STETSON BUSINESS LAW REVIEW

THE TAX INEFFICIENCY OF "PROOF OF STAKE" BLOCKCHAIN REWARDS

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I. INTRODUCTION

Cryptocurrency has been one of the hottest and least understood financial topics of the last decade, and as of Q4 of 2022, the total asset value of the entire cryptocurrency market was over one trillion dollars.[2] Cryptocurrency is a scarce, valuable, intangible form of digital property that is held by the taxpayer on a computer;[3] however, it cannot be removed from the blockchain network on which it was created.[4] It is regularly bought and sold on an open market, and the fair market value of any unit of cryptocurrency is derived through the traditional economic notions of supply and demand.[5] Buying and selling on the open market also creates a fluctuating fair market value and high price volatility.[6]

Despite the "currency" name, cryptocurrency in the United States is not characterized as a currency for tax purposes.[7] Notwithstanding several failed attempts by Congress[8], no federal laws have been passed that seek to manage the use, trade, purchase, sale, or exchange of cryptocurrency for tax purposes. Instead, the IRS established a tax policy by publishing Notice 2014-21, which requires that all cryptocurrencies be characterized as property for tax purposes, and as such, the taxation principles related to property transactions have become the rules that govern cryptocurrency transactions.[9] Notice 2014-21 and an accompanying Frequently Asked Questions page published by the IRS are the cornerstone of guidance for US taxpayers when

2. D. Towne Morton, *The Future of Cryptocurrency: An Unregulated Instrument in An Increasingly Regulated Global Economy*, 16 LOY. UNIV. CHI. L. REV. 129, 129 (2020); Jordan Pritchett, *Cryptocurrency: An Overview*, 134 BANKING L.J. 547, 547 (2017); Cristina Polizu, PhD, et al., *A Deep Dive into Crypto Valuation*, S&P GLOBAL (Nov. 10, 2022) https://www.spglobal.com/en/research-insights/featured/special-editorial/understanding-crypto-valuation.

3. David Rodeck, *Digital Currency: The Future of Your Money*, FORBES (Feb. 16, 2023), https://www.forbes.com/advisor/investing/cryptocurrency/digital-currency/.

4. *Id.*

5. *See* Morton, *supra* note 2; Andrew Bloomenthal, *What Determines Bitcoin's Price?*, INVESTOPEDIA, https://www.investopedia.com/tech/what-determines-value-1-bitcoin/ (updated May 11, 2022).

6. Anshu Siripurapu & Noah Berman, *Cryptocurrencies, Digital Dollars, and the Future of Money*, COUNCIL ON FOREIGN REL. (Feb. 28, 2023), https://www.cfr.org/backgrounder/cryptocurrencies-digital-dollars-and-future-money

7. Notice 2014–21, 2014–16 I.R.B. 938 [hereinafter Notice].

8. S*ee generally* Blockchain Innovation Act of 2020, H.R. 8153, 116th Cong. (2020); The Digital Taxonomy Act of 2019, H.R. 2154, 116th Cong. (2019); and The Token Taxonomy Act of 2018 and 2019, H.R. 7356, 115th Cong. (2018), H.R. 2144, 116th Cong. (2019).

9. Notice, *supra* note 7.

treating cryptocurrency as a capital asset and reporting the tax consequences of any related transactions.[10]

The most important set of rules relating to the taxation of cryptocurrency in the United States are found in Notice 2014-21.[11] First, that cryptocurrency is to be treated like property,[12] and second, which instances of cryptocurrency received by a taxpayer, through "mining" or other non-purchasing receipt events, should, or should not, be recognized as income to that taxpayer at the time of receipt.[13] For example, IRS FAQ Q-23 explains that any cryptocurrency received as part of an "airdrop" due to a blockchain hard fork (a non-purchasing receipt event) is income, whereas IRS FAQ Q-31 states that any cryptocurrency received as a bona fide gift (a non-purchasing receipt event) is not income.[14] The Notice, and its previously mentioned rules, make logical and rational sense on their face; however, as technology has progressed and taxpayer activity has moved far beyond simple buy and sell transactions, it has become clear that the simple taxing principles related to property transactions are no longer adequate for managing the new and intricate ways taxpayers have begun to engage with cryptocurrency and the blockchain ecosystems.

One such area, and the focus of this Article, is the block verification and endorsement rewards received by taxpayers who participate in a proof of stake blockchain network.[15] The mechanics of how a "proof of stake blockchain network" works are discussed below, and the related tax inefficiency and characterization lies in Question 8 of the Notice, which states:

> *Q-8: Does a taxpayer who "mines" virtual currency (for example, uses computer resources to validate Bitcoin transactions and maintain the public Bitcoin transaction ledger) realize gross income upon receipt of the virtual currency resulting from those activities?*

10. *Frequently Asked Questions on Virtual Currency Transactions,* IRS, https://www.irs.gov/individuals/international-taxpayers/frequently-asked-questions-on-virtual-currency-transactions (last updated July 26, 2023) [hereinafter FAQs].
11. Notice, *supra* note 7.
12. FAQs, *supra* note 10.
13. *Id.*
14. *Id.*
15. Notice, *supra* note 7.

> A-8: Yes, when a taxpayer successfully "mines" virtual currency, the fair market value of the virtual currency as of the date of receipt is includible in gross income.

The purpose of this Article is to show, through an analysis of the applicability of Question #8, that, when drafted, the policy in Notice 2014-21 was likely reasonable, but almost a decade later, that reasonableness can no longer hold true. While the development of new technology is often inspired by old, new technology also seeks to solve existing problems in novel ways. Software developers, whether involved in blockchain or elsewhere, build software with the intent to solve those new problems, and not to comply with tax law.[16]

Because the Notice characterizes cryptocurrency as property for tax purposes, this Article will abandon the typical currency related terms found in other analyses, such as coin or token, and instead refer to the cryptocurrency as units of property and cryptocurrency property. For the most part, this Article will assume the reader is generally familiar with the concepts behind cryptocurrency and blockchain technology.[17]

II. THE BASIC CONCEPTS OF PROOF OF WORK V. PROOF OF STAKE

Although digital forms of fiat currency do exist, such as central bank digital currency[18], cryptocurrency property cannot exist without a blockchain network,[19] and all of the transactions and transactional data is stored on its underlying blockchain: a never-ending chain of verified blocks of information.[20]

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16. *See* Kindra Cooper, *Problem-Solving in Software Engineering: An Inside Look*, SPRINGBOARD BLOG (Jan. 20, 2020), https://www.springboard.com/blog/problem-solving-in-software-engineering-an-inside-look/. ("[S]oftware engineers are tasked with designing features and applications that may not even exist yet").

17. Brian Ray, *Blockchain Symposium Introduction: Overview and Historical Introduction*, 67 CLEV. ST. L. REV. 1, 1-21 (2019).

