discretion in what to impose.\textsuperscript{336} Further, the FIT Act provides several opportunities for the SEC and CFTC to work

\textsuperscript{332} \textit{Id.}

\textsuperscript{333} H.R. 4763, at § 105.

\textsuperscript{334} See \textit{id.} at § 503.

\textsuperscript{335} See \textit{e.g.}, \textit{id.}

\textsuperscript{336} \textit{Id.}
together to ensure the regulatory system is not unduly burdensome. Despite its positive traits, the bill is not without criticisms.  

[91] In the Financial Services Committee’s markup meeting for the FIT Act, Representative Maxine Waters claimed the bill creates more confusion than provides clarity and offers fewer protections to consumers and investors than the existing securities laws. Representative Waters described the bill as “the wish-list of big crypto” and “undeserving of any of our support.” Nevertheless, on July 26, 2023, the Financial Services Committee passed the FIT Act out of Committee, which is the first time a crypto-focused regulatory Act has been voted out of any committee in the House or Senate. Next, the FIT Act will go to the House Floor for debate.

[92] In the Senate wing of the Capitol Building, Senators Lummis and Gillibrand have introduced the Responsible Financial Innovation Act (RFIA).  


339 Id.


b. The Responsible Financial Innovation Act

[93] Last year, during the 117th Congressional session, Senators Lummis and Gillibrand introduced the RFIA. The Senators reintroduced the RFIA this year with several changes to the previous version, but the main regulatory scheme between the SEC and the CFTC remains the same: The CFTC will have jurisdiction over “crypto assets” and “crypto asset exchanges,” while the SEC retains its jurisdiction over securities.

[94] The RFIA grants the CFTC with primary jurisdiction over crypto assets, crypto asset exchanges, and crypto asset transactions. All crypto asset exchanges must register with the CFTC as such. The RFIA attempts to make a clear distinction between assets that are commodities or securities by examining the rights or powers conveyed to customers. Specifically, if a digital asset provides its holder with a debt or equity interest, liquidation rights, a right to a dividend payment, or other financial interest in a business


344 S. 2281, at §§ 403–04.

345 Id. at § 501.

346 Id. at § 404.

347 Id.
entity, the asset would be subject to the SEC’s jurisdiction.\textsuperscript{348} The RFIA considers situations when cryptocurrencies are “ancillary assets,” which is when cryptocurrency is issued to a purchaser under an investment contract.\textsuperscript{349} When a cryptocurrency is provided to a purchaser under an investment contract as an ancillary asset, the ancillary asset itself is not necessarily a security.\textsuperscript{350} The CFTC would have jurisdiction over ancillary assets that fall within its definition of digital asset, but the Bill also imposes disclosure requirements on issuers of such ancillary assets and gives the SEC jurisdiction over the disclosure requirements.\textsuperscript{351}

[95] While it appears to be a relatively straightforward regulatory regime, the RFIA also “[c]odifies the existing \textit{Howey} test, as interpreted by the Federal courts over the last eighty years.”\textsuperscript{352} The differing results from applying the \textit{Howey} test to cryptocurrencies is one of the main reasons why clear regulation was so necessary.

[96] The RFIA falls short of providing the ideal regulatory clarity investors and developers seek because there remains ambiguity in determining whether an asset is a commodity, a security, or an ancillary asset. However, in situations involving both an investment contract and an


\textsuperscript{349} Press Release, Gillibrand, \textit{supra} note 343 (click on “here” after “For a section by section of the bill” at the bottom of the page).

\textsuperscript{350} S. 228, at § 501.

\textsuperscript{351} \textit{Id.}

\textsuperscript{352} Press Release, Gillibrand, \textit{supra} note 343 (click on “here” after “For a section by section of the bill” at the bottom of the page).
ancillary asset, the CFTC would have jurisdiction over the asset, while the SEC would have jurisdiction over the issuer’s reporting requirements.\textsuperscript{353}

[97] The previous version of the RFIA tasked the CFTC and SEC with studying, reporting, and developing a proposal for a new self-regulatory organization (SRO) between the two agencies to oversee cryptocurrency markets.\textsuperscript{354} According to Senator Gillibrand, an SRO between the two organizations “can play a complementary role, working with regulators to allow them to be more nimble and efficient, while maintaining strong supervision.”\textsuperscript{355} Although Senator Lummis’s press release fails to address the lack of a SRO in the new RFIA,\textsuperscript{356} this new version creates an Advisory Committee on Financial Innovation, which will study and report to regulators any evolutions in the crypto asset market.\textsuperscript{357}

[98] If the RFIA is passed, it would codify the existing issue with the United States’ current regulatory scheme: attempting to apply the Howey test to assets without clear, objective measures to determine whether a cryptocurrency is a commodity, a security, or something entirely different. Nonetheless, even if the CFTC has original jurisdiction over all cryptocurrencies, it is unlikely the CFTC can effectively oversee the

\textsuperscript{353} S. 2281, at § 501.


\textsuperscript{355} Id.

\textsuperscript{356} Id.

