polygon labs

September 8, 2023

The Honorable Ron Wyden
Chairman
Committee on Finance
U.S. Senate
219 Dirksen Senate Office Building
Washington, DC 20510

The Honorable Mike Crapo
Ranking Member
Committee on Finance
U.S. Senate
219 Dirksen Senate Office Building
Washington, DC 20510

I. Introduction

Polygon Labs respectfully submits this letter in response to the request for comments (the "Consultation") on the taxation of digital assets from Senate Finance Committee Chairman Ron Wyden and Finance Committee Ranking Member Mike Crapo. An open dialogue with industry stakeholders and other market participants on digital asset taxation is essential for producing fair and effective tax policy for this novel and emerging technological system.

Polygon Labs is an international software development company that builds blockchain infrastructure and complementary software. We believe that a blockchain-based internet will enhance the ways we transact and interact in society. This belief is reflected in our mission to provide more efficient and open blockchain infrastructure on which third party developers and the global community can build.

Much of permissionless blockchain infrastructure, including the Polygon network, is powered and secured by validators participating in "staking" (described below). Since staking is foundational to "proof-of-stake" blockchains – which comprise a significant number of the most used blockchain networks[1] – this response to the Consultation focuses only on the questions related to taxation of staking rewards, as that will have a direct impact on the functioning of these networks.

We recommend that the Internal Revenue Service ("IRS") tax consensus-layer staking rewards only at sale or other disposition of these cryptoassets. Not taxing staking rewards as accrued, but taxing only upon disposition in a sale would: (1) maintain the principle that self-sourced property is not taxed until a disposition; (2) reflect income more clearly; (3) be more easily administrable for the IRS; and (4) remain consistent with the principle of technological neutrality.

[1] Ethereum, the largest blockchain by transaction volume,[#] has relied on PoS since September 2022. Seven out of the top ten blockchains, by market capitalization,[#] also use a consensus mechanism that relies on PoS, or a variation of PoS (*e.g.*, "delegated proof-of-stake").

II. Background on consensus-layer staking

Blockchains are digital ledgers on which data can be credited to and debited from individuals or entities through their pseudonymous blockchain addresses. The inclusion of a transaction on the ledger, such as a credit to or debit from an address, happens according to a set of rules, called a "consensus mechanism," that enables all of those participating in "securing" the network to agree on the state of the ledger at any time. Because blockchains are designed to function without a centralized intermediary – *e.g.*, an administrator or operator controlling which transactions get included in the network or which individuals may participate in or use the network – they are referred to as "permissionless" networks.

When a user submits a transaction for inclusion on a blockchain, they remit a "gas" fee – denominated in the blockchain's native token (*e.g.*, ETH on Ethereum, MATIC on Polygon, ATOM on Cosmos) – and the proposed transaction is sent to a queue (a "memory pool"). A network of computers ("nodes") collect transactions from the memory pool, organize them into data "blocks," and add them to the blockchain in accordance with the consensus mechanism.

One consensus mechanism is "proof of stake" ("PoS"), where node operators – also called "validators" or "stakers" in this context – put up, or "stake," the blockchain's native token in a smart contract (*i.e.*, self-executing piece of code) to demonstrate their interest in ensuring the security of the network. Validators risk having their stake devalued (or "slashed") if they break the software's rules by not following the consensus mechanism. This is the way that permissionless blockchains are both "decentralized" – operating through the efforts of many, disparate, unrelated actors – and "trustless" – there is no single actor that must be trusted to ensure the security and continued operation of a network.

As validators perform the work necessary to add blocks to the network, they receive additional amounts of the network's native token, which are referred to colloquially as "staking rewards." Although validators technically receive these rewards upon successfully adding data blocks to the blockchain, they can only *use* them, just like any other cryptoasset, after un-staking (*i.e.*, removing them from the smart contract to a wallet address they control).

III. Staking rewards should not be taxed until a sale or other disposition

Revenue Ruling 2023-14 (the "IRS Staking Rule"), which the IRS published on July 31, 2023, provides:

> "If a cash-method taxpayer stakes cryptocurrency native to a proof-of-stake blockchain and receives additional units of cryptocurrency as rewards when validation occurs, the fair market value of the validation rewards received is included in the taxpayer's gross income in the taxable year in which the taxpayer gains dominion and control over the

> validation rewards. The fair market value is determined as of the date and time the taxpayer gains dominion and control over the validation rewards."