18. Board of Governors of the Federal Reserve System, *FAQ on Central Bank Digital Currency (CBDC)*, FED. RESERVE (Aug. 3, 2023), https://www.federalreserve.gov/cbdc-faqs.htm.

19. Scott Likens, *Making Sense of Bitcoin, Cryptocurrency, and Blockchain*, PWC FINTECH, https://www.pwc.com/us/en/industries/financial-services/fintech/bitcoin-blockchain-cryptocurrency.html (last visited July 17, 2023).

20. William Kleindienst, *Bitcoin, Blockchain, and Cryptocurrencies: A Legal Perspective*, 33 S.C. LAW 50, 52 (2022).

From a high-level perspective, there are two main methods for verifying and storing any data on a blockchain system: proof of work and proof of stake.[21] Both use a network of decentralized contributors to verify the new data, create new blocks of data, and record that data onto each newly created block.[22] In return, the contributors at all levels, including block endorsement and verification, receive new units of cryptocurrency property as reward for their participation in moving the blockchain forward.[23] Under both methods, the contributors who participate often pool their resources together in order to have a better chance at earning a block reward.[24] These resource pools are generally organized by combining either the computing power of many individuals,[25] or the cryptocurrency ownership stake of many individuals.[26]

While each approach seeks the same result, each has different requirements and methods to reach their goal.[27] The proof of work method, where the term "mining" virtual currency comes from,[28] which was the focus of Notice 2014-21[29] uses specialized computers to solve complex cryptographic problems, resulting in the verification and recording of new data onto the blockchain and the distribution of new cryptocurrency property rewards to the contributors.[30] This process is resource intensive, both in its upfront capital investment to purchase the specialized computer equipment, as well as the energy consumption costs for running and cooling the equipment.[31]

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21. Ameer Rosic, *Proof of Work vs Proof of Stake: Basic Mining Guide*, BLOCKGEEKS, https://blockgeeks.com/guides/proof-of-work-vs-proof-of-stake (updated Oct. 18, 2022).

22. *Id.*

23. *Id.*

24. *What are Mining Pools: The Massive Cooperatives that Power Blockchain,* PHEMEX (Oct. 15, 2021), https://phemex.com/academy/what-are-mining-pools.

25. *Id.*

26. *See* Rosic, *supra* note 21. Under proof of stake, the owners pool their cryptocurrency ownership together. The more stake that is aggregated together, the more opportunities for verifying and endorsing blocks, and earning rewards, that pool will get.

27. *Id.*

28. Brian Baker, *What is Bitcoin mining and how does it work?*, BANKRATE (Mar. 27, 2023), https://www.bankrate.com/investing/what-is-bitcoin-mining/.

29. *Id.*

30. Peter Van Valkenburgh, *What is Bitcoin mining, and why is it necessary?*, COIN CENTER (Dec. 15, 2014) https://www.coincenter.org/education/advanced-topics/mining.

31. Corrie E. Clark & Heather L. Greenly, *Bitcoin, Blockchain, and the energy sector,* CONG. RSCH. SERV., R45863, BITCOIN, BLOCKCHAIN, AND THE ENERGY SECTOR (2019) (energy cost depends on the proximity to power generation and location).

Furthermore, in a proof of work network there is an effective conflict of interest between two distinct groups of taxpayers.[32] Except when engaging in a transaction on the network, a taxpayer who only holds units of cryptocurrency property from a proof of work blockchain does not benefit from the "mining" process, and conversely, a taxpayer only engaged in "mining" is not required to own any units of cryptocurrency property from that blockchain at any given time.[33] Though they are separate in their roles, the taxpayer engaged in the mining process can be thought of as an advanced mode participant, while the taxpayer who only holds cryptocurrency property can be thought of as a simple mode participant.

In that way, a proof of stake blockchain network also has two levels of participation in the form of the advanced mode and the simple mode. Under proof of stake both the advanced mode and the simple mode users are able to participate in the verification and recording of new data onto the blockchain, and as such, both are able to receive the rewards as a result.[34] While not completely without some work involved, the advanced mode user must have some level of technical expertise and skill to operate and maintain a network server, —known as a node,[35] —while the simple mode only requires the taxpayer to own a personal computer or a smartphone.[36]

Unlike the proof of work network, both the advanced and simple mode users of a proof of stake system must have a "stake" in the network by owning a portion of that network's cryptocurrency property. The simple mode user often only delegates their stake to an advanced mode user, like a stock voting proxy.[37] The more stake allocated to the node, determined by a

32. Rosic, *supra* note 21.

33. *Id.*

34. E. Napoletano, *Proof of Work Explained*, FORBES (Feb. 16, 2023), https://www.forbes.com/advisor/investing/cryptocurrency/proof-of-work/#:~:text=Proof%20of%20work%20is%20a,the%20integrity%20of%20new%20data.

35. *What is a Node in Crypto?*, SENSORIUM (Sept. 14, 2022), https://sensoriumxr.com/articles/what-are-nodes-in-crypto.

36. *Id.* The cost of running a node, while significantly less than a proof of work setup, still requires costs, such as internet, electricity, server hardware. Most people own a smartphone anyway to participate as a simple mode user.

37. Coinbase, *Delegating Digital Assets 101*, COINBASE (Jan. 9, 2021), https://www.coinbase.com/cloud/discover/solutions/delegating-digital-assets.
(delegation of cryptocurrency property gives all the rights associated with ownership to another person or entity, but not the title of ownership to another person or entity).

combination of the node owner's stake and its delegates' stake, the more opportunities that node will have to earn rewards.[38]

In this way, unlike proof of work, both types of stakeholders can participate in the proof of stake blockchain network for relatively low investment cost.[39] This ease of entry, coupled with the broad ability for participation, is the reason that the future of blockchain is moving towards the proof of stake method,[40] and it is why it is important for the United States to establish policies under the tax law and other regulations to foster growth, rather than stifle innovation.

