



U.S. Federal Income Tax Analysis of Liquid Staking

By Proof of Stake Alliance

INTRODUCTION

This white paper provides an overview of “liquid staking,” a novel technological solution to a liquidity constraint prevalent across proof-of-stake blockchain networks, and considers whether the exchange of cryptoassets for receipt tokens (“**Receipt Tokens**”) issued by liquid staking technologies to evidence legal and beneficial ownership of staked cryptoassets should be treated as a taxable transaction for U.S. federal income tax purposes.

This white paper has been prepared on behalf of the Proof of Stake Alliance (“**POSA**”). POSA is a nonprofit industry alliance whose members include the leading enterprises that advance or service existing protocols that are built on proof-of-stake technology. A more energy efficient method for validating transactions, proof of stake, is not only continuing to grow as a share of the overall blockchain market, but is also the preferred method for emerging blockchain applications. For example, 19 of the 20 largest smart contract platforms are powered by blockchains utilizing the proof-of-stake method for validating transactions, including blockchain networks like Ethereum, Solana, Cardano, Tezos, Polkadot and Avalanche. POSA’s goal is to foster increased adoption of proof-of-stake blockchain networks in the United States. The continued development of liquid staking as a technological solution to liquidity constraints associated with proof-of-stake blockchain networks advances POSA’s goal of increasing the adoption of such blockchain networks.

OVERVIEW OF LIQUID STAKING

What Is Staking?

Blockchains are peer-to-peer networks that incorporate a mechanism design and cryptography to enable users to transact without needing to trust one another or any intermediary.¹ These networks require a distributed group of users to operate computers, known as “nodes,” which run all or part of the software necessary for the system to function because it has no central operator.

Each blockchain’s underlying code incorporates a method for validating transactions called a “consensus algorithm” to incentivize nodes to contribute valuable resources to the blockchain to provide transaction settlement assurances to the network’s users.² The consensus algorithm ensures that each node will be rewarded with an amount of a digitally native resource – a cryptoasset – in accordance with the rules of the algorithm, for so long as the node remains online and operates in accordance with the blockchain’s technical requirements (“Network Rewards”). The two most common types of consensus algorithms are proof of work and proof of stake.³

* Developed by the Proof of Stake Alliance’s Liquid Staking Working Group, composed of members from over 10 industry organizations, co-chaired by representatives from Alluvial and Lido, and legal advisers from Willkie Farr & Gallagher LLP.

¹ Shawn Bayern, *Of Bitcoins, Independently Wealthy Software, and the Zero-Member LLC*, 108 Nw. L. Rev. 1485, 1488 (2014).

² “Settlement assurances” refers to “a system’s ability to grant recipients confidence that an inbound transaction will not be reversed.” Nic Carter, *It’s the settlement assurances, stupid* (July 22, 2019), available at https://medium.com/@nic_carter/its-the-settlement-assurances-stupid-5dcd1c3f4e41.

³ Darren J. Sandler, *Citrus Groves in the Cloud: Is Cryptocurrency Cloud Mining A Security?*, 34 Santa Clara High Tech. L.J. 250, 256 (2018).

Blockchains that utilize proof of work, such as Bitcoin, rely on nodes to solve computationally challenging math problems using an application-specific machine that is powered by electricity.⁴ Each node competes to solve a math problem using trial and error until one finds a solution in what is known as a winning “nonce.”⁵ The first node to solve the math problem and prove it by incorporating the solution into a new “block” of validated transaction information is rewarded with a predetermined amount of the blockchain’s native cryptoasset. The reward acts to incentivize node operators to invest in the most powerful machines available, in order to perform more of the calculations required to win the opportunity to post a new block of transactions – machines that typically require significant energy to power their use.⁶

In contrast, blockchains that utilize proof of stake⁷ require node operators, known as “validators,” to “stake” their cryptoassets to operate a validator node and thereby secure the blockchain network.⁸ Unlike proof-of-work mining, proof-of-stake validating does not require energy-demanding hardware that is often prohibitively expensive. Validators are generally able to run the validator node software client on a basic laptop with a minimum amount of the blockchain network’s native cryptoasset to stake.⁹ The validator’s staked cryptoassets function as collateral that is subject to destruction or “slashing” in the event that the validator misbehaves.¹⁰ For example, if a validator on the Ethereum blockchain makes an incorrect attestation by voting for the incorrect source block, target block or head block, or misses an attestation opportunity, the validator will suffer a slashing penalty that is equal to the amount of Network Rewards that the validator would have received had the validator submitted the attestation correctly.¹¹ Whereas the proof-of-work algorithm randomly selects a “miner” to annex the next block based on its calculations, or “work,” the proof-of-stake algorithm randomly selects a “validator” to create the next block based on its share of the staked tokens. The odds of selection increase linearly the more cryptoassets the validator stakes.¹²