\textsuperscript{357} S. 2281, at § 908.
cryptocurrency markets due to its lack of resources. 358 “The CFTC was underfunded when I was there,” according to former CFTC Chair Timothy Massad, who claimed the CFTC “didn’t have the resources to do things that we really needed to do.” 359 FTX was a registered exchange with the CFTC, for example, and the CFTC failed to proactively protect investors against FTX’s fraudulent activity. 360

[99] The RFIA is not without merit, though, especially in the consumer protection realm. Both bills require crypto exchanges to have a Chief Compliance Officer and to institute risk management functions. 361 The RFIA goes a step further by requiring crypto intermediaries to maintain proof of reserves and undergo an annual verification. 362 Under the RFIA, auditors would go through an exchange’s total balance of customer assets and ensure the exchanges have an equal (or greater) amount of assets to cover all potential customer withdrawals. 363 Requiring proof of reserves on


359 Id.


362 S. 2281, at § 203.

363 Id. at § 404.
an annual basis is a secure and transparent way to ensure customer funds are safe, and arguably could have prevented the FTX scandal.\footnote{Frederick Munawa, ‘Proof of Reserves’ Emerges as a Favored Way to Prevent Another FTX, COINDESK (Nov. 17, 2022 at 4:58 PM), https://www.coindesk.com/tech/2022/11/17/proof-of-reserves-emerges-as-a-favored-way-to-prevent-another-ftx/#:~:text=If%20in%20place%20at%20FTX,Fried's%20trading%20firm%20Alameda%20Research) [https://perma.cc/P344-HNXA].}

[100] In sum, some cryptocurrencies fall under the broad definition of commodities, and the CFTC has exerted its jurisdiction over cryptocurrencies when there are futures contracts or fraud involved. The SEC believes most cryptocurrencies (besides Bitcoin) constitute securities. There are two pieces of legislation introduced in Congress that would grant the CFTC with main jurisdiction over cryptocurrencies but retain the SEC’s jurisdiction over digital assets in certain circumstances.\footnote{See e.g., S. 2281; H.R. 4763.} The RFIA utilizes the existing \textit{Howey} test to determine whether a cryptocurrency constitutes a security, while the FIT Act provides quantitative and qualitative measures to determine whether a digital asset constitutes a digital commodity or a restricted digital asset.

[101] While the next section discusses how cryptocurrencies are taxed, Section V will offer suggestions on how the U.S. should regulate the cryptocurrency industry in the future.

\textbf{IV. \textsc{How the United States Taxes Cryptocurrency}}

[102] Although Bitcoin was created in 2009, cryptocurrency investors had to wait until 2014 before the Internal Revenue Service (IRS) provided any guidance on how cryptocurrency would be taxed.\footnote{I.R.S. Notice 2014-21, 2014-1 C.B. 938.} The IRS released Notice 2014-21, which provided—most importantly—that cryptocurrencies are taxed as “property,” and that cryptocurrency earned from mining on a
PoW blockchain is includible in a taxpayer’s gross income.\textsuperscript{367} As discussed below, treating cryptocurrency as property for federal income taxation purposes results in a double-taxation that other currencies are not subject to.\textsuperscript{368} The IRS has recently increased its focus on preventing tax evasion through cryptocurrency.\textsuperscript{369} However, many substantive questions remain on how the United States will tax certain cryptocurrency activities.

A. IRS Notice 2014-21

[103] IRS Notice 2014-21 announced to United States taxpayers that “convertible” virtual currencies (virtual currencies that have an equivalent value in real currency) are considered “property” for federal income tax purposes.\textsuperscript{370} The IRS listed Bitcoin as an example of a convertible virtual currency, while Ethereum (ETH) and Ripple (XRP) would also classify as convertible virtual currencies.\textsuperscript{371} Under federal tax law, taxing an asset as “property” means the asset is given capital treatment, like a security.\textsuperscript{372} Cryptocurrency holders in the United States must find their basis in the asset when they acquire it, which is the cost of acquiring the cryptocurrency. When cryptocurrency is sold or otherwise dispossessed, taxpayers must calculate their capital gains or losses.\textsuperscript{373}

\textsuperscript{367} Id.

\textsuperscript{368} See id.


\textsuperscript{371} Id.

\textsuperscript{372} 26 U.S.C. § 1221.

\textsuperscript{373} 26 U.S.C. § 1001.
1. Taxing “Property”

[104] Because cryptocurrencies are treated as property for tax purposes, crypto is subject to capital gains and losses rules.\(^{374}\) When someone trades, sells, or otherwise dispossesses cryptocurrency, they must calculate their capital gains or losses realized on the exchange by subtracting their basis in the property from their amount realized.\(^{375}\) Taxpayers can deduct up to $3,000 of capital losses against their ordinary income, and losses in excess of $3,000 can be offset only against any capital gains the taxpayer recognized.\(^{376}\) If a taxpayer lacks capital gains to offset the capital losses in excess of $3,000, the capital losses must be carried over to the next taxable year.\(^{377}\)

[105] To illustrate how “property” is taxed, consider an individual who purchased 1,000 ADA on October 25, 2019, when ADA was $.40 each.\(^{378}\) The individual would have a $400 basis in their ADA, plus any transaction fees paid to acquire the ADA. If the individual sold their 1,000 ADA on August 28, 2021, when ADA was $2.85 per coin,\(^{379}\) the transaction would result in a $2,450 capital gain (as calculating gain is determined by subtracting the adjusted basis of $400 from the amount realized of $2,850 to get a $2,450 gain). The taxpayer’s $2,450 gain would be taxed at the

\(^{374}\) Id.

\(^{375}\) Id.

\(^{376}\) 26 U.S.C. § 1211.

\(^{377}\) 26 U.S.C. § 1212(b).


\(^{379}\) Id.
preferential, long-term capital gain rate because the individual held the ADA for over one year.  

a. Paying for Services with “Property”

[106] If a taxpayer receives cryptocurrency for providing services or selling goods, then the fair market value of the cryptocurrency received is includable in the taxpayer’s reportable gross income.  

This is the same outcome as when a taxpayer is compensated for goods or services with United States dollars; however, because cryptocurrency is taxed as property, taxpayers must also calculate their basis in the cryptocurrency. The taxpayer’s basis in the cryptocurrency is the fair market value of the cryptocurrency when they receive it. This is the same outcome as when someone is paid for services with shares in a company.