A. Does This Relationship Create a Tax Partnership?

The joint activity by a stake-pool operator and its delegates opens a question about what is actually going on between an advanced mode user and simple mode user under the proof of stake system, and whether they are engaged in a tax partnership.[41] The advanced users, who expressly avails themselves of the proof of stake network by setting up a node, could be engaged in a business activity. While the simple mode user, who only delegates his stake to the node but does not manage the node or pay for expenses, is more likely engaged in a passive activity.[42] In that regard, this activity could create an implied limited partnership. Though not necessary for the formation of a common law partnership, an implied limited partnership is an unlikely result because the Revised Uniform Limited Partnership Act of 1997, adopted by more than half of the states according to the Uniform Law Commission, requires a filing of a certificate of limited partnership with an office of a state's Secretary of State.[43]

Furthermore, while both types of users are deploying their stake as a resource to receive the rewards, a tax partnership

38. *Id.*
39. *Id.*
40. *Id.*
41. 26 C.F.R §301.7701–3 (2020) (requires that a partnership first be a business entity). This activity cannot be a partnership under this definition because it is not a business entity, and it is entirely possible for those involved to have never met one another, or that they live in different countries.
42. *See* Comm'r v. Groetzinger, 480 U.S. 23, 36 (1987) (citing Higgins v. Comm'r, 312 U.S. 212, 216) (determination of an active trade or business requires an examination of the facts in each case).
43. P'SHIP ACT (1985) ACT § 201 (1985) (creating a significant problem for cross border cooperation).

cannot be the case because the two are only sharing in the pro rata receipt of property; there is no shared expenses,[44] and never any shared losses.[45]The two types of users do not pool their resources to buy property together or to pay other service providers, and the pledged stake by one type of user does not affect the property rights of the other. Only the advanced mode user can legally claim title to the hardware of a node,[46] but if either type of users sustain any losses resulting from the cryptocurrency property losing appreciated value, that user's loss will not affect the other.[47] If the advanced mode user sustains losses through operating the node, and as a result, the activity is no longer economical, that user will simply shut down the node hardware and the simple mode user will find a different node operator to delegate their stake.[48]

B. Cryptocurrency Compared to Other Valuable Property

Receipt of new cryptocurrency property by the taxpayer is somewhat similar to the earned interest a taxpayer receives for money or other assets held by a financial institution. In that case, the taxpayer receives the interest payment in return the financial institution's ancillary deployment of the cash or other assets it holds on the taxpayer's behalf, generally in the form of loans. On the other hand, with the proof of stake blockchain network there is no ancillary deployment of the crypto property, and the network generates and distributes new property to the taxpayer, which the taxpayer did not previously have, simply because the taxpayer own

44. Madison Gas & Elec. Co. v. Comm'r, 633 F.2d 512, 517 (7th Cir. 1980) (separates startup costs for each entity reflects a partnership). Here, the simple mode user has no startup costs and is not engaged in an active trade or business.

45. 26 C.F.R §301.7701–3(b)(2) (2020). Two or more persons are engaged in digging a ditch. None of their individual resources are comingled, and each is free to come and go as they please with no repercussions. This matches the relationship between the advanced and simple users.

46. *See* REV. UNIF. PART. ACT § 301 (UNIF. LAW COMM'N 1997). (Members operating in the cooperative effort who hold themselves out to third parties as conducting business as a single unit). Only the advanced mode user has a duty to attract new members to the activity pool or to interact with third parties at all. Simple mode has no control over the operation.

47. While I.R.C. §7701(a)(1) (1999) has a broad definition that includes the term "pool", and under the related regulations a partnership may be formed without formal designation, there is still no financial tie between anyone cooperating here.

48. While there are privately controlled pools that protect who join and who leaves, generally, unlike §601 REV. UNIF. PART. ACT (2020–2021 ed.), which requires notice of withdrawal from a partnership, there is no requirement either user ever notifies the other that they are no longer choosing to participate with each other.

units of that property to begin with and participates in moving the blockchain forward.

A wrinkle in the already challenging analogy is apparent when we observe that there is no standard way that these systems operate their networks or deploy and distribute their networks. rewards. Some networks require that the simple user must expressly choose to participate, such as the Tezos and Cardano blockchains,[49] while others like the VeChain and Algorand blockchains, require that all users must always participate.[50] Some blockchains calculate and give the simple and advanced user their rewards relatively frequently; for instance the Tezos blockchain rewards are distributed every three days,[51] while others do not track or give the rewards at all until the user makes an express request for them to be calculated and distributed.

Both the Cardano blockchain, which accumulates rewards every five days, and the Cosmos blockchain, which accumulates rewards every few seconds, require that the taxpayer must expressly elect to have their rewards distributed.[52] In that regard, when using a system where the taxpayer must expressly request their rewards to be distributed, it should be clear that the taxpayer does not have dominion and control over the property before the distribution is completed.[53] Nonetheless, without clear guidance, the answer is not so obvious. The taxpayer will always have the ability to make the distribution request, but without making that request, the taxpayer cannot do anything with the property.[54]

49. The Tezos and Cardano blockchains require the users to expressly participate.

50. Users of the VeChain and Algorand blockchains are made to automatically participate simply by owning the property.

51. The Tezos blockchain creates a reward every three days and distributes the reward the user automatically.

52. The Cardano blockchain accumulates rewards every five days, whereas the Cosmos blockchain accumulates rewards every few seconds. Both require the user to expressly request the rewards to be distributed to them.

53. Comm'r v. Glenshaw Glass Co., 348 U.S. 426, 431 (1955) (gross income includes "accessions to wealth, clearly realized, and over which the taxpayers have complete dominion").

54. FAQs, *supra* note 10, at A–24 (a taxpayer has dominion and control over cryptocurrency they can transfer, sell, exchange, or otherwise dispose of).

C. The Relationship between Blockchain Networks and Cryptocurrency

This discussion is important for the future of cryptocurrency and blockchain technology because while Bitcoin was the initial catalyst that caused the cryptocurrency revolution,[55] the usefulness of Bitcoin's underlying blockchain is quite limited.[56] In fact, it can only do one thing: record the transactions of the Bitcoin cryptocurrency.[57] Newer blockchains, which tend to be proof of stake, are more akin to decentralized software platforms whose cryptocurrency property serve to support the underlying functions and operations.[58]

This ability to build useful software applications on top of a blockchain network quashes the biggest critical arguments that there is no inherent or underlying value to the property and that speculative investment is the only price driver.[59] As new blockchain-based software applications grow in acceptance, it is clear that the utility of the blockchain network itself will back the underlying value of any cryptocurrency property, rather than the speculative investor activity.

III. PROOF OF STAKE AND TAX INEFFICIENCY

Under accepted tax principles, when a taxpayer buys any unit of property, the amount the taxpayer paid for that property is the property's tax basis.[60] At a later time if the property is sold; the tax basis is subtracted from the amount realized from that sale to

55. *See* Likens, *supra* note 19.

56. Nathan Reiff, *Bitcoin vs. Ethereum: What's the Difference?*, INVESTOPEDIA, https://www.investopedia.com/articles/investing/031416/bitcoin-vs-ethereum-driven-different-purposes.asp (updated Oct. 4, 2022).

57. *Id.*

58. Carlo R.W. De Meijer, *Blockchain Technology Challenges: New Third-Generation Solutions*, FINEXTRA (Feb. 28, 2021), https://www.finextra.com/blogposting/19949/blockchain-technology-challenges-new-third-generation-solutions (third generation blockchains seek so solve issues of scalability, privacy, and utility).

59. Jennifer Sor, *Crypto Has Little Intrinsic Value or Fundamentals to Fall Back On, and Traders Are Merely Riding A 'Hot Ball of Momentum' Investment Firm Says*, MKT. INSIDER (Jan. 12, 2023), https://markets.businessinsider.com/news/currencies/crypto-market-hot-ball-theory-momentum-trading-intrinsic-value-skeptic-2023-1.