Whereas nodes on a proof-of-work blockchain effectively secure the blockchain by contributing scarce computing power in validating transactions, nodes on a proof-of-stake blockchain secure the blockchain by placing scarce cryptoassets at risk of slashing in connection with their validation activities. As more validators stake more cryptoassets, it becomes more difficult for a malicious actor to obtain a sufficient amount of cryptoassets to attack the network. Validators are generally free to withdraw their stake, including any Network Rewards earned by the validator, at any time following a minimum staking period, such as two weeks, but in some circumstances the cryptoassets may remain locked after withdrawal for a brief unbonding period.

As with proof-of-work, validators on proof-of-stake blockchains acquire Network Rewards, also known as “block rewards.” In the case of proof-of-stake blockchains, the probability that a validator will be selected to create a new

⁴ Satoshi Nakamoto, *Bitcoin: A Peer-to-Peer Electronic Cash System* (Oct. 31, 2008), available at <https://bitcoin.org/bitcoin.pdf>.

⁵ Kevin Hotchkiss, *With Great Power Comes Great (Eco) Responsibility – How Blockchain Is Bad for the Environment*, Geo. Envtl. L. Rev. 1 (2019).

⁶ *Id.* at 210.

⁷ Some blockchains incorporate a variant of the proof-of-stake consensus mechanism, called “delegated proof of stake,” which enables users to elect delegates to validate blocks on their behalf by allocating their cryptoassets to a “staking pool” associated with a particular delegate. Parma Bains, *Blockchain Consensus Mechanisms: A Primer for Supervisors*, International Monetary Fund (Jan. 2022), available at <https://www.imf.org/-/media/Files/Publications/FTN063/2022/English/FTNEA2022003.ashx>.

⁸ Vitalik Buterin, *A Proof of Stake Design Philosophy* (Dec. 29, 2016), available at https://vitalik.ca/general/2016/12/29/pos_design.html.

⁹ “GPU mining and ASIC mining . . . require huge amounts of electricity consumption, expensive hardware purchases and large warehouses. PoS staking, on the other hand, can be done on an unassuming laptop” Vitalik Buterin, *Why Proof of Stake?* (Nov. 6, 2020), available at <https://vitalik.ca/general/2020/11/06/pos2020.html>.

¹⁰ Validator behavior that may result in slashing includes downtime (*i.e.*, failure to sign transactions for a period of time) and double-signing (*i.e.*, signing two blocks at the same block height).

¹¹ Blocknative, *A Staker’s Guide to Ethereum Slashing & Other Penalties* (Oct. 1, 2022), available at <https://www.blocknative.com/blog/an-ethereum-stakers-guide-to-slashing-other-penalties>.

¹² Cong T. Nguyen et al., *Proof-of-Stake Consensus Mechanisms for Future Blockchain Networks: Fundamentals, Applications and Opportunities*, Digital Object Identifier 10.1109/ACCESS.2019.2925010 (June 26, 2019).

block (and the associated reward tokens) correlates to the validator's stake amount.¹³ Thus, there is an incentive for validators to have an increased stake of cryptoassets insofar as the stake amount, among other factors, will affect the probability that the validator is selected to verify the transactions and earn Network Rewards when a new block is added to the blockchain.

The Proof-of-Stake Landscape

Although the proof-of-work method for validating transactions continues to power Bitcoin, the longest-running blockchain network, proof of stake is gaining significant adoption.¹⁴ The proof-of-work method has been subject to criticism for the high capital costs of the application-specific machines required to perform computations and the amount of electricity required to keep those machines online.¹⁵ Recently, governments have weighed prohibitions, moratoria and other restrictions on proof-of-work mining due to environmental concerns with excess electricity usage.¹⁶

Most blockchains launched in recent years incorporate proof of stake. Recently, Ethereum transitioned from a proof-of-work blockchain to a proof-of-stake blockchain in a transition called the “Merge.”¹⁷ As a result of the Merge, the Ethereum mainnet, which incorporated proof of work, “merged” with a separate proof-of-stake side-chain called the “Beacon Chain” with the result that Ethereum's mainnet now operates solely via proof of stake.¹⁸

For roughly one year prior to the Merge, Ethereum users were able to stake ether (“ETH”) via the Beacon Chain to establish an immediate level of security for the blockchain upon its full transition to proof of stake.¹⁹ Consistent with other proof-of-stake blockchains, Ethereum becomes stronger and less vulnerable to attacks as more ETH is staked.²⁰ A user's staked ETH remains locked until withdrawal capabilities are functional on Ethereum, which is estimated to occur in approximately six months.

