



September 8, 2023

Via Electronic Mail: responses@finance.senate.gov

Senate Committee on Finance
219 Dirksen Senate Office Building
Washington, DC 20510-6200

Re: Selected Issues Regarding the Taxation of Digital Assets

Dear Chairman Ron Wyden and Ranking Member Mike Crapo,

The DeFi Education Fund (DEF) thanks the Senate Finance Committee and Joint Committee on Taxation for the opportunity to respond to the request for comments on the taxation of digital assets published by Senate Finance Committee Chairman Ron Wyden and Finance Committee Ranking Member Mike Crapo.¹ We appreciate your openness to public discourse on this new and promising technology.

By way of background, DEF is a non-partisan research and advocacy group. Our mission is to educate lawmakers about the technical workings and benefits of decentralized finance (DeFi), achieve regulatory clarity for the future of the global digital economy, and advocate for individual users and developers in the DeFi space. DeFi has immense potential to advance innovation in the world economy, and we believe that potential can best be realized in conjunction with smart policy. DEF is not a trade association and does not represent the interests of any specific parties.

The digital assets space extends beyond DeFi, of course and includes centralized exchanges and services. However, our comments focus on DeFi. In sum, we recommend:

- Staking rewards should not be taxed until a sale or other disposition.
- Section 6050I should be revised so that it does not deputize recipients of digital assets to collect and report information about their payers.²
- Congress should explicitly extend the application of section 1058's nonrecognition rule to "loans" of actively traded fungible tokens.
- The wash sale rules should not apply to taxpayers who use digital assets as currency.

I. Background

¹ Selected Issues Regarding the Taxation of Digital Assets, Senate Finance Committee, Chairman Ron Wyden and Ranking Member Mike Crapo (June 2023).

² Except as otherwise specified, all section references herein are to the Internal Revenue Code and Treasury regulations thereunder.

DeFi enables users to transact through peer-to-peer (P2P) computer networks. A P2P network is composed of two or more computers (nodes) running open-source software.³ Although each node acts independently in its own economic interest, the software's incentives are designed such that, in aggregate, nodes' actions create a virtual ledger of information, or "blockchain," to emerge from the nodes' aggregate actions. Those incentives structures are collectively referred to as a "consensus mechanism." Although each blockchain has its own design nuances, there are broadly two kinds of consensus mechanisms: Proof-of-Work (PoW) and Proof-of-Stake (PoS). Each consensus mechanism solves three issues that arise in creating a distributed ledger:

- (1) Who gets to propose the next block of data to be included on the ledger?
- (2) How can we ensure the block proposer is not proposing falsified information?
- (3) How can we encourage nodes to join the network?

In a PoW network, nodes—known as miners in this context—compete to solve a computational puzzle. The first miner to solve the puzzle gets to propose the next block of data for addition to the ledger. If it does not contain any transactions that break the "rules" of the network, like "double-spend" transactions or other falsified information, the other nodes validate the "winning" miner's block. In that event, the winning miner receives "validator rewards." On the Bitcoin network,⁴ validator rewards consist of: (1) newly minted BTC and (2) transaction fees. Newly minted BTC currently represents the majority of mining rewards. Transaction fees are fees users are required to pay to include their transactions in a block. If a miner's block is *not* approved, the miner will not receive any validator rewards and, consequently, will be in a net economic loss position after having incurred real-world resources to solve the computational puzzle.

In a PoS network, nodes—known as stakers in this context—lock up, or "stake," a material amount of the blockchain's native token in the software they run. The software selects a staker at random to propose a new block of data for inclusion on the ledger. As with PoW, the other nodes approve the winning staker's block if it does not contain falsified information, and the winning staker receives validator rewards. On the Ethereum network, validator rewards consist of: (1) newly minted ETH and (2) "priority gas fees." Newly minted ETH represents the majority of staking rewards. Priority gas fees are fees some users pay in excess of a mandatory "base fee" for faster inclusion in a block. (Unlike Bitcoin, Ethereum's software protocol destroys, or "burns," base fees, thereby offsetting the inflationary effects of newly minted ETH.) If a staker's block is *not* approved (e.g., because the staker submitted falsified data), all or a portion of the staker's ante is devalued, or "burned."