60. I.R.C. § 1012(a) (2000) ("The basis of property shall be the cost of such property."); I.R.C. §1011(a) (2000) ("The adjusted basis for determining the gain or loss from the sale or other disposition of property, whenever acquired, shall be the basis . . . adjusted as provided in I.R.C. section 1016.").

calculate any profit or loss.[61] Like traditional forms of property, cryptocurrency property is subject to these same mechanics because of the policy set forth in Notice 2014-21.[62] Even still, there are other areas in the cryptocurrency and blockchain ecosystem that can be used to highlight the ways Notice 2014-21 is no longer sufficient. For example, Notice 2014-21 is incapable of providing guidance on how to determine the tax treatment of a taxpayer's use of smart contracts,[63] or whether the creation and sale of artwork and other digital media, in the form of a "non-fungible token," are a collectibles.[64]

For the purchase of a unit of cryptocurrency property, the basis is easy to find, it is simply the cost paid for the quantity of cryptocurrency purchased.[65] Like other forms of property, the taxpayer should treat each purchase of cryptocurrency as a single and discrete unit of property, with its own tax basis.[66] Thus, it is important for a taxpayer to keep track of the tax bases for each unit cryptocurrency property purchased in order to maintain proper records, and for determining the actual gain or loss realized on any future dispositions.[67]

However, at the time Notice 2014-21 was drafted staking rewards were not considered, and mining virtual currency, found in Question #8.[68] of the Notice, is the closest analogy to make.[69] Because there is no guidance related specifically to proof of stake,

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61. I.R.C. § 1001(a).

62. Lee A. Sheppard, *Cryptocurrency Customer Compliance*, *in* TAX NOTES FED. 709 (Nov. 4, 2019), https://www.taxnotes.com/tax-notes-today-federal/cryptocurrency/cryptocurrency-customer-compliance/2019/11/04/2b32c (that simple fact remains that the IRS has a disconnect between their ability to regulate and what taxpayers are doing).

63. Stuart D. Levi & Alex B. Lipton, *An Introduction to Smart Contracts and Their Potential and Inherent Limitations*, HARVARD L. SCH. F. ON CORP. GOVERNANCE (May 26, 2018), https://corpgov.law.harvard.edu/2018/05/26/an-introduction-to-smart-contracts-and-their-potential-and-inherent-limitations (a smart contract is a computer code that automatically executes all or parts of an agreement and is stored on a blockchain-based platform; however, they are rarely a true contract in the traditional legal sense as we know them).

64. Ryan Browne, *People are Paying Millions for Clips that can be Viewed for Free. Welcome to the World of 'NFTs'*, CNBC (Mar. 3, 2021), https://www.cnbc.com/2021/03/03/what-are-nfts-all-you-need-to-know-about-crypto-collectibles.html ("[N]on-fungible tokens, are a new type of digital asset. Ownership of these assets are recorded on a blockchain . . . Each NFT is unique and acts as a collector's item that can't be duplicated . . . ").

65. I.R.C. § 1012(a), *supra* note 60.

66. FAQs, *supra* note 10, at Q–40.

67. *Id.* at Q–39.

68. Notice, *supra* note 7.

69. Notice, *supra* note 7.

the safe reporting method is that each staking reward received by a taxpayer is taxable income for an amount equal to the fair market value of the quantity of property received, at the time the taxpayer received it.[70] This treatment of staking rewards inferred by a combination of the Rev. Rul. and Notice 2014–21 Q–8 (virtual currency mining).

The inefficiency of this policy as it relates to proof of stake rewards reaches a point of convergence with the mechanics of property transactions when analyzed against the frequency that taxpayer receives these proof of stake rewards. After the taxpayer receives the new property and recognizes income, the fair market value of the property at the time of its receipt becomes the tax basis by which the amount realized in a future sale or disposition will be calculated for future gains and losses.[71] Those mechanics, coupled with the lack of uniformity across each system and the market conditions that create a fluctuating fair market value over time, is where the heart of the inefficiency lies.[72]

70. Rev. Rul. 2019–24, 2019–44 I.R.B. 1004 (Oct. 9, 2019) (receipt of cryptocurrency property by "airdrop",
i.e., not from purchase, bona fide gift, or exchange for value, is included in gross income).

71. I.R.C. § 1001(a) *supra* note 61.

72. *See* Bloomenthal, *supra* note 5.

Timestamp	Unit Received	FMV @ Timestamp	Cost Basis	Unit Current Value	Gain/Loss
6/25/20 3:41 AM	0.329029	$ 2.54	$ 0.84	$ 1.02	$ 0.18
6/28/20 12:21 AM	0.345892	$ 2.30	$ 0.80	$ 1.07	$ 0.28
6/30/20 9:01 PM	0.233874	$ 2.37	$ 0.55	$ 0.73	$ 0.17
7/3/20 5:41 PM	0.214652	$ 2.30	$ 0.49	$ 0.67	$ 0.17
7/6/20 2:11 PM	0.102269	$ 2.37	$ 0.24	$ 0.32	$ 0.07
7/9/20 10:51 AM	0.098187	$ 2.58	$ 0.25	$ 0.30	$ 0.05
7/13/20 11:54 AM	0.224553	$ 3.08	$ 0.69	$ 0.70	$ 0.00
7/15/20 10:46 AM	0.217195	$ 2.96	$ 0.64	$ 0.67	$ 0.03
7/18/20 1:51 AM	0.27387	$ 3.12	$ 0.85	$ 0.85	$ (0.01)
7/20/20 10:25 PM	0.140597	$ 2.80	$ 0.39	$ 0.44	$ 0.04
7/23/20 6:58 PM	0.233839	$ 3.20	$ 0.75	$ 0.72	$ (0.02)
7/26/20 3:31 PM	0.351099	$ 3.00	$ 1.05	$ 1.09	$ 0.04
7/29/20 12:05 PM	0.197834	$ 2.88	$ 0.57	$ 0.61	$ 0.04
8/1/20 8:39 AM	0.095196	$ 2.91	$ 0.28	$ 0.30	$ 0.02
8/4/20 5:21 AM	0.099421	$ 3.14	$ 0.31	$ 0.31	$ (0.00)
8/7/20 2:03 AM	0.224106	$ 3.25	$ 0.73	$ 0.69	$ (0.03)
8/9/20 10:51 PM	0.405936	$ 3.72	$ 1.51	$ 1.26	$ (0.25)
8/12/20 7:37 PM	0.254414	$ 4.25	$ 1.08	$ 0.79	$ (0.29)
8/15/20 4:19 PM	0.428053	$ 4.15	$ 1.78	$ 1.33	$ (0.45)
8/18/20 1:05 PM	0.262343	$ 3.99	$ 1.05	$ 0.81	$ (0.23)
8/21/20 9:38 AM	0.238469	$ 3.80	$ 0.91	$ 0.74	$ (0.17)
8/24/20 6:39 AM	0.141861	$ 3.73	$ 0.53	$ 0.44	$ (0.09)
Totals	**5.11**		**$ 16.30**	**$ 15.85**	**$ (0.45)**

Total Units Received	Cost Basis	If All Sold @ FMV	Gain Or Loss
5.11	$ 16.30	$ 15.85	$ (0.45)

The chart above is an example of what proper accounting looks like when tracked over time. This chart uses a cryptocurrency whose hypothetical current fair market value is $3.10. Through a hypothetical sale by the taxpayer of each of the discrete units of property received over time, gain and loss is calculated using the past fair market at the time of the property's receipt and the current fair market value of the property at the time of the hypothetical sale.