[107] To illustrate: consider a tutor who charges $20 per hour and accepts ADA as a form of payment. Further, imagine that the tutor has agreed to give four hours of lessons to our 1,000 ADA investor, beginning on August 28, 2021. The investor prepays for the lessons at the current fair market value of $2.85 per ADA, which amounts to 28.07 ADA, for the lessons worth $80 USD. First, the investor dispossessed 28.07 ADA, which


382 Id.

383 Id. at 938.

384 Int'l Freighting Corp. v. Comm'r of Internal Revenue, 135 F.2d 310, 313 (2d Cir. 1943).

385 See generally 26 C.F.R. § 1.61-6 (2023) (applying the general rule of gains derived from dealings in property to a hypothetical example); Cardano price, supra note 378.
constitutes a recognition event under I.R.C. § 1001(a), and had an amount realized of $80 USD. The investor’s $400 basis in the 1,000 ADA must be equally apportioned to the 28.07 ADA transferred to the tutor. The investor’s equally apportioned basis in the 28.07 ADA would be $11.23, and the investor thus realized a gain of $68.77 on the transaction. The investor would have to recognize $68.77 in capital gains on their tax returns and would retain $388.77 of their basis in the 971.93 ADA remaining in their wallet.

[108] The IRS taxes cryptocurrencies like a security rather than a currency, and the resulting complexities and tax consequences underlying a simple transaction disincentivize cryptocurrencies’ adoption. Getting paid in “property” can be equally complicated.

b. Getting Paid with “Property”

[109] This transaction between the investor and the tutor also produces complex tax consequences to the tutor. The tutor would have to report the $80 in ADA in their gross income as compensation earned from providing services, and they would receive an $80 basis in the 28.07 ADA


387 See generally 26 C.F.R. § 1.61-6 (2023).

388 Id.

389 See generally 26 U.S.C. §§ 1001(b)(1)–(2), 1011(a)–(b) (applying the general rule of gains derived from dealings in property to a hypothetical example).


391 See generally 26 U.S.C. § 61 (applying the definition of gross income to a hypothetical example).
The tutor could hold onto the ADA; however, they might have to eventually sell some to pay taxes or to pay for goods or services not accepting ADA. If the tutor sold the 28.07 ADA on an exchange on December 10, 2021 (when ADA was worth $1.35 per coin—$37.89 in total), this would be a taxable event. The tutor would have an amount realized of $37.89 on the sale, thereby yielding a short-term capital loss of $42.11. The tutor could deduct the $42.11 in capital losses from their ordinary income because the $42.11 is less than $3,000, the amount of capital losses permitted to be deducted against ordinary income under § 1211(b).

If the tutor had many clients paying in cryptocurrency, however, and had capital losses exceeding the $3,000 threshold, the tutor would be taxed on the full $80 of ADA under the higher, ordinary income rates, even after realizing a capital loss.

If the tutor recognized a gain when selling the ADA, the tutor would have to pay capital gains taxes on the capital gains recognized from the sale, and the $80 in ADA would be taxed as ordinary income earned from providing services. This simple transaction shows how taxing cryptocurrency as “property” makes it impractical for cryptocurrency to be used as an everyday currency. If the investor paid the tutor with $80 USD, [110]

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392 See generally id. at § 1011 (applying the general rule of using an adjusted basis for determining gain or loss to a hypothetical example).

393 Cardano price, supra note 378.

394 See generally 26 U.S.C. § 1001 (applying the general rule of gains derived from dealings in property to a hypothetical example).


396 See generally 26 U.S.C. § 61 (applying the general rule of gains derived from dealings in property to a hypothetical example).

397 See generally §§ 61, 1001 (applying the general rule of gains derived from dealings in property to a hypothetical example).
the tutor would have $80 in gross income, and that’s it. The investor and the tutor would both bypass the additional level of taxation at the capital gains level, even though the USD value is subject to fluctuation, too.

2. Cryptocurrency Earned from Mining

[111] Notice 2014-21 further provides that, when someone operating a node on a PoW network successfully “mines” cryptocurrency, the fair market value of the cryptocurrency at the time of receipt is includible in the taxpayer’s gross income. For example, the aforementioned miner of Bitcoin block #660000 received $117,370 in Bitcoin for mining the block, and the same amount would be includible in their gross income. If a taxpayer’s cryptocurrency mining activities constitute a trade or business, the mining operation’s net earnings constitute self-employment income and are subject to the self-employment tax. Some cryptocurrency miners fail to meet the trade or business standard and thus treat their mining rewards as ordinary income. Some cryptocurrency mining activities clearly constitute a business, such as the operations run by Riot, which is a publicly traded company. Riot mined 5,554 Bitcoin in 2022, which was worth

398 26 U.S.C § 61.


400 Id.

401 Id.


around $259.2 million. In January 2023, Riot broke a record by mining 740 Bitcoin in just a month, which was worth approximately $16.8 million. The Bitcoin’s fair market value at the time it is received is includible in Riot’s gross income.

[112] In sum, IRS Notice 2014-21 provides, in part, that cryptocurrencies are taxed as “property,” and when cryptocurrency is earned from mining rewards, the cryptocurrencies’ fair market value at the time of receipt is includible in the taxpayer’s gross income. As a result of the double taxation scheme inherent in transacting with “property,” it is impractical for businesses and individuals to adopt cryptocurrency as a form of payment. Further, cryptocurrencies are volatile assets. Including the fair market


407 Id. at 938.


value of cryptocurrencies earned from mining and performing services in a taxpayer’s gross income—and receiving a fair market value basis in cryptocurrency—potentially leads to disastrous tax consequences.