II. Validators should not be taxed until a sale.

³ Open-source means the software is free to use, modify, and distribute.

⁴ This letter uppercases blockchain names (e.g., Bitcoin and Ethereum) and uses ticker symbols (e.g., BTC and ETH) to describe their native tokens.

Under IRS guidance, validator rewards are taxed at their fair market value when a miner or staker can transfer them.⁵ We believe Congress should enact legislation under which staking rewards are not taxed until a sale or other disposition because doing so better reflects the economic reality of the activity.

First, validator rewards should be treated as self-sourced property because they consist predominantly of newly minted tokens, not gas fees,⁶ and newly minted tokens do not have a payer. Taxpayers are never taxed until sale when they extract minerals like gold, breed livestock, produce art, manufacture goods, or otherwise assume ownership over property for which no previous owner exists (self-sourced property). This treatment remains even if an active secondary market exists for that self-sourced property, as it does for many commodities.⁷ Validators attain newly minted tokens by running and maintaining open-source software on their computers; in effect, they are digital farmers vying to pick fruit from a tree that grows on public property. They should not be taxed until they sell the fruit.⁸

Second, taxing validator rewards upfront does not reflect a validator's true economic gain.⁹ Validator rewards are often inflationary in nature and therefore do not represent business profits.¹⁰ Moreover, taxing staking rewards upfront ignores the staker's continued economic risk in the relevant blockchain protocol. As long as a staker needs to keep a material amount of the protocol's native tokens locked up to collateralize their maintenance of a validator client, they remain exposed to price volatility and the risk of being penalized.¹¹

⁵ Notice 2014-21 (mining rewards); Revenue Ruling 2023-14 (staking rewards).

⁶ Tax law generally taxes income streams according to their predominant character instead of "bifurcating" them. See *Universal Castings Corp. v. Commissioner*, 37 T.C. 107, 116-17 (1961) (declining to treat payments on an inseparable stock-note unit as consisting, in part, of interest); Rev. Rul. 1975-33, 1975-1 C.B. 115 (additional dividend rights that were inseparable from other rights inherent in stock issued in a reorganization were attributes of that stock, not separate property); Treasury regulations section 1.1275-4 (rejecting componentization of contingent payment debt instruments in favor of an "all-or-nothing" approach, contrary to prior proposed regulations).

⁷ See, e.g., Rev. Rul. 77-176, 1977-1 CB 77 (oil and gas extraction); *Metz v. United States*, No. 1446 (E.D. Ky. 1962) (animal breeding); IRS Publication 225, "*Farmer's Tax Guide*," at 61 (grain harvesting and animal breeding); Rev. Rul. 86-24, 1986-1 CB 80 (animal breeding). The taxation of "treasure trove" in the hands of its finder is not inconsistent with the general principle that self-sourced property is taxed only at 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. Cesarini*, DC-OH, 69-1 USTC ¶19270, 296 F.Supp 3 (1969) (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).

⁸ At that time, they would recognize gain equal to the value of the rewards. Their gain would be capital unless treated as ordinary under section 1221 (e.g., if the staker holds the tokens as "inventory").

⁹ See section 446(b) (taxpayer's method of accounting must "clearly reflect income").

¹⁰ See *Glenshaw Glass Co.*, 348 U.S. 426 (1955) (defining income as "undeniable accessions to wealth, clearly realized, and over which the taxpayers have complete dominion").

¹¹ Cf. *Virginia Iron Coal & Coke Co. v. Commissioner*, 37 BTA 195, aff'd, 99 F.2d 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

Third, taxing validator rewards upfront is technology-biased as blockchains can have differing “policies” for validators that may cause unfair tax treatment. For example, stakers on Solana cannot withdraw rewards unless they unstake entirely, and they cannot thereafter restake their tokens before the expiration of a three-day waiting period—the upfront taxation would require them to recognize income before they actually crystallize their economic gain or loss by selling the rewards. At a theoretical extreme, U.S. tax law encourages a blockchain design where non-validators’ tokens are automatically burned periodically instead of new tokens being credited to validators; the result would be economically identical to current blockchain designs, but would not prematurely tax validators.