The historical fair market value is often difficult to determine after the fact.[73] It is important to note that a "virtual currency miner" operating on a proof of work blockchain would need to keep

73. There are various services available to help taxpayers find this information, but it is still time consuming if not done in real time. *See Historical Prices*, COIN MARKET CAP (last visited Jun. 18, 2023), https://coinmarketcap.com/historical; This can also be inferred by the fluctuating fair market value, *see* Bloomenthal, *supra* note 5.

similar records for later selling their mining rewards, but when considering the initial resources required to participate under proof of work, that activity is closer to an active trade or business, and that taxpayer would likely be expected to keep more accurate records.[74] The inefficiency under proof of stake happens because, as noted above, everyone who holds units of that type of property can engage in the system in a much more passive way.[75] With the value of any unit of the property derived from the fair market value of each unit found on the open market, existing outside of the system itself, a simple user could find themselves in an unintended forensic accounting nightmare.[76]

A. Addressing the Inefficiency and Other Concepts

Through the relationships described above, we can see that the tax inefficiency of Notice 2014-21 is a result of the price fluctuation related to market supply and demand, coupled with the potential for hundreds of instances of income realization events.[77]As shown, tracking the recognized income is not as simple as keeping track of purchased assets, the earned interest from a savings account, or the dividends received from owning stocks.[78]

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74. Justin Woodward, *IRS Guidance on Cryptocurrency Mining Taxes*, TAXBIT (Jun. 3, 2021), https://taxbit.com/blog/2019-10-21-irs-guidance-on-cryptocurrency-mining-taxes/ (some frequent expenses that may be eligible for the trade or business expense deduction include mining equipment, electricity costs, repairs, and rented space used to operate the equipment).

75. *See* Rosic, *supra* note 21.

76. The example above uses real data for the proof of stake endorsement rewards I received from the Tezos blockchain network from June to August of 2020. Like most people, when I started participating in that system, I was not considering the tax consequences of the reward property received, or how to track the tax basis for gain and loss on any future disposition. Having identified this problem, and not finding a satisfactory product already on the market, I created a tool to automate the tax basis calculation, and have published it for public use at https://backtobasis.tax.

77. *See* Rosic, *supra* note 21.

78. *See* Coinbase Tax Resource Center, COINBASE, https://help.coinbase.com/en/coinbase/taxes-reports-and-financial-services/taxes/coinbase-tax-resource-center (last visited Jun. 18, 2023) (Coinbase, one of the largest US based cryptocurrency exchanges, issues its customers 1099-MISC forms under limited circumstances, but never issues 1099-B forms); Adam Barone, *Form 1099-INT: Interest Income Definition*, INVESTOPEDIA, https://www.investopedia.com/terms/f/form-1099-int.asp (updated Feb. 8, 2021); Adam Barone, *Form 1099-B: Proceeds from Broker and Barter Exchange Definition*, INVESTOPEDIA, https://www.investopedia.com/terms/f/form-1099-b.asp (updated Feb 8, 2021). As explained in these two articles, taxpayers are given reports for income earned through interested and income earned through brokerage services. However, there is no general reporting requirement or information return requirement for cryptocurrency transactions.

The latter three are measured in dollars, whereas cryptocurrency rewards are always received as new property.

When laid out in this way the relationship is clear to see. Under the right circumstances, a hypothetical taxpayer could let accumulated rewards go untouched for years; only to sell them later when the historical fair market value has changed so frequently that determining basis is almost an impossible task. Unless a taxpayer chooses to do so, under real world conditions, little ties any one taxpayer to their blockchain activity.[79] The eventual sale back to fiat currency is the exit point for any cryptocurrency, and that is where the blockchain activity is generally linked to the taxpayer.[80]

Nonetheless, it is a completely valid argument to say that if a taxpayer chooses to engage in this activity, that taxpayer is responsible for accurate record keeping. When considering that these systems are designed to escape the traditional financial markets and transactional tracing mechanisms, under the current policy rules, some taxpayers may simply choose to not comply with the reporting policy rather than engage in forensic price tracking and accounting.[81]

B. Income Recognition from Staking Rewards

At the forefront of the challenge to the IRS and Notice 2014-21, as it relates to proof of stake rewards, is Abraham Sutherland and his 2019 publication, *Cryptocurrency Economics, and the Taxation of Block Rewards Parts 1 & 2*.[82] Sutherland specifically

79. John Bohannon, *Why Criminals Can't Hide Behind Bitcoin*, SCIENCE (Mar. 9, 2016), https://www.sciencemag.org/news/2016/03/why-criminals-cant-hide-behind-bitcoin. If a person were to purely keep their transactions on the blockchain, they could be untraced, but eventually the cryptocurrency property will need to be sold for cash. Liking to an exchange account to a bank account is the easiest way authorities can link a person to a cryptocurrency address.

80. Some companies like Bity allow taxpayers to pay their bills using bitcoin or other cryptocurrency property. However, the company requires proper identification to do so. *See generally* Pay Bills Online with Crypto, BITY (last visited Jun. 18, 2023), https://bity.com/products/crypto-online-bill-pay/.