B. More Recent IRS Activity

[113] The IRS published Notice 2014-21 almost a decade ago, and the IRS has released subsequent Notices and Rulings pertaining to cryptocurrencies since then.\textsuperscript{410} While the IRS has been forced to address complex substantive tax issues regarding cryptocurrencies, recent IRS efforts have been targeted towards the complex administrative issues cryptocurrencies pose.\textsuperscript{411}

1. IRS Revenue Ruling 2019-24

[114] IRS Revenue Ruling 2019-24 announced that any cryptocurrency “air dropped” to a taxpayer, because of a “hard fork,” is includible in the taxpayer’s gross income.\textsuperscript{412} A hard fork is when a cryptocurrency on a blockchain undergoes a protocol change, which results in a permanent diversion from the existing blockchain history, and a new cryptocurrency is created on the new blockchain.\textsuperscript{413} After the hard fork, new cryptocurrency transactions are recorded on the new blockchain and transactions involving the “legacy” cryptocurrency are recorded on the legacy blockchain.\textsuperscript{414} Sometimes when a blockchain undergoes a hard fork, the blockchain will “air drop” the new tokens to the legacy token holders.\textsuperscript{415} Pursuant to

\begin{footnotesize}


\textsuperscript{412} Id.

\textsuperscript{413} Id.

\textsuperscript{414} Id.

\textsuperscript{415} Id.
\end{footnotesize}
Revenue Ruling 2019-24, when a blockchain network undergoes a hard fork and airdrops new tokens to U.S. taxpayers, the new airdropped tokens constitute gross income under IRC § 61.\[416\]

2. Administrative Efforts to Prevent Tax Evasion

[115] The IRS is focusing its administrative efforts on identifying taxpayers with cryptocurrency holdings.\[417\] After IRS Notice 2019-132, the IRS sent letters to virtual currency owners advising them to pay the taxes they failed to include in prior taxable years.\[418\] In 2021, 2022 and 2023, the IRS required taxpayers to answer a new “yes or no” virtual currency question when taxpayers filed Forms 1040, 1040-SR, and 1040-NR.\[419\] Taxpayers who disposed of any virtual currency held as a capital asset through sale, exchange, or transfer must answer “yes,” compute their capital gains and losses on Form 8949, and report their gain or loss as income on Schedule D Capital Gains and Losses.\[420\]

[116] The IRS is put in a difficult position here: it is used to dealing with financial instruments passing through centralized intermediaries, but cryptocurrency has no such intermediary besides centralized exchanges,


\[420\] Id.
some of which are not in the United States. Moreover, cryptocurrency investors could either leave cryptocurrencies in their wallets or bypass centralized exchanges by using decentralized exchanges and, consequently, make no reporting on their returns, which is likely what led to Notice 2019-132.

3. IRS Proposed Regulations for Cryptocurrency Brokers

[117] Most recently, the IRS issued proposed regulations that extend reporting requirements to cryptocurrency “brokers”.

IRC § 6045 requires every person doing business as a broker to, when required by the Secretary of Treasury, file an information return with the name and address of each customer, details regarding gross proceeds, and the adjusted basis of certain categories of assets sold. Section 80603(a) of the Infrastructure Investment and Jobs Act amends the § 6045 definition of “broker” to include any person who, for consideration, provides services effectuating transfers of digital assets on behalf of other persons.


In explaining the rationale for the new reporting rules, the IRS says:

Digital assets have grown in popularity as both a payment method and an investment or trading asset. Proponents believe that digital assets may offer potential benefits over traditional fiat currencies, such as lower transactions costs and faster transaction speeds. Digital assets may also be popular, however, because the distributed ledger record of transactions does not include the identity of the parties involved in the transactions. This pseudonymity creates a significant risk to tax administration.\(^{426}\)

The IRS will need to continue its efforts in easing the administrative burdens cryptocurrencies pose, but there are also unresolved substantive tax issues.

C. **Unanswered Questions on How the United States Taxes Cryptocurrency**

There are three substantive, unresolved tax issues covered here: (1) whether staking rewards are includible in gross income when they are received; (2) whether cryptocurrency traders can make a mark-to-market election; and (3) whether investors in crypto assets are permitted to make an obsolescence of nondepreciable property deduction.

1. **Earning Cryptocurrency as Staking Rewards on PoS Blockchains**

As mentioned above, IRS Notice 2014-21 provides that cryptocurrency earned as mining rewards are includible in the taxpayer’s

\(^{426}\) *Id.*
gross income when the cryptocurrency is received.\textsuperscript{427} In the years since Notice 2014-21, the IRS has failed to provide any guidance on whether staking rewards are includible in gross income when they are received.

\[122\] A Nashville couple, Joshua and Jessica Jarrett (collectively, “the Jarretts”), purchased Tezos (XTZ) coins and staked the coins with a node on Tezos’ PoS network.\textsuperscript{428} The Jarretts received 8,876 Tezos (XTZ) in staking rewards during 2019.\textsuperscript{429} The Tezos coins were worth $9,407 when the Jarretts received them, and the Jarretts reported that amount as income and paid the corresponding income taxes.\textsuperscript{430} On July 31, 2020, the Jarretts filed an amended tax return requesting a $3,793 refund from the IRS.\textsuperscript{431} The Jarretts argued that, under IRC § 1001(a), the virtual currency they earned as staking rewards failed to constitute taxable income because property is only taxed when it is sold or dispossessed, rather than when it is created.\textsuperscript{432} The Department of Justice ordered the IRS to issue the $3,793 refund to the Jarretts, but the Jarretts refused the refund because the IRS did not provide


\textsuperscript{430} \textit{Id.}

\textsuperscript{431} \textit{Id.}

\textsuperscript{432} \textit{Id.}
its rationale for issuing the refund.\textsuperscript{433} The IRS argued the refund rendered the Jarretts’ action moot and filed a motion to dismiss, which was granted on September 30, 2022.\textsuperscript{434} Thus, taxpayers earning staking rewards on a PoS blockchain lack clarity on how, if, or when the IRS will tax their earnings.