Finally, taxing validator rewards upfront is unlikely to raise meaningful revenue. Miners are notoriously nomadic, and are likely to select jurisdictions with a lower tax bite. U.S. taxpayers who want economic exposure to staking without upfront taxation have alternate options with more favorable tax treatment as opposed to running their own nodes or delegating to U.S. service providers. Non-rebasing liquid staking tokens represent fractionalized interests in staked tokens. Under current law, it appears that U.S. taxpayers are not taxed on non-rebasing liquid staking tokens until a sale.¹²

If validator rewards continue to be taxed upfront, we urge the swift enactment of legislation that sources those rewards—and any payments under a delegated staking or similar arrangement that are determined by reference to staking rewards—to the residence of the relevant taxpayer. Foreigners cannot stake with U.S. service providers without such a rule, because it is unclear under current law how staking rewards are sourced, and U.S. sourcing would result in a 30% withholding tax.¹³

III. Congress should repeal the changes made to Section 6050I in the Infrastructure Investment and Jobs Act

The Infrastructure Investment and Jobs Act (the IIJA) amended Section 6050I to require anyone who receives more than \$10,000 in digital assets in a trade or business during the taxable year to report identifying information about the payer and the transaction on Form 8300 beginning in 2024. Failure to file a Form 8300 within 15 days, or reporting missing or incorrect information, can result in a \$25,000 fine or five years in prison.

Congress should repeal the IIJA’s amendments to Section 6050I.

First, Section 6050I would make it exceedingly difficult for Americans to participate in the burgeoning on-chain economy. Blockchain technology uses cryptography to enable people to

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)

¹² See, e.g., Jason Schwartz, *The Latest DeFi Alpha Is Tax-Optimized Staking*, *Decentralized Law* (May 25, 2022), <https://www.friedfrank.com/uploads/documents/cc68fd4ecd02c64da95a5c0752355f73.pdf>.

¹³ For the same reason, foreign currency gain and periodic payments under notional principal contracts are both sourced to the residence of the recipient.

pseudonymously transact without a middleman. Artists and publishers can release digital works through on-chain smart contracts instead of relying on a gallery or other middleman to find potential buyers. Software developers can rent their skills to anyone willing to pay for them. Requiring American entrepreneurs to determine the identity of their payers within a pseudonymous payment system could reduce their access to that system.

Second, there is no third-party intermediary required to collect information from transacting parties to execute a blockchain transaction; hence, there is no central server storing user data that is susceptible to hacks. Section 6050I would change that by deputizing taxpayers to collect personal information from others that would encourage the proliferation of “information honeypots” ripe for exploitation by hackers.

Finally, Section 6050I forces Americans to reveal their personal information to others. Associating an American’s public key with their identity gives the world access to every on-chain transaction the American has engaged in, potentially exposing intimate details about them. That forced exposure is not only bad policy; it also raises serious constitutional questions.¹⁴

IV. Congress should explicitly extend the application of Section 1058 to actively traded fungible tokens.

A significant amount of crypto activity involves a “loan” of crypto tokens to a third party or software protocol in exchange for an interest-like return and the right to acquire identical tokens in the future.¹⁵ For example, in delegated staking arrangements, taxpayers transfer tokens to a service provider, who stakes the tokens and passes staking rewards through to them. Similarly, in some “DeFi staking” transactions, taxpayers transfer tokens to a software protocol, which uses the tokens programmatically (e.g., by lending them out on an overcollateralized basis) and passes yield through to the taxpayers.¹⁶ In each case, the taxpayers can acquire identical tokens from the service provider or software in the future, subject to a reasonable delay imposed by the relevant protocol’s design to ensure an orderly reduction of its liquidity.¹⁷