While the Merge was highly covered and analyzed given Ethereum's status as the second-largest blockchain, nearly all newer blockchains have been built using some form of proof-of-stake method of validation due to the inherent energy and operational efficiencies. The rise of proof-of-stake networks has fostered the growth of an entire American-based ecosystem of developers and companies involved in its development. Firms that facilitate staking, such as Figment, Blockdaemon and Coinbase Cloud, have created billions of dollars of value, employ hundreds of

¹³ Strictly speaking, the terms “proof of work” and “proof of stake” refer to Sybil-resistant methods of randomly selecting validators, and the consensus mechanism determines agreement on which new blocks become a part of the blockchain. “From an algorithmic perspective, there are two major types [of proof-of-stake mechanisms]: chain-based proof of stake and BFT-style proof of stake. In chain-based proof of stake, the algorithm pseudo-randomly selects a validator during each time slot (e.g. every period of 10 seconds might be a time slot), and assigns that validator the right to create a single block, and this block must point to some previous block (normally the block at the end of the previously longest chain), and so over time most blocks converge into a single constantly growing chain. In BFT-style proof of stake, validators are randomly assigned the right to propose blocks, but agreeing on which block is canonical is done through a multi-round process where every validator sends a ‘vote’ for some specific block during each round, and at the end of the process all (honest and online) validators permanently agree on whether or not any given block is part of the chain.” Vitalik Buterin, Proof of Stake FAQ (Dec. 31, 2017), available at https://vitalik.ca/general/2017/12/31/pos_faq.html#what-about-capital-lockup-costs.

¹⁴ Felix Lutsch, *Liquid Staking Research Report*, Chorus One, p. 3 (2020).

¹⁵ Environmental Working Group, Earthjustice, Greenpeace, League of Conservation Voters, Sierra Club, Friends of the Earth, Seneca Lake Guardian, Milwaukee Riverkeeper, Comment Letter on Energy and Climate Implications of Digital Assets. 87 Fed. Reg. 17,105 (Mar. 25, 2022), available at https://static.ewg.org/upload/pdf/5.9.22_Final_EO_National_Comments2.pdf?_ga=2.127981004.1313037002.1652199398-145893579.1648558628.

¹⁶ See, e.g., New York S6486D (2021-2022).

¹⁷ *The Merge*, Ethereum Foundation (July 25, 2022), available at <https://ethereum.org/en/upgrades/merge/>.

¹⁸ *Id.*

¹⁹ *What is staking*, Ethereum Foundation (July 14, 2022), available at <https://ethereum.org/en/staking/#what-is-staking>.

²⁰ *Id.*

people and have generated significant investment in the United States.²¹ Additionally, proof of stake democratizes participation in these blockchain networks, as anyone who holds cryptoassets native to the network may participate in staking. Network Rewards from staking are shared among stakers, whereas, in contrast to proof of work, gains flow to miners that are capable of significant capital investment in hardware and electricity. An entire ecosystem of web3 applications is also being built on proof-of-stake networks. The continued growth of this sector within the crypto ecosystem demonstrates the growing need for legal consensus on how proof-of-stake technologies are classified and regulated.

What Is Liquid Staking?

“Liquid staking” enhances the security of proof-of-stake blockchains while providing additional functionality for stakers. When a blockchain user stakes cryptoassets directly by operating a proof-of-stake validator node, some or all of the user’s staked cryptoassets typically become locked and non-transferable for as long as the cryptoassets remain staked and until such time that the relevant blockchain’s “unbonding period” or other waiting time requirement concludes. As a result, such users immediately lose the liquidity associated with their staked cryptoassets. A solution to the liquidity constraints associated with staking has recently emerged in the form of liquid staking, whereby users who stake their cryptoassets (“**Liquid Stakers**” and each, a “**Liquid Staker**”) receive transferable Receipt Tokens that evidence ownership of (i) the staked cryptoassets, and (ii) Network Rewards that accrue in respect of such staked cryptoassets.