2. Whether Cryptocurrency Traders Can Make a Mark-To-Market Election

[123] Internal Revenue Code (IRC) § 475(f) provides commodities and securities traders with the option to make a “mark-to-market” election.\textsuperscript{435} If a trader makes a mark-to-market election, all the securities (and/or commodities) they hold are deemed as sold for their fair market value at the end of the year, and the taxpayer recognizes ordinary gain or loss associated with the deemed sales.\textsuperscript{436} If the taxpayer has a gain after the deemed sales, then the taxpayer recognizes ordinary income on the gain. But if the taxpayer recognizes a loss on the deemed sales, the taxpayer is permitted to deduct the losses from their ordinary income.\textsuperscript{437} The taxpayer still holds the assets, and each asset’s basis is adjusted to its current fair market value, just as if the trader sold the assets to themselves. Recharacterizing a capital loss as an ordinary loss is significant for two reasons: (1) ordinary income is taxed at a higher rate than capital income, so deductions against ordinary income are more valuable than deductions against capital income; and (2)


\textsuperscript{434} Id. at *1.

\textsuperscript{435} I.R.C. § 475(f).

\textsuperscript{436} Id.

taxpayers can typically deduct only up to $3,000 in capital losses against their ordinary income, and any excess losses are carried forward to the next taxable year if the taxpayer lacks sufficient capital gains to absorb the losses.438

[124] § 475(a) requires securities dealers to use mark-to-market accounting for all securities held in inventory at the end of the taxable year.439 The mark-to-market election, however, is available to commodities traders and dealers, as well as securities traders.440 The SEC and the CFTC have fought over whether cryptocurrencies are securities or commodities, but the commissions agree Bitcoin is a commodity and acknowledge most cryptocurrencies either classify as securities or commodities.441 Nonetheless, cryptocurrency traders and dealers lack uniform guidance on whether they are permitted to make this, at times, valuable election.

3. Memorandum Number 202302011

[125] Internal Revenue Code § 165 governs losses for United States taxpayers.442 One of the losses, permitted by § 165(g), is called the “worthless securities” deduction.443 Under § 165(g), if any security becomes worthless during a taxable year, the loss resulting therefrom shall


439 26 U.S. § 475(a).

440 Id.

441 Brady Dale, Bitcoin is the only coin the SEC Chair will call a commodity, AXIOS (Jun. 28, 2022), https://www.axios.com/2022/06/28/bitcoin-is-the-only-coin-the-sec-chair-will-call-a-commodity [https://perma.cc/H292-V86Y].

442 I.R.C. § 165.

443 Id. at § 165(g).
be treated as a loss from a sale or exchange if the investor is unwilling or unable to sell or otherwise dispose of the security in a taxable transaction.\textsuperscript{444} Fraud is rampant in the cryptocurrency industry, with developers luring investors’ capital by promising to build an expert project, only to abandon the project after receiving investor’s money.\textsuperscript{445} As a result, many cryptocurrency investors have been left with worthless cryptocurrencies, and taxpayers requested guidance from the IRS as to whether the worthless securities deduction applies to cryptocurrencies.\textsuperscript{446}

[126] In January 2023, the IRS Office of Chief Counsel released Memorandum 202302011, which concluded that cryptocurrency investors were not permitted a § 165(g) deduction because cryptocurrencies do not fall within § 165(g)(2)’s definition of securities.\textsuperscript{447} The Memorandum indicates a deduction may be available, however, under § 165(a) through Treasury Regulation § 1.165-2(a), which addresses obsolescence of nondepreciable property.\textsuperscript{448} Under Treasury Regulations § 1.165-2(a), taxpayers can claim a loss when: (1) the loss is incurred in a business or a transaction entered for profit; (2) the loss arises from the sudden termination of usefulness in the business or transaction; and (3) the property is permanently discarded from use, or the transaction is discontinued.\textsuperscript{449}

\textsuperscript{444} Id.


\textsuperscript{446} Id.


\textsuperscript{448} Id.

\textsuperscript{449} 26 C.F.R. § 1.165-2
[127] Memorandum 202302011 falls short of explicitly permitting the deduction because, under the facts considered in the Memorandum, the investor never abandoned the crypto asset.\textsuperscript{450} Moreover, the Memorandum is inconclusive on whether the crypto asset is worthless when each token is worth less than a penny and the token is traded on at least one exchange.\textsuperscript{451} However, Memorandum 202302011 does indicate whether an investor holding a worthless crypto asset will be permitted to take a capital loss when the investor abandons the asset.\textsuperscript{452} Abandoning the worthless crypto asset in this context would likely be satisfied by “burning” a crypto asset, which is the process of sending a crypto asset to an inaccessible wallet on the blockchain network.\textsuperscript{453}

\textbf{V. Offering a Cryptocurrency Regulation and Taxation Scheme for the United States}

[128] When Satoshi Nakamoto wrote the Bitcoin white paper in 2009, the U.S. federal government had just printed $1 trillion in new money to bail out the financial sector following the 2007/2008 financial crisis.\textsuperscript{454} This influx of $1 trillion increased the existing money supply and decreased the


\textsuperscript{451} Id.