Due to the fact that revenue rulings are not binding on taxpayers or the courts,[2] and the IRS has declined to let a court rule on the tax treatment of staking rewards, stakers are left uncertain on the state of the law, making a legislative solution necessary.[3]

For the reasons discussed below, we propose that staking rewards be taxed only on a sale or other disposition.[4]

First, under the long-standing principle of tax administration in the United States, exercising dominion and control over property for which there is no previous owner (which we refer to as "self-sourced property") is not a tax event. Instead, taxpayers take self-sourced property with a basis equal to the cost of producing it (if any), and are taxed only when they sell or otherwise dispose of it.[5] Their gains at that time equal the difference between their sale price and basis. Taxing staking rewards before a sale is inconsistent with this principle.

When taxpayers extract oil, gas, or minerals, they are not taxed until they sell that property.[6] When they breed animals, they are not taxed until they sell the animals.[7] When they harvest crops, they are not taxed until they sell the crops.[8] The same rule applies when taxpayers create art, manufacture goods, bake scones, affix their autograph to paper, or otherwise ***assume control over property that does not have a previous owner***.[9] The principle that self-sourced property is not taxed until a sale or other disposition holds true even when the property has a readily

[2] *See, e.g.*, *Stubbs, Overbeck & Assocs. v. United States*, 445 F2d 1142, 1146–1147 (5th Cir. 1971) ("It is merely the opinion of a lawyer in the agency and must be accepted as such"); *Sims v. United States*, 252 F2d 434 (4th Cir. 1958), aff'd, 359 US 108 (1959).

[3] In *Jarrett v. United States*, a staker sued the IRS for a refund of the tax he paid on his newly minted block rewards, arguing that the rewards were self-created property instead of property received for services. No. 3:21-cv-00419 (M.D. Tenn. 2021). The IRS initially contested Jarrett's refund suit, then granted his refund and successfully sued to dismiss the case on mootness grounds.

[4] The character of gain on sale would be determined under section 1221, and generally would be capital unless the rewards are held as inventory.

[5] Section 1001(a). Except as otherwise specified, all section references herein are to the Internal Revenue Code and the Treasury regulations promulgated thereunder.

[6] *See* Revenue Ruling 77-176.

[7] *See Metz v. United States*, No. 1446 (E.D. Ky. 1962); Revenue Ruling 86-24.

[8] IRS Publication 225, "*Farmer's Tax Guide*," at 61.

[9] The taxation of "treasure trove" in the hands of its finder is not inconsistent with the general principle that self-sourced property is not taxed until disposition. When one person loses property and another later claims it, a payment is deemed made from the original owner to the finder. *See, e.g., United States v. Cesarini*, 296 F.Supp. 3 (N.D. Ohio 1969), *aff'd per curiam*, 428 F.2d 812 (6th Cir. 1970) (because "title belongs to the finder as against all the world except the true owner," finding property triggers a tax when the true owner does not emerge to dispute the finder's ownership).

ascertainable fair market value, as is the case with oil, gas, minerals, and many animals and crops.

Newly minted tokens accruing to stakers are self-sourced property in exactly the same way – they are sent to stakers from ownerless property (software that is open to and accessible by anyone – *i.e.*, "open-source") with their own efforts (validation). Software is not a "person" for tax purposes,[10] so the receipt of newly minted tokens from software is not income. And it is axiomatic that tokens newly minted from ownerless software have a previous owner. If they did, that owner would be entitled to an item of tax expense, and possibly a deduction, when the tokens are credited to a staker.

The emergence of a virtual ledger from the sum of stakers' actions does not change the above analysis. Assume a group of farmers happens upon an apple orchard on ownerless property. They agree to take turns picking apples. To ensure no one cheats, each farmer is required to ante up the first 32 apples they pick. If they cheat, those apples are thrown into a river. Over time, each of the farmers begins selling some of their apples, establishing a market price for them. Although a system thus emerges from the aggregate of each farmer's actions, the farmers are not taxed until they sell their apples. Stakers should be treated similarly on their newly minted tokens.