81. Bohannon, *supra* note 79 (though not impossible, people will still take the easy route).

82. Abraham Sutherland, *Cryptocurrency Economics and the Taxation of Block Rewards*, 165 TAX NOTES 749 (Nov. 4, 2019), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3466796 [hereinafter Sutherland Part 1]; Abraham Sutherland, *Cryptocurrency Economics and the Taxation of Block Rewards*, 165 TAX NOTES 953 (Part 2; Nov. 11, 2019),

analyzed the consequences of proof of stake rewards against other types of passive income by analyzing how the Tezos blockchain works for the advanced mode users.[83] Sutherland argues that when a taxpayer participates in the proof of stake blockchain data verification process, the instances of cryptocurrency property they receive as a reward are not only new property, but they are units of self-created property.[84] Sutherland contends that when these rewards are looked at for "what they actually are", Notice 2014-21 deviates from generally accepted tax principles relating to income from property transactions because it is instructing that this self-created property should be recognized as income upon their creation, whereas other forms of self-created property require a subsequent sale of the property to generate an income realization event.[85]

While the Sutherland argument is strong, his "self-created property" theory still tries to create a one-size-fits-all rule based on the activity of a single blockchain network, Tezos, in the same way that Notice 2014-21 did by only considering Bitcoin.[86] As previously explained, there is no standard way that software developers solve their design problems when creating any software.[87] When the mechanics of the many different blockchains are analyzed, it becomes clear that the processes from system to system lack a uniform way to account for the proof of stake rewards received by a taxpayer, and how they are distributed between the advanced mode user and the simple mode user.[88]

In an email conversation with Keefer Taylor, co-founder of the blockchain engineering firm Tessellated Geometry, LLC, Taylor explained that the items paid out from the proof of stake rewards on the Tezos blockchain are made up of both new property and network transaction fees.[89] As the use of the network grows, so will the quantity of transaction fees that are included as part of the

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https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3466796. (hereinafter Sutherland Part 2].

83. Sutherland Part 1, *supra* note 82, at 755. Sutherland hangs his entire argument on the way the Tezos blockchain works, barely mentioning the many other blockchain networks that utilize proof of stake.

84. Sutherland Part 2, *supra* note 82, at 964.

85. *Id.*

86. *See* Sutherland Part 1, *supra* note 82.

87. Cooper, *supra* note 16; De Meijer, *supra* note 58.

88. *See* Glenshaw Glass Co., *supra* note 53.

89. E-Mail from Keefer Taylor, Co-Founder, Tessellated Geometry, to author (Mar. 3, 2021) (on file with author).

rewards.[90] To Sutherland's credit, at the time of his publication the proportion of the reward made up of newly created property was significantly greater than the proportion made up of transaction fees; as the use of this blockchain continues to grow, so will the proportion of the reward that is made up of fees.[91]

Logically then, to follow Sutherland's self-created property theory to its conclusion will require an analysis of each reward received, including all of the different ways that each system handles its reward distribution, to determine which portion of the units may contain self-created property and which portion is made from transaction fees. Thus, in accepting that self-created property theory, we would find ourselves in a situation that is as equally complex as Notice 2014-21 is inefficient. Though Sutherland's argument that proof of stake rewards are not income upon receipt have merit,[92] the self-created property theory as a unifying characterization is simply not on point.

Notwithstanding that Sutherland's argument fails to include an important nuance of the rewards system the blockchain network that he specifically analyzed, the "self-created property" theory is simply unable to account for the many ways that the many proof of stake systems facilitate their distribution of various rewards.[93]

C. Diluted Stake Ownership Resulting from Rewards

Similarly, Sutherland's *Taxation of Block Rewards* explores the idea of a dilution in value of each taxpayer's overall stake in any proof of stake blockchain by the rewards earned.[94] Using an analogy based on *Eisner* v. *Macomber*,[95] Sutherland asserts that there is no actual gain in wealth over time because the percentage of ownership never changes, similar to a corporate stock split.[96] Sutherland uses a formula to chart out why the assertion is correct;

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90. *Id.*
91. *Id.*; Sutherland Part 1, *supra* note 82.
92. 26 C.F.R. § 1.61-4(a) (2023). The farm method of accounting allows a farmer to not recognize income until crops or other farm products are sold. Here, though cryptocurrency property is not new or self-created, there is precedent for other types of property where the taxpayer puts in efforts to get new property, such as farm products, to only recognize income on future disposition.
93. Taylor E-mail, *supra* note 89.
94. Sutherland Part 1, *supra* note 82, at 760.
95. Eisner v. Macomber, 252 U.S. 189 (1920).
96. Sutherland Part 1, *supra* note 82, at 762.

however, his point is ultimately moot because the exercise is one that does not match the way an individual unit of cryptocurrency property achieves a fair market value.[97]

The well-known definition of *fair market value* is the price a willing buyer would pay to a willing seller in an arm's length transaction,[98] and each cryptocurrency unit's fair market value is derived through exactly that definition. Interestingly, at the time of *Macomber*, the shares of United States Oil Co. (Standard Oil), the company whose stock was at the heart of the case, traded only privately.[99] However, in Sutherland's dilution analysis, the concept that each unit of property derives its fair market value from its trade on an open market is missing.[100] Instead, Sutherland presents an idea where the blockchain network itself has static value, and the units of cryptocurrency property thereof derive value by in proportion to the aggregate network value, similar to how the shares of a closely held corporation derive their value from the aggregate value of all existing stock of the company.[101]

While it is a generally accepted concept that proof of stake rewards creates a dilution of the circulating supply of property, and therefore the systems are inflationary,[102] failing to take notice of the actual mechanics of the real-world activity makes little sense.[103] When analyzed in the proper light, the underlying network derives its value from the aggregate value of all of the underlying cryptocurrency property outstanding. In fact, one of the most important metrics to many taxpayers involved in the cryptocurrency markets is the value of each network's market

97. Bloomenthal, *supra* note 5.

98. Bank One Corp. v. Comm'r, 120 T.C. 174, 308 (2003). Fair market value, though not expressly defined in the tax code, generally requires (1) that a willing buyer and willing seller be aware of all the facts relevant to the value of property, and (2) neither the buyer or seller be under compulsion to buy or sell the property in question.

99. Brian Taylor, *The First Billion-Dollar Company*, INV. OFFICE (Nov. 15, 2017), https://www.investmentoffice.com/Observations/Markets_in_History/The_First_Billion-Dollar_Company.html ("One of the more interesting aspects of the dissolution was that even though Standard Oil was the biggest corporation in the world in 1911, its shares were not traded on the New York Stock Exchange. Shares only traded over the counter or on the New York Curb.").

100. Sutherland Part 1, *supra* note 82, at 762.

101. *Id.*

102. *Id.*

103. Thomas Lee Hazen, *Tulips, Oranges, Worms, and Coins – Virtual, Digital, or Crypto Currency and the Securities Laws*, 20 N.C. J.L. & TECH. 500, 508 (Apr. 2019). While it makes sense to give cryptoassets capital gains treatment, the notion that a common enterprise in cryptoassets exists between everyone holding a piece of the cryptoasset should be rejected.

capitalization.[104] Thus, if the fair market value of a single unit is $3.10, and the network generates 30 units of property from proof of stake rewards, those new units will retain $3.10 as their fair market value, regardless of any dilution.

After all, the purpose of challenging the IRS policy of Notice 2014-21 is to push the tax policy in a direction that more closely matches taxpayer activity. The fact of the matter is that when a taxpayer receives their staking reward, they can immediately sell that unit of property on the open market, bringing to fruition the income recognition concept that Notice 2014-21 attempts to capture.