\textsuperscript{452} Id.


value of assets and savings owned by corporations and individuals.\(^{455}\) In addition to resolving the issues inherit with third-parties processing payments, Satoshi sought to create a payment system where no central bank had power to directly impact a currency’s value.\(^{456}\) Satoshi embedded a message on the first block on Bitcoin’s blockchain that said, “Chancellor on the Brink of Second Bailout for Banks.”\(^{457}\)

[129] What Satoshi created “is a lot like gold,” but “it is digital rather than a heavy, unwieldy object. In other words, Bitcoin could serve the same purposes as gold in terms of a currency, but much more efficiently because it does not have any mass and can be sent easily from place to place.”\(^{458}\) Some experts believe blockchain technology and cryptocurrencies will enhance economic efficiency and have a broad lasting impact on global financial markets in payments, banking, securities settlement, title recording, cyber security, and more.\(^{459}\) Blockchain technology’s full potential will likely be unmet, however, unless our regulatory and taxation schemes protect consumers and incentivize adopting cryptocurrency as a form of payment.

\(^{455}\) Id.


\(^{458}\) Nathan, supra note 456, at 4.

As to regulation, Congress should create a joint SRO between the SEC and CFTC, provide qualitative and quantitative measures to determine whether a digital asset is a commodity or a security, and institute consumer protections such as annual verification of proof of reserves. From a taxation standpoint, the United States should provide leniency by establishing non-recognition events and allowing crypto traders and nodes to make deductions that are available for commodities and securities activities.

A. How the United States Should Regulate Cryptocurrency

To incentivize its adoption from a regulatory standpoint, the United States should create a joint self-regulatory organization with original jurisdiction over all cryptocurrencies. Congress should also adopt the FIT Act’s functionality and decentralization inquiries to provide objective measures in determining whether a crypto is a commodity or a security. Further, requiring crypto intermediaries to annually verify proof of reserves, as the RFIA does, will provide better consumer protection.

1. Advocating for a Joint Self-Regulatory Organization with Original Jurisdiction over Cryptocurrency Activities

The SEC and CFTC have attempted to regulate this novel industry with an already-existing regulatory scheme. Employing the United States’ existing regulatory scheme has worked to retroactively prosecute fraudulent activity, such as in SEC v. Bitcoin Savings and Trust, but it has failed to provide effective, proactive oversight for investors, as evidenced by the FTX scandal. The U.S. federal government has attempted to fit a square peg (cryptocurrency) into a round hole (the existing regulatory scheme). The SEC and CFTC have each taken their turns regulating cryptocurrency in different contexts, and this bifurcated approach has yielded a lack of clarity for investors and developers. Because cryptocurrencies are unlike assets

460 Id.
the world has seen before, Congress should create a new agency to serve as the first line of regulation for the cryptocurrency industry.

[133] Congress should establish a joint self-regulatory organization to serve as a one-stop agency for all cryptocurrency activities. Providing the SRO with original jurisdiction over all cryptocurrency activities would prevent the initial turf war that ensues between the CFTC and the SEC over current cryptocurrency matters. Further, the CFTC and SEC could pool their capital and expertise together to provide clear, uniform guidance to cryptocurrency developers, while also overseeing markets to protect cryptocurrency investors. Under the current regulatory regime—and even after the Ripple Labs case—crypto developers are unsure whether they have engaged in the unregistered sale of securities or commodities, but the SRO could provide guidance on all cryptocurrencies and serve as an intermediary between developers and regulators. If the SRO successfully oversees cryptocurrency markets, investors will have more confidence in the space, which would logically bring in more investment. Because this technology and the products offered are unlike anything the world has seen before, Congress should create a new regulatory body rather than attempt to use its current regulatory scheme.

[134] As mentioned in Section IV, the former version of the Lummis-Gillibrand RFIA tasks the CFTC and SEC with studying, reporting, and developing a plan for the two agencies to create a joint SRO.\(^{461}\) The two Senators are not alone in believing a new SRO is needed to regulate cryptocurrencies: the former CFTC Chair, Timothy Massad, endorsed this approach in an interview in August 2022.\(^ {462}\) Massad considered the Digital Commodity Exchange Act of 2022, which provided the CFTC with exclusive jurisdiction over cryptocurrencies, and said it was unworkable because the CFTC is underfunded and would not be able to handle it

\(^{461}\) Id.

\(^{462}\) Velasquez, supra note 358.
alone.463 With a joint SRO, the CFTC and the SEC would have the collective expertise and resources to oversee the cryptocurrency industry, and over time, the SRO would provide clear guidance to developers as well as investor protections.

2. Advocating for a Qualitative and Quantitative Howey Test

[135] The FIT Act and the RFIA take two different approaches in clarifying when a digital asset constitutes a security or a commodity. The RFIA codifies the Howey test, which fails to give the appropriate clarity developers and investors in the crypto industry seek. The FIT Act, on the other hand, provides qualitative and quantitative measures for determining whether a cryptocurrency constitutes a digital commodity or a restricted digital asset. Further, the FIT Act maintains that digital assets remain restricted digital assets, subject to the SEC’s regulatory enforcement, until either the SEC or CFTC certifies a functional blockchain as decentralized.464 The FIT Act’s approach provides more clarity than the RFIA’s, and Congress should adopt legislation with mechanisms like the FIT Act’s functional and decentralization measures.

3. Advocating for Annually Verifying Proof of Reserves

[136] From a consumer protection standpoint, the RFIA requiring digital asset intermediaries to undergo annual verification of proof of reserves provides more extensive consumer protections than the FIT Act. The FIT Act requires digital commodity exchanges to “establish standards and procedures that are designed to protect and ensure the safety of consumer

463 Id.

money, assets, and property." While the FIT Act provides explicit measures for determining whether an asset is regulated as a commodity or a security, it imposes vague reporting and consumer protection standards. The opposite is true with the RFIA; requiring digital asset intermediaries to undergo annual audits ensuring customers’ funds are available is a logical and worthy policy.