Second, taxing staking rewards – that, as mentioned above, can only be used after a validator un-stakes them – prior to disposition would be incongruent with the principle that payments under a transaction generally are not taxed until it is possible to determine whether they represent income or a return of capital.[11]

Staking is an open-ended transaction that represents contribution and/or work relating to a PoS blockchain protocol. Although a blockchain protocol credits its native token to stakers over time in the form of staking rewards, a validator's "stake" remains part of the protocol's work method while they continue to validate. As they are validating and continue to "put up" their stake, they have not yet sold or exchanged the staked cryptoassets for other property.[12]

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[10] *See* section 7701(a)(1) (a "person" means an individual, a trust, estate, partnership, association, company or corporation).

[11] *See, e.g.*, Virginia Iron Coal & Coke Co. v. Commissioner, 37 BTA 195, aff'd, 99 F2d 919 (4th Cir. 1938), cert. denied, 307 U.S. 630 (1939) (option premiums not taxed when "[i]t was impossible to tell…whether they would ultimately represent income to the petitioner or a return of capital"); Revenue Ruling 58-234 ("Since the optionor assumes [an] obligation, which may be burdensome and is continuing until the option is terminated, without exercise, or otherwise, there is no closed transaction nor ascertainable income or gain realized by an optionor upon mere receipt of a premium for granting such an option."); Revenue Ruling 78-182 (option premium not taxed until transaction is closed); Revenue Ruling 2003-7 (upfront payment under a variable prepaid forward contract not taxed until the contract is closed); See, *e.g.*, Merrill Lynch Wealth Management, Strategic Acceleration Redemption Securities, https://olui2.fs.ml.com/Publish/Content/application/pdf/GWMOL/365338PM.pdf (last visited Sept. 5, 2023) ("The appreciation on STARS will generally be taxed as capital gains."). Structured notes are a $100 billion industry in the United States. See Gunjan Banerji and Eric Wallerstein, The Market For Structured Notes is Booming, The Wall Street Journal (Nov. 14, 2022), https://www.wsj.com/livecoverage/stock-market-news-today-11-14-2022/card/the-market-for-structured-notes-is-booming-BFvwL6Gddbuk3PKWaluk.

[12] The deferral of taxation on open transactions should be contrasted with the taxation of payable-in-kind interest,# which is predicated on the assumption that lenders will ultimately recover the full amount of their principal.# Stakers are not

Failure to treat staking as an open transaction and tax prior to disposition would often result in significant overtaxation. Assume Jack and Jill each hold half of a protocol's 200 outstanding tokens at the beginning of the year, and Jill receives another 100 newly minted tokens over the course of the year for staking while Jack's ownership of tokens remains constant. Assume further that the aggregate market capitalization of the tokens remains static at $200 throughout the year, so that each token's value is $1 at the beginning of the year (200 tokens outstanding at a $200 market capitalization) and $0.67 at the end of the year (300 tokens outstanding at a $200 market capitalization). By the end of the year, the aggregate value of Jill's tokens will have increased from $100 to $133.33 because she now owns two-thirds of tokens whose market capitalization is $200. But because the average value of newly minted tokens she received over the course of the year was $0.83 ([$1 + $0.$\overline{67}$] ÷ 2), she will be taxed on $83 instead of $33.33. Taxing staking as an open-ended transaction results in unfair taxation.

Third, taxing staking rewards only upon disposition will be administratively easier than any other option. Administrability is essential to fair taxation.[13] Congress' historical and consistent unwillingness to tax self-sourced property until a disposition arguably stems from the Sixteenth Amendment's grant of authority to tax "income," which the Supreme Court defined in 1955 as "undeniable accessions to wealth, *clearly realized*, and over which the taxpayers have complete dominion."[14] The realization requirement is rooted in administrative convenience.[15]

In taxing newly minted tokens before disposition, the IRS Staking Rule conflates (1) a taxpayer's exercise of dominion and control with (2) realization, instead of treating them as separate requirements.[16] That conflation results in an undue administrative burden on both stakers and the government. Depending on a blockchain's design, stakers can potentially be credited with thousands of staking rewards each year. Taxing those events upfront would require stakers to determine and report the fair market value of the tokens each time they are credited to the stakers' wallets. Because stakers receive staking rewards from software, not a person, they do

unconditionally entitled to either a return of the value they have staked (because token prices are volatile) or even the same number of tokens they have staked (because they might be penalized by the blockchain protocol). They thus are in a very different economic position from lenders. We recognize that non-pro-rata stock dividends, which are taxed on receipt even if the taxpayer retains exposure to the stock, might serve as a counterpoint. But non-pro-rata stock dividends typically represent a fundamental change to a taxpayer's investment, made at the discretion of a corporation's board of directors. By contrast, staking rewards are an inherent feature of the staker's overall investment—they are "part of the deal" from inception. We therefore believe non-stock financial instruments offer a better analogy for the appropriate taxation of staking rewards.