In that way, it does not matter that any rewards received by a taxpayer dilute the taxpayer's aggregate ownership percentage if the fair market value per unit is the metric for which gain, or loss, is recognized and that fair market value not affected by the occurrence of a reward distribution. Hence, if Notice 2014-21 is rationally correct in its characterization of cryptocurrency as property, and its required recognition of income at the time of receipt, can the inefficiency alone, when compared to actual taxpayer activity and expectation, warrant a drastic change of policy?

The answer to that question should be a resounding "YES!" While it is true that the IRS has the authority to enforce the policies established by the agency itself,[105] it is also no secret that due to a lack of budget, the IRS is currently having trouble keeping up with even its standard tax collection and enforcement duties.[106] Therefore, to meet taxpayer expectations in a way that will encourage compliance, there needs to be a broad-based legislative investigation and enactment of true statutory rules and regulations relating to blockchain, cryptocurrency, and the entire spectrum of related transactions. From my experience, most taxpayers want to comply, but they also do not want to be in a

104. Jason Fernando, *Market Capitalization: How Is It Calculated and What Does It Tell Investors?*, INVESTOPEDIA, https://www.investopedia.com/terms/m/market capitalization.asp (Mar. 16, 2023).

105. I.R.C. § 7801(a) (2018) (noting that the Powers of the Department of Treasury to enforce Title 26 of the United States Code); I.R.C. § 7803(a)(2) (2022) (outlining the duties of the Commissioner of the Internal Revenue Service.).

106. Jessica Lucas-Judy, *More Delays Ahead—Pandemic Continues to Slow Down IRS*, U.S. GOV'T ACCOUNTABILITY OFF. (Mar. 25, 2021), https://www.gao.gov/blog/more-delays-ahead-pandemic-continues-slow-down-irs (Covid-19 impacted the IRS in the same ways that most private businesses were impacted, employees were sent home. This further slowed down the already complex activity of processing tax returns).

situation where the rules make compliance burdensome and confusing.

IV. CHANGES THAT FIT IN THE REAL WORLD

As discussed above, it is not possible to create an all-encompassing rule by simply focusing on only one blockchain system.[107] Each developer builds, manages, and operates their system differently, and what may work for one, such as Sutherland's arguments based off the Tezos blockchain, will likely create unforeseen complications for others. Though many taxpayers may disagree, the truth of the matter is at the time of publication, the IRS was technically correct with Notice 2014-21. However, when applied to real world changes that have taken place since that time, the Notice creates a taxing mechanism that is essentially taxation by brute force, rather than precision.

A. Other Areas of Inefficiency in Cryptocurrency and Blockchain

Though this Article examines proof of stake reward systems as the primary example of the inefficiency of Notice 2014-21, there are many other activities taking place on many blockchains and decentralized software that are simply beyond the scope of this Article.[108] The prime example of such activities falls under an umbrella term known as "decentralized finance", or Defi.[109] The activities happening within Defi range from leveraged positions, to assent lending, and even synthetic interest-bearing savings accounts.[110] While we may draw analogies for these activities to traditional notions of finance, "smart contracts" control these activities,[111] and the operations, aside from deposit and withdraw,

107. Morton, *supra* note 2.

108. Mayank Sahu, *8 Interesting Ethereum Project Ideas & Topics for Beginners*, UPGRAD BLOG (Jan. 3, 2021), https://www.upgrad.com/blog/ethereum-project-ideas-beginners/. Software to exchange property, games, casinos, credit access for small businesses, NFTs.

109. Kenneth Rapoza, *What's the Big Deal About DeFi and How do you Invest in It?*, FORBES (Mar. 21, 2021), https://www.forbes.com/sites/kenrapoza/2021/03/21/whats-the-big-deal-about-defi-and-how-do-you-invest-in-it/?sh=43f30b6fe89c ("Decentralized finance . . . refers to digital, peer-to-peer financial services technologies that permit crypto trading, loans, interest accounts, and other services. It is reliant on public blockchains like Ethereum and cryptocurrencies.").

110. *Id.*

111. Levi & Lipton, *supra* note 63.

happen in a way that has been designed to shield the true activity from the view of the taxpayer in the first place.[112]

Some of these activities, and their merit as financial devices, are questionable at best, and more akin to gambling at worst; however, they raise other novel questions. For example, should a leveraged position that uses cryptocurrency property as collateral, and which pays out another type of cryptocurrency property as a loan, receive the same treatment as a traditional loan? Assuming the loan has a sufficient interest rate, it is normal for traditional loans to use property as collateral; the lender usually distributes cash to the borrower, not other property. Another, and one of the most interesting, is the concept of cryptocurrency property that has a fair market value pegged to the value of an outside source, such as fiat currency, and intended for use as a traditional fiat currency, colloquially known as stablecoins.[113]

B. Notice 2014-21 is No Longer Reasonable under U.S. v. Mead Corp.

The IRS is simply not able to create a complex taxing regime on its own, and "The Congress may not delegate its purely legislative power to a commission, but, having laid down the general rules of action under which a commission shall proceed, it may require of that commission the application of such rules to particular situations and investigation . . . "[114] Congress has not yet created a statutory and legal framework to authorize a taxing power over cryptocurrency property and blockchain transactions; to do so would be outside of the delegated authority that the IRS has as an administrative agency. When Congress confers decision making authority upon agencies Congress must "lay down by legislative act an intelligible principle to which the person or body authorized to [act] is directed to conform.[115] The limits of an administrative agency to conduct its activities are outlined in the Administrative Procedure Act (the "APA") which sets the limits of an administrative agency to conduct its activities.[116] Three cases,

112. *Id.*

113. Lennart Ante et al., *The Influence of Stablecoin Issuances on Cryptocurrency Markets* 1-2 (Blockchain Rsch. Lab, BRL Working Paper Series No. 11, 2020).

114. J. W. Hampton, Jr., & Co. v. United States, 276 U.S. 394, 408 (1928).

115. Whitman v. Am. Trucking Ass'ns, 531 U.S. 457, 472 (2001) (quoting *J.W. Hampton*, 276 U.S. 394 at 409).

116. Administrative Procedure Act, 79 P.L. 404, 60 Stat. 237, 79 Cong. Ch. 324 (1946).

Chevron, U.S.A., Inc. v. NRDC, Inc.[117]; *Skidmore v. Swift & Co.*[118]; and *United States. v. Mead Corp*, have each famously tested the APA and its limits.[119] First, *Chevron* deals with the regulatory interpretation of statutes.