With liquid staking, Liquid Stakers typically stake cryptoassets through a decentralized liquid staking protocol or staking-as-a-service service provider (each as discussed below) and receive Receipt Tokens evidencing their legal and beneficial ownership of the associated staked cryptoassets. Receipt Tokens are generally transferable and usable within decentralized applications, allowing Liquid Stakers to transact with their staked cryptoassets without having to withdraw them from staking.

In a typical liquid staking protocol or service provider arrangement, Network Rewards and slashing losses accrue to (or are deducted from) staked cryptoassets in one of two constructs. In the first construct, a Liquid Staker’s Receipt Tokens evidence ownership of more or fewer cryptoassets (each, a “**Static Receipt Token**”) as and when Network Rewards or losses accrue. In the other construct, a Liquid Staker receives additional Receipt Tokens or loses Receipt Tokens (each, a “**Dynamic Receipt Token**”) as and when Network Rewards or losses accrue. In either construct, however, a Liquid Staker may redeem the Receipt Tokens with the protocol or service provider for the associated cryptoassets at any time, subject to any waiting period imposed by the relevant blockchain. Alternatively, a Liquid Staker may transfer its Receipt Tokens to a third party.

Receipt Tokens evidence ownership of intangible commodities in the digital world in a substantially identical manner that warehouse receipts, bills of lading, dock warrants and other documents of title evidence title to tangible commodities in the physical world. For example, a person may own gold bullion or livestock but prefer to store it with a depository warehouse or syndicate for safekeeping. In return for depositing the gold bullion or livestock at the depository warehouse or syndicate, the depositor receives a document of title that evidences the

²¹ See Coindesk, “Crypto Infrastructure Firm Blockdaemon Raises \$207M at \$3.25B Valuation” (Jan. 26, 2022), available at <https://www.coindesk.com/business/2022/01/26/crypto-infrastructure-firm-blockdaemon-raises-207m-at-325b-valuation/>; and The Block, “Coinbase Cloud has \$30 billion in crypto assets staked across 25 blockchains” (Dec. 2, 2021), available at <https://www.theblock.co/linked/126104/coinbase-clients-staking-more-than-30-billion-crypto-assets>.

depositor's ownership to the commodity that is being stored. Thereafter, the depositor can transfer the document of title to a counterparty in a commercial transaction or may use it to satisfy certain delivery obligations as it demonstrates that the person delivering it to the depository warehouse or syndicate has ownership of the actual underlying commodity. The counterparty may then take delivery of the commodity by presenting the document of title to the depository warehouse or syndicate as it represents legal and beneficial ownership of such commodity. Similarly, by redeeming Receipt Tokens, the holder may take delivery of the staked cryptoassets as the Receipt Tokens represent legal and beneficial ownership of such staked cryptoassets.

Types of Liquid Staking Arrangements

As noted above, Liquid Stakers generally stake cryptoassets through one of two models. Under the first model, Liquid Stakers allocate cryptoassets to a decentralized smart contract protocol that stakes cryptoassets on a Liquid Staker's behalf and issues corresponding Receipt Tokens in a programmatic manner (the "**Protocol Model**").²² Each Receipt Token functions as a native title document that evidences the Receipt Token holder's ownership of staked cryptoassets. The generation, issuance and redemption of the Receipt Tokens is performed automatically via smart contract code without the need for or reliance upon a third-party intermediary. For example, at the election of a Liquid Staker, the protocol will programmatically redeem the Receipt Tokens for the corresponding staked cryptoassets (taking into account any accrued Network Rewards or slashing losses). The Protocol Model is currently utilized across a number of blockchains.²³

In the second model, Liquid Stakers enter into a bilateral relationship with a staking-as-a-service provider, such as a centralized exchange, governed by a services agreement (the "**Provider Model**"). Under the Provider Model, Liquid Stakers deposit cryptoassets to the service provider's digital wallet and the service provider stakes the cryptoassets on the Liquid Stakers' behalf. Upon receipt of a Liquid Staker's cryptoassets or a Liquid Staker's request for Receipt Tokens, the service provider will generate Receipt Tokens that evidence ownership of the staked cryptoassets and will issue the Receipt Tokens to the Liquid Staker. The service provider then stands ready to redeem each Receipt Token for a corresponding amount of cryptoassets (taking into account any accrued Network Rewards or slashing losses) when the Liquid Staker tenders the Receipt Tokens to the service provider, just as warehousemen stand ready to redeem physical goods when a depositor tenders a warehouse receipt.