B. A More Lenient Taxation Scheme

[137] Taxing cryptocurrencies as “property” disincentivizes businesses and individuals to receive payment in cryptocurrency for two main reasons: (1) it provides two layers of taxation—a tax on the fair market value of the cryptocurrency at ordinary income rates and a capital tax when the asset is sold or dispossessed; and (2) it fails to account for cryptocurrencies’ extreme volatility, and a taxpayer may be taxed on ordinary income exceeding the cryptocurrency’s subsequent fair market value. To incentivize cryptocurrencies’ adoption, there are four policies the United States should adopt for greater leniency in taxing cryptocurrencies: (1) providing a non-recognition event up to a certain amount when using cryptocurrency to pay for goods or services; (2) taxing staking rewards only when the asset is sold or dispossessed; (3) allowing nodes to make a mark-to-market type election at the end of the taxable year; and (4) allowing investors in crypto assets to make an obsolescence of non-depreciable property deduction.

1. Providing Non-Recognition Events When Using Cryptocurrency for Goods or Services

[138] As discussed in Section IV, transacting with cryptocurrencies for goods or services yields more complex tax consequences than transactions

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465 See id. at § 404.

completed with USD. Complexities aside, transacting in cryptocurrencies can result in an individual recognizing a taxable gain when using cryptocurrency to pay for goods or services, such as the 1,000 ADA investor’s $68.77 gain when paying 28.07 ADA for tutoring services. Cryptocurrencies are taxed like securities, but cryptocurrencies were invented to operate as a currency. To limit the extra level of taxation and to treat cryptocurrencies more like currencies, Congress should establish a non-recognition event up to a certain amount when cryptocurrencies are used to pay for goods or services. The RFIA, for example, provides for a $200 non-recognition event on gains or losses when parties transact with cryptocurrencies for goods or services. Under the RFIA’s approach, the 1,000 ADA investor’s $68.77 gain would not be included in their gross income when they paid for tutoring services, which would be a step towards taxing cryptocurrencies like actual currencies.

[139] Although the RFIA limited the gain or loss exemption to $200, other countries have provided for even more lenient structures. In Germany, cryptocurrency investors are not taxed on the first €600 realized from short-term capital gains on cryptocurrencies. German cryptocurrency investors initially paid no tax on long-term capital gains realized from selling or spending cryptocurrencies—until that taxation scheme was reversed by the German Federal Fiscal Court in March of 2023. Nonetheless, a de


minimis non-recognition event when using cryptocurrencies to pay for goods or services would allow people to use cryptocurrencies more like a currency than “property.”

2. Staking Rewards Should Be Includible in Gross Income Only when Sold or Dispossessed

[140] I strongly believe cryptocurrency earned as staking rewards should be taxed only when the assets are sold or dispossessed. As a statutory matter, whether staking rewards are taxable income under § 1001(a) is an incredibly close call. On some PoS blockchains, staking rewards are sent from the node to the individual staking their coins when the staking rewards are claimed, which likely constitutes dispossession of property under § 1001(a).471 On other PoS blockchains, however, staking rewards auto-populate inside the individual’s cryptocurrency wallet.472 When staking rewards auto-populate in someone’s wallet, there has been no sale, exchange, or dispossession of the cryptocurrency.473 In this way, the transaction shows that the staker is involved in the creation of the property, as the Jarretts argued in *United States v. Jarrett*.474

[141] If the United States federal government treats staking rewards sent from the node to the staker differently than staking rewards that auto-populate in someone’s wallet, blockchain developers could eventually


upgrade their networks to allow staking rewards to auto-populate in stakers’ wallets. As such, treating staking rewards differently depending on how the staker received the cryptocurrency will be only a part-time fix as networks would eventually evolve to adapt to the taxation scheme.

[142] Under the RFIA, cryptocurrencies earned as staking rewards are includible gross income only when sold or dispossessed. The RFIA goes a step further by also providing that mining rewards are includible in gross income only when the asset is sold or dispossessed, thereby overruling IRS Notice 2014-21.

[143] As discussed in Section II, PoW blockchains consume substantially more energy than PoS blockchains. From a policy standpoint, Congress could show bias towards PoS blockchains, as they are healthier for the environment. Moreover, treating staking rewards differently depending on how the staker receives the cryptocurrency would only be a part-time fix as blockchain developers could alter the software for staking rewards to auto-populate in users’ wallets. If the United States federal government adopts a scheme where staking rewards earned on a PoS blockchain are not taxable until the assets are sold or dispossessed, policymakers would incentivize investors towards blockchains that are healthier for the environment while adopting a policy that will be workable in the future.

3. Allowing PoS and PoW Nodes to Make a Mark-to-Market Election on Cryptocurrency Holdings

[144] Under IRS Notice 2014-21, the fair market value of mining rewards are includible in the recipient taxpayer’s gross income at the time they are received, and the recipient receives a fair market value basis in the

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476 Id.
cryptocurrencies. It is still unclear whether staking rewards are includible in gross income at the time they are received, but if staking rewards are includible in gross income at the time of receipt, then this proposal applies to network participants on PoS and PoW blockchains.

[145] If the fair market value of cryptocurrency earned as mining and staking rewards is includible in the taxpayer’s gross income at the time the cryptocurrency is received, the value of the cryptocurrency holdings may subsequently decrease after nodes earn the cryptocurrency. Such a situation would result in the taxpayer reporting more gross income in their tax return than the underlying assets’ current fair market value. For example: consider a Bitcoin miner who earned 1 Bitcoin in mining rewards on April 19, 2022, when Bitcoin’s highest price for the day was $41,665.50. The miner would have to include $41,665.50 in their gross income, regardless of whether the miner sold or held the Bitcoin. At the end of the taxable year, on December 31, 2022, Bitcoin’s highest price for the day was $16,625.05. Thus, although the miner included $41,665.50 in their gross income, the Bitcoin they earned and continued to hold was worth only $16,625.05 at the end of the 2022 calendar taxable year.