"When a court reviews an agency's construction of the statute which it administers, . . . [the first question is] whether Congress has directly spoken to the precise question at issue."[120] Here, Congress has enacted no statutes, and therefore there is no legislation to carve out a delegation of power to the Treasury and the IRS to create a complex taxing regime for cryptocurrency property transactions.[121]

"Good administration of the Act and good judicial administration [of agency rules] alike require that the standards of public enforcement and those for determining private rights shall be at variance only where justified by very good reasons."[122] Second, this area also falls outside of the purview of *Skidmore* because if there are no statutes to interpret, then there are also no other regulatory rules for the Treasury and IRS to follow related to cryptocurrency transactions either. One of the most important factors in dealing with cryptocurrency taxation is that Notice 2014-21 is a policy stance the IRS has chosen to take; the choice that cryptocurrency is property is not actual law.[123]

Considering the situation at hand, the IRS acted independently when it decided on the policy position published in Notice 2014-21. Therefore, the issue must be analyzed in light of *United States* v. *Mead Corp*. "Congress, that is, may not have expressly delegated authority or responsibility to implement a particular provision or fill a particular gap. Yet it can still be apparent from the agency's generally conferred authority and . . . that Congress would expect the agency to be able to speak with the force of law."[124]

Under the *Mead* ruling, Congress enacted legislation to enforce tariffs on trading partners, carving out a delegation of

117. Chevron, U.S.A., Inc. v. NRDC, Inc., 467 U.S. 837 (1984).
118. Skidmore v. Swift & Co., 323 U.S. 134 (1944).
119. United States v. Mead Corp., 533 U.S. 218 (2001).
120. *Chevron*, 467 U.S. at 842.
121. *See* Notice, *supra* note 7 (all cryptocurrency and blockchain legislation that failed in Congress).
122. *Skidmore*, 323 U.S. at 140.
123. Various failed legislative packages, *supra* note 7.
124. *Mead*, 533 U.S. at 229.

power to the United States Customs Service to set which import items would be subject to certain tariffs.[125] In its ruling, the Court noted that Congress was not going to get involved in the technical details of characterizing each item imported through US ports of entry, and in doing so found that so long as the USCS made its designations properly and with due process, the agency should be given deference in those decisions because that was the entire point in delegating powers to administrative agencies.[126]

Here, there is a similarity from the perspective of the policy choices made in 2014. At that time, Bitcoin was the only cryptocurrency receiving any significant public attention,[127] and as such could neatly fit into a *Mead* issue.[128] The IRS has been delegated the power to collect taxes by Congress, but Congress has not delegated a specific statutory power to tax cryptocurrency or blockchain activity. Through the analysis of *Mead*, it is clear that Notice 2014-21 is a reasonable extension of the previously delegated power, despite no specific delegation of power.

When the IRS was formulating the notice between 2012 and 2014, many people still assumed Bitcoin was a blip in the social radar that would eventually die out.[129] The price was fluctuating between $200 and $800, and it looked like the whole thing could just be another fad that would disappear as quickly as it came.[130] History, on the other hand, has shown that has not been the case.[131] Though Bitcoin itself has not changed, public perception around cryptocurrency as a whole certainly has, including advanced financial instruments that track and derive their own value based on the cryptocurrency markets and bought and sold in traditional financial markets.[132]

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125. *Id.* at 222 ("Section 1502(a) provides that 'the Secretary of the Treasury shall establish and promulgate such rules and regulations as not inconsistent with the law. . . .'"). For the IRS, the same can be said to apply with I.R.C. § 7801.

126. *Id.* at 226.

127. Van Valkenburgh, *supra* note 30.

128. *Mead*, 533 U.S. at 218.

129. Dan Ashmore, *Bitcoin Price History 2009 to 2022*, FORBES, https://www.forbes.com/advisor/investing/cryptocurrency/bitcoin-price-history/ (Oct. 11, 2022).

130. *Id.* (Almost two years later, in April 2013, Bitcoin reached $200. By the end of November that same year, it was worth
more than $1,000. It then rose tenfold to $10,000 in November 2017.).

131. Rodeck, *supra* note 3.

132. John Rotoni, *What is Grayscale Bitcoin Trust?*, MOTLEY FOOL (Apr. 10, 2021), https://www.fool.com/investing/2021/04/10/what-is-the-grayscale-bitcoin-trust/ (Grayscale is a trust, it's a fund which buys Bitcoin, and the shares of this fund are traded in the New

Though it is true that Notice 2014-21 was open to public notice and comment submissions, the entire cryptocurrency market has changed significantly since its publication.[133] Everyone, from institutional investment firms (and their big money) to retail investors with small savings are getting involved, and all want a piece of the action.[134] The simple power of the IRS to tax in this area because of the Congressional general delegation of a taxing authority can no longer be taken lightly. Those simple rules found in Notice 2014-21, meant to get ahead of a phenomenon no one understood, are no longer sufficient or reasonable on their own.

V. BETTER RULES MOVING FORWARD

There have been countless articles and publications written on how to create a better taxing regime for cryptocurrency.[135] With so much existing literature, I will only propose four solutions that can create a better policy for this activity, as well as meet taxpayer expectations.

First, buying cryptocurrency property for cash as a capital asset, and later sold should follow the regular capital asset sale rules. Second, when a taxpayer uses cryptocurrency property as a means of transferring value to purchase goods or services, regardless of whether the property has a fixed or fluctuating fair market value, that property should be treated as instantly sold and any appreciation in the property recognized as ordinary income.[136] Third, any other activity that happens on the blockchain, including proof of stake rewards, where the taxpayer receives some quantity of property through an action other than buying, should be disregarded at the time of receipt, and only characterized and recognized at a later time of sale for regular fiat currency. This future characterization method should disregard any historic fair market value of the property for tax basis purpose, and instead, tax any amount realized at a flat tax rate. Finally, any

York Stock Exchange. You can go to your broker and buy shares in this trust. By this way, you have exposure to Bitcoin because you know that this trust is backed by Bitcoin.).

133. Notice, *supra* note 7; Kasey Pittman and Michelle Hobbs, *The Ever-Changing World of Digital Asset Taxation*, BAKERTILLY (Oct. 25, 2022), https://www.bakertilly.com/insights/the-ever-changing-world-of-digital-asset-taxation.

134. Rodeck, *supra* note 3.

135. Sutherland Parts 1 & 2, *supra* note 82; Hazen, *supra* note 103.

136. If it is being used like cash, it should be treated like cash.

comprehensive change must include a de minimis threshold level to exclude minimal value activity from gross income.

VI. CONCLUSION

Notice 2014-21 and the rules that it sets forth have become significantly inefficient in dealing with the cryptocurrency and blockchain markets as they stand today, especially proof of stake network rewards. To that end, even the most prominent publication analyzing the proof of stake problem misses the mark when it comes to exploring how taxpayers use cryptocurrency property, how these blockchain systems are structured, and how those systems should be taxed.

However, given that the limited power delegated to the IRS does not include creating new taxing regimes, the policies described in Notice 2014-21 were reasonable at the time of their publication. Ultimately, an act of Congress will be necessary to create an efficient taxing regime that can account for the complex nuance created by this emerging industry.