Taxpayers generally take the position that “crypto loans” of the type described above do not trigger taxable dispositions of their tokens, either because: (1) no tax transfer has actually taken place (if the “borrower” is merely software); (2) the “borrower” is acting as the transferor’s agent; or (3) a deferred exchange of property for identical property is not a taxable event under

¹⁴ Coin Center outlines those arguments in its own response to your request for comments. See Coin Center’s Letter to Senate Finance Committee (Aug. 21, 2023), <https://www.coincenter.org/app/uploads/2023/08/Coin-Center-Response-to-WydenCrapo-Tax-RFI-Aug-2023.pdf>.

¹⁵ See Miller Whitehouse-Levine and Amanda Tuminelli, Response to Open Consultation: The Taxation of Decentralised Finance (DeFi) Involving the Lending and Staking of Cryptoassets (June 2023), *available at* https://www.defieducationfund.org/_files/ugd/84ba66_e73f5656c9a047788521cf09259db7a4.pdf.

¹⁶ DeFi staking is different from consensus-layer staking because it involves an app-specific activity instead of an activity that maintains and secures a blockchain.

¹⁷ In DeFi protocols, the transferor might receive a bailment token representing their claim. That token, itself, might be transferable. A sale of the bailment token is decidedly a tax event.

traditional tax principles.¹⁸ Assuming no taxable disposition, the crypto “lender” typically includes the yield credited to them as ordinary income on a current basis.¹⁹ We believe Section 1058 should be modernized to confirm the appropriateness of that position.

Liquidity is essential to the orderly functioning of financial markets. Congress enacted Section 1058 to codify a longstanding recognition, reflected in previous administrative guidance, that the liquidity created by the securities lending market would be impaired if loans of securities were tax events.²⁰ The same clarity should be accorded today’s *digital* financial markets. A contrary position would require crypto lenders to treat their loans as installment sales and each yield payment as part capital gain or loss and part recovery of basis.

Unfortunately, Section 1058, by its terms, applies only to stock, debt, and options.²¹ When Section 1058 was enacted, the market for lending digital assets would not exist for another 40 years. Section 1058 confirms loans of securities do not give rise to a tax event if, in general, they (1) provide for the return of identical securities, (2) pass through all distributions the owner is “entitled” to receive, and (3) do not reduce the lender’s risk or opportunity for gain on the securities. The requirements in clauses (1)-(3) appear in Section 1058(b).

Section 1058 should be modified to apply to fungible digital assets, or “virtual currencies,” that are actively traded within the meaning of Section 1092(d) (i.e., for which there is an established securities market),²² so long as the following requirements are satisfied:

1. *The taxpayer is entitled, either contractually or under the terms of a transferee software protocol, to receive identical virtual currency within a reasonable time after demand (subject to reasonable delays).*

This requirement modifies the requirement in Section 1058(b)(1) to account for the automated nature of some crypto lending transactions. We would welcome further discussions as to what types of delays are “reasonable,” understanding that reasonableness might change with technological advances.

2. *The taxpayer is entitled, either contractually or under the terms of a transferee software protocol, to a current yield whose effect is to compensate the taxpayer for their temporary surrender of the virtual currency.*

This requirement is intended to carve out deposits of tokens in exchange for so-called “non-rebasing tokens” that represent fractionalized interests in a growing pool of assets.

¹⁸ See section 1001 (an exchange of property for property not “materially different in kind or in extent” is not taxable).

¹⁹ In the event Congress exempts staking rewards from upfront taxation, it would be worth considering whether a similar exemption should apply to yield under a delegated staking arrangement. We would be happy to discuss the relevant considerations with you.

²⁰ GCM 36948 (1976); S. Rep. No. 95-762, 1978-2 C.B. 357 (Senate Finance Committee Report on Pub. L. No. 95-345 (1978)).

²¹ See section 1058(a); section 1236(c).

²² Reg. section 1.1092(d)-1(a).