[146] To prevent such an excessively harsh tax consequence, Congress could do two things: (1) pass legislation that provides that mining and staking rewards are includible in gross income only when the assets are sold


481 Id.
or dispossessed, such as the RFIA; or (2) pass legislation providing a mark-to-market type election where nodes could elect to have a deemed sale on the cryptocurrency rewards they earned the past year. Under the mark-to-market election, nodes would recognize a gain or loss on the deemed sale, and any losses realized could be deducted from the taxpayer’s ordinary income. The taxpayer’s basis in cryptocurrencies earned from mining and staking rewards would be adjusted to the current fair market value, and in effect, the amount includible in the taxpayer’s gross income would be equal to their cryptocurrency holdings’ value at the end of the taxable year rather than the value at the time the crypto is received. In this way, nodes would not have to pay high ordinary income taxes on unrealized capital sales, and nodes’ gross income would more accurately reflect their current holdings and accessions to wealth.

4. Allowing Cryptocurrency Traders a Mark-to-Market Election

[147] Cryptocurrency traders, those who consider cryptocurrency trading to constitute their trade or business, should also be permitted to make a mark-to-market election at the end of a taxable year under IRC § 475. If the United States federal government is going to tax cryptocurrencies as property, this valuable election should also be available to cryptocurrency traders as it is for securities and commodities traders. The current version of the Lummis-Gillibrand RFIA provides this election to cryptocurrency dealers.482

5. Allowing Investors in Crypto Assets to Take an Obsolescence of Nondepreciable Property Loss

[148] Although Memorandum 202302011 is inconclusive as to whether cryptocurrency investors are permitted to make a deduction under Treasury

482 Lummis-Gillibrand Responsible Financial Innovation Act, S. 2281, 118th Cong. (2023), at § 806.
Regulations § 1.165-2(a), the IRS should adopt this policy. Cryptocurrency investors can prove they have abandoned a crypto asset through “burning” the asset, which is sending the asset to a wallet no one can access. Burning an asset is the closest thing to abandoning property in the cryptocurrency context; a person who burns a crypto asset relinquishes all dominion or control over the asset. As to worthlessness, the IRS should rely on an asset’s subjective worthlessness—as it does with partnership interests. The IRS points out in Memorandum 202302011 that a cryptocurrency may not be worthless if it is still traded on one exchange because it still has the potential to grow in value. On decentralized exchanges, however, any crypto asset can be posted for sale by any user. As such, if a taxpayer abandons a crypto asset by burning it, the IRS should rely on the asset’s subjective value when determining if the taxpayer is permitted a deduction under § 1.165-2(a).

VI. CONCLUSION

[149] Cryptocurrency refers to a digital asset that uses blockchain technology to cryptographically record and process transactions. Cryptocurrency can be purchased on centralized exchanges, but it is wiser


484 Reiff, What Does It Mean to Burn Crypto?, supra note 453.

485 See id.


to keep your cryptocurrency in a wallet to ensure you are the sole custodian of your cryptocurrency.

[150] The United States has taken a regulation-through-litigation approach to regulating cryptocurrency, which has resulted in unclear guidance to cryptocurrency developers and investors. Cryptocurrencies are considered commodities under the Commodity Exchange Act, and the CFTC has regulatory oversight when a virtual currency is used in a derivatives contract, or if there is fraud or manipulation involving a virtual currency traded in interstate commerce.489 The SEC, on the other hand, has regulatory oversight when a cryptocurrency passes the Howey test and is therefore deemed an investment contract and thus a security.490 SEC v. Ripple Labs, Inc. illustrates how difficult it is to apply the Howey test to cryptocurrency, and it failed to provide a clear direction for determining how the federal government will regulate cryptocurrencies when they are sold in an ICO or when they are sold on secondary exchanges.491 Nonetheless, when an investment contract involves cryptocurrency, the SEC has jurisdiction over the matter.492

[151] Two pieces of legislation, the FIT Act and the RFIA, attempt to provide regulatory clarity and provide the CFTC with primary jurisdiction over cryptocurrencies. The FIT Act provides an objective inquiry in determining whether an asset is regulated by the SEC or the CFTC, which


492 Reiff, Howey Test Definition, supra note 490.
is commendable. The RFIA, on the other hand, has excellent proposals for taxation and consumer protections.

[152] The IRS treats cryptocurrencies as “property” for federal tax purposes, and transactions involving cryptocurrency are therefore subject to capital gains and losses.\(^{493}\) The value of any cryptocurrency earned from mining is includible in a taxpayer’s gross income when the cryptocurrency is received, and the miner gets that amount as basis in their cryptocurrencies.\(^{494}\) It is still unknown whether cryptocurrency earned from staking rewards is includible in a taxpayer’s gross income when they receive it or whether it is includible only when the taxpayer sells or dispossesses the staking rewards.

[153] I believe Congress should create a joint self-regulatory agency with the SEC and the CFTC and give the new agency original jurisdiction over all cryptocurrency activities. A new agency comprised of experts from the CFTC and the SEC would provide a one-stop agency that could issue uniform rules, regulations, and guidance to investors and developers in the cryptocurrency realm. This paper endorses the FIT Act’s approach in providing a qualitative and quantitate inquiry into whether a digital asset is regulated by the SEC or the CFTC, and endorses the proof of reserve and taxation proposals set forth in the RFIA. I believe Congress should provide non-recognition events when cryptocurrencies are used to pay for goods or services so cryptocurrencies are treated more like traditional currencies. Further, I believe Congress should adopt a taxation scheme whereby staking rewards are includable in gross income only when the asset is sold or dispossessed. And lastly, Congress should permit cryptocurrency nodes and traders to take the same deductions and make the same elections currently available for securities and commodities activities.


\(^{494}\) Id.