[13] *See, e.g.*, Notice 2001-44 (describing administrability as a "fundamental tax policy principle").

[14] *Glenshaw Glass Co.*, 348 U.S. 426 (1955); *see also Eisner v. Macomber*, 252 U.S. 189, 208 (1920) (taxpayer must experience a "coming in" from a "source" to realize income).

[15] *See Helvering v. Horst*, 311 U. S. 112, 311 U. S. 116 (1940) ("the concept of realization is founded on administrative convenience"); *Cottage Savings Ass'n v. Commissioner*, 499 U.S. 554, 559 (1991) (a sale or exchange "is easily detected by a taxpayer or an administrative officer," whereas asset valuation is a "cumbersome, abrasive, and unpredictable administrative task") (internal citations omitted).

[16] *See* Revenue Ruling 2023-14 (concluding that "A has an accession to wealth as A gains dominion and control" over tokens, without mentioning realization).

not receive Form 1099s and thus are faced with determining, on their own, when each reward event occurred and what the token value was at that time. The IRS will have a corresponding requirement if it wants to try to corroborate a taxpayer's income calculation.

That administrative burden should be weighed against the upside of taxing staking rewards before a sale. As discussed herein, there is no material upside of doing so; instead, taxing staking rewards upfront results in a poor reflection of income that creates undesirable incentives and is inconsistent with historical taxation principles.

Fourth*,* global policymakers and regulators have recognized the importance of remaining technologically neutral when creating laws and regulations for innovation. Given the technological design differences among various blockchain networks, legislation that taxes staking rewards as income prior to disposition will necessarily be technologically-biased.

Examples of the design differences and resulting taxation differences are as follows:

- Some blockchain designs result in stakers having thousands of new token reward events each year. Taxing stakers upon each of those events shoulders them with a greater administrative burden than those who validate on blockchains designed to credit tokens less frequently.
- Some blockchain designs enable stakers to withdraw their rewards only if they deactivate their validator software and withdraw their entire stake. The IRS's current approach taxes those stakers on value that they cannot, in practice, access without temporarily shutting down their staking activities.
- Some designs enable taxpayers to acquire tokens that function as transferable receipts of staked tokens and any associated rewards. Taxpayers generally are not taxed on rewards that accrue "inside" of those tokens until a sale, because the tokens themselves are virtual currency that is not "looked through" under current IRS guidance.[17] The IRS's current approach encourages the proliferation of those designs to the detriment of designs that credit tokens currently.

Tax policy should not incentivize one product type over another. In this nascent stage of blockchain development, taxing staking rewards when credited to validators risks doing just that, without materially increasing tax revenues.[18] The taxation of on-chain activities should not favor one blockchain design over another. Otherwise, tax policy could inadvertently influence the direction of technological development.

[17] *See* Notice 2014-21 ("virtual currency" is property).

[18] *See also* Abraham Sutherland, *Cryptocurrency Economics and the Taxation of Block Rewards,* 165 Tax Notes 749, 769-770 (Nov. 4, 2019) (positing that the best blockchain design under the IRS's approach would be one where stakers do not receive newly minted tokens and, instead, nonstakers' tokens are automatically destroyed periodically; that design would not result in any tax to stakers, notwithstanding that its economic effect on them would be identical to the current model).

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We thank Chairman Wyden and Ranking Member Crapo and the Joint Committee on Taxation for your consideration of the recommendations set forth above. We would be happy to discuss these recommendations and additional tax policy considerations with you further.

Rebecca Rettig
Chief Legal & Policy Officer
Polygon Labs

cc: Jason Schwartz, Fried, Frank, Harris, Shriver & Jacobson LLP