In both models, the relationship of a Liquid Staker and the protocol or service provider, as applicable, resembles a bailment relationship. Although the requirements of a common law bailment vary from state to state, a bailment generally arises when an individual or company deposits goods in a warehouse (or an electronic equivalent) and there is an express or implied agreement that the warehouse will later return or dispose of the goods in accordance with the depositor's instructions.²⁴ In such circumstances, the individual or company is the bailor and the warehouse acts as bailee.²⁵ It is well established that a bailment relationship exists when an individual or company deposits goods (living or otherwise) such as grain, timber, lumber or livestock for the purpose of safekeeping such

²² See, e.g., Lido Finance, *Introducing Lido*, Medium (Oct. 15, 2022), <https://lidofinance.medium.com/introducing-lido-8aee079cae8e>; and David Rugendyke, *Rocket Pool – Staker's Guide*, Medium (July 30, 2021), available at <https://medium.com/rocket-pool/rocket-pool-stakers-guide-2c5c324b1749>.

²³ *Top 10 Non-custodial Proof of Stake Providers ranked by Staked Value*, Finrate AG (July 28, 2022), available at <https://www.stakingrewards.com/global-charts/top-10-non-custodial-proof-of-stake-providers-ranked-by-staked-value/>.

²⁴ See *Lionberger v. United States*, 371 F.2d 831, 840 (Ct. Cl. 1967) ("A bailment relationship is said to arise where an owner, while retaining title, delivers personality to another for some particular purpose upon an express or implied contract. The relationship includes a return of the goods to the owner or a subsequent disposition in accordance with his instructions.").

²⁵ Practical Law Commercial Transactions, *Warehousing*, Practical Law Practice Note 0-570-3226.

goods.²⁶ The bailee typically provides the bailor with a document of title memorializing that the bailor has deposited goods with the bailee but the bailor remains the legal and beneficial owner of the goods (and any offspring or byproducts thereof).²⁷ State laws generally permit documents of title to be issued in electronic format, such as in the form of a cryptoasset Receipt Token.²⁸

ANALYSIS OF EXCHANGE OF CRYPTOASSETS FOR RECEIPT TOKENS UNDER U.S. FEDERAL INCOME TAX LAWS AND REGULATIONS

Framework for Tax Analysis

The U.S. Treasury Department (“Treasury”) and U.S. Internal Revenue Service (“IRS”) have issued only limited guidance on the tax treatment of virtual currency transactions²⁹ and have issued no guidance on liquid staking. As a result, general tax principles must be applied to determine the tax treatment of liquid staking.

Under general tax principles, entering into a liquid staking arrangement will be a taxable event only if there is a sale or other disposition of cryptoassets in exchange for property that differs materially in kind or extent.³⁰ First, the deposit of property with a custodian or agent does not result in a sale or disposition because no transfer of ownership occurs. Just as a person storing property with a depository warehouse or syndicate receives a document of title that facilitates transfer of the depositor’s retained ownership, a Liquid Staker receives Receipt Tokens evidencing ownership of the deposited cryptoassets. The receipt of Receipt Tokens evidencing ownership of the same type of cryptoasset (in staked form) will not result in a taxable transaction unless the exchange causes a person other than the Liquid Staker to be considered the owner of the cryptoassets for U.S. federal income tax purposes. No such transfer of tax ownership occurs because the Receipt Tokens merely evidence the Liquid Staker’s legal and beneficial ownership of staked cryptoassets so that such rights become transferable.

It may be possible to view certain liquid staking arrangements as involving more than a custodial or agency arrangement, where the Liquid Staker exchanges cryptoassets for new property in the form of the Receipt

²⁶ See, e.g., *Sexton v. Graham*, 53 Iowa 181, 4 N.W. 1090, 1095 (1880) (finding that “[w]here a warehouseman merely receives grain from several depositors with the understanding that it may be mixed in a common mass, and it is so mixed, the transaction is a bailment . . .” (citing *Cushing v. Breed*, 96 Mass. 376, 380 (1867))); *Chaffin v. State*, 5 Ga. App. 368, 63 S.E. 230 (1908) (timber and lumber); *Barron v. State*, 126 Ga. 92, 54 S.E. 812 (1906) (sheep).