We believe staking virtual currency in exchange for non-rebasing tokens raises additional tax complexities that should be the subject matter of further study by the IRS.²³

Our proposal eliminates the requirement in current Section 1058(b)(2) for distributions to be passed through to the transferor, because virtual currencies are not contractual constructs that “entitle” their holders to distributions (as is the case with stock and debt). Moreover, any “new” property credited to a holder of virtual currency (e.g., as a result of an “airdrop”) often are *de minimis* in value and promotional in nature. We do not believe the tax treatment of a crypto “loan” as a sale or nontaxable disposition should turn on how that property is shared among the parties. We would welcome the opportunity to help the IRS identify situations where a virtual currency loan’s failure to “pass through” assets credited to the holder is inconsistent with the purposes of nonrecognition.

3. *The transaction does reduce the taxpayer’s risk or opportunity for gain on the transferred virtual currency.*

This requirement tracks Section 1058(b)(3).

Our proposal is limited to actively traded virtual currencies because those are the kind of crypto tokens whose frictionless transfer under delegation and staking transactions is essential to the orderly functioning of an on-chain financial ecosystem.

Section 1058(b)(4) gives the IRS significant discretion to ensure that a putative securities loan does not undermine the policy underlying Section 1058. We think the same approach could be applied to loans of digital assets, and we would welcome the opportunity to have an open dialogue with the IRS about the rapidly developing market for those loans.

Modernizing Section 1058 would give taxpayers who transact in digital assets greater certainty about their taxes, encourage orderly markets, and reduce the administrative complexity that would otherwise result if token delegation or staking transactions were treated as installment sales that require yield payments to be bifurcated into capital gain or loss and basis recovery.

V. Congress should be cautious of applying the wash sale rules to digital assets.

The wash sale rules of Section 1091 limit the ability of taxpayers to claim a loss on a sale of “stocks or securities” if they acquire substantially identical property within 30 days.²⁴ Under current law, the rules do not apply to foreign currencies or other commodities.²⁵

²³ See, e.g., Jason Schwartz, *supra* (positing that staking in exchange for rebasing tokens is a tax event, even if staking in exchange for nonrebasing bailment tokens is not).

²⁴ See section 1091(a).

²⁵ See section 1091(a) (wash sale rules apply only to stocks, securities, and options thereon); Revenue Ruling 74-218 (wash sale rules do not apply to foreign currencies).

Crypto is different from stock in that crypto is often used as a currency. Taxpayers who spend crypto as currency frequently acquire identical crypto tokens within 30 days of a payment for valid non-tax reasons. The wash sale rules should not apply to those taxpayers, since they were intended to address only tax-motivated transactions.²⁶

We recognize that many taxpayers invest in digital assets solely for speculation or as a store of value, and “harvest” their built-in losses at the end of a year. Congress might liken those taxpayers to passive stock investors, who are subject to the wash sale rules. However, any expansion of the wash sale rules to digital assets should be effectuated in a way that does not punish taxpayers for using crypto to make payments.²⁷

One possible approach might be to expand the applicability of the mark-to-market election under Section 475(e)-(f) to “investors” in actively traded virtual currency. Currently, the election under Section 475(e)-(f) applies only to “dealers” and “traders” in actively traded commodities. Investors who elect to mark-to-market their virtual currency each year and pay tax at ordinary rates on its appreciation would be exempt from the application of the wash sale rules, just like taxpayers who mark-to-market their securities under current law.

* * *

We appreciate your consideration of our observations and recommendations. If you have any questions or comments regarding this letter, please feel free to contact us.

Sincerely,



Lizandro Pieper
Policy Associate
DeFi Education Fund

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

²⁶ See S. Rep. 67-275, 67th Cong., 1st Sess. (Sept. 26, 1921), *available at* <https://www.finance.senate.gov/imo/media/doc/RPT67-275.pdf> (wash sale rules intended “to prevent evasion” through “fictitious exchanges”).

²⁷ Exempting taxpayers who use crypto in a “trade or business” would be too narrow, since spending crypto for consumptive purposes typically should not cause a taxpayer to be a “trader.”