²⁷ See *Bank of New York v. Amoco Oil Co.*, 35 F.3d 643, 652 (2d Cir. 1994) (finding a bailment relationship where a person deposits inventory with another person “in the regular course of business or financing” and the recipient provides the depositor with a document “evidencing that the person in possession of it is entitled to receive, hold and dispose of the document and the goods it covers”).

²⁸ See U.C.C. § 1-201(b)(16).

²⁹ Notice 2014-21, 2014-16 IRB 938 (general tax principles for property transactions apply to transactions using virtual currency); Rev. Rul. 2019-24, 2019-44 IRB 1004 (receipt of new cryptocurrency in airdrop following hard fork resulted in gross income); IRS “Frequently Asked Questions on Virtual Currency Transactions” (last updated March 23, 2022) (“IRS FAQs”), available at <https://www.irs.gov/individuals/international-taxpayers/frequently-asked-questions-on-virtual-currency-transactions>.

³⁰ See Treas. Reg. § 1.1001-1(a).

Tokens.³¹ Even if a transfer of tax ownership could be viewed as occurring, the exchange should not result in a “realization” of gain because the property received in the exchange (*i.e.*, the Receipt Tokens) does not differ “materially either in kind or in extent” from the original property (*i.e.*, the Liquid Staker’s cryptoassets).³²

These two criteria – whether there is a sale or other disposition and whether the property received in exchange differs materially in kind or extent – are discussed further below.

The discussion then turns to why a liquid staking protocol should not be treated as a separate entity for tax purposes and the difficulties that such treatment would entail. Liquid staking protocols lack the hallmark characteristics for separate entity treatment, in that the participants have no joint intent to conduct an enterprise, and the activities of the liquid staking protocol itself fall well short of the threshold of constituting a business.

Non-U.S. persons must face the additional questions of whether staking activities cause them to be engaged in a trade or business within the United States and, if so, whether the same analysis would apply to liquid staking. In general, a non-U.S. person is subject to U.S. tax in the same manner as a U.S. person on income that is effectively connected with the conduct of a trade or business within the United States. A non-U.S. person may be able to avoid being engaged in a U.S. trade or business if it conducts its staking activities outside the United States, although the activities of agents within the United States, including any partnership in which the non-U.S. person invests, must be taken into account. Even if a non-U.S. person is engaged in a U.S. trade or business, its income may not be subject to U.S. tax if the income is sourced outside the United States. These issues are beyond the scope of this white paper.

No Sale or Other Disposition

Participation in a liquid staking arrangement, whether under the Protocol Model or the Provider Model, does not result in a “sale or other disposition” and therefore does not give rise to a taxable event. For there to be a sale or disposition, there must be a transfer of benefits and burdens of owning the property—something that is simply not present in a liquid staking arrangement.

Courts and the IRS have generally examined which party has the “benefits and burdens” of ownership to determine whether tax ownership has been transferred.³³ With financial assets, this analysis generally looks at which party has (1) the risk of loss and opportunity for gain, (2) the right to current income from the property, (3) legal title, (4) the right to exercise voting rights, and (5) the ability to control the disposition of the asset.³⁴ Under this framework, a Liquid Staker should continue to be the owner of the staked cryptoassets for federal tax purposes following receipt of the Receipt Tokens. Thus, the deposit of the cryptoassets and the receipt of the Receipt Tokens should not be a taxable transaction because no transfer has occurred.

As noted above, Receipt Tokens are cryptographic records that evidence a Liquid Staker’s legal and beneficial ownership of staked cryptoassets in order to facilitate transfers, and are comparable to custodial arrangements such as warehouse receipts, bills of lading and dock warrants for physical commodities. Depending on the liquid

³¹ See IRS FAQs A16 (“If you exchange virtual currency held as a capital asset for other property, including for goods or for another virtual currency, you will recognize a capital gain or loss.”).

³² Treas. Reg. § 1.1001-1(a).

³³ See, e.g., *Rochlis v. United States*, 146 Fed. Cl. 743 (2020); *Grodt & McKay Realty, Inc. v. Comm’r*, 77 T.C. 1221, 1237 (1981).

³⁴ See, e.g., *H.J. Heinz Co. v. United States*, 76 Fed. Cl. 570 (2007); *Anderson v. Comm’r*, 92 T.C. 138 (1989); Rev. Rul. 82-144, 1982-2 CB 34; TAM 200244009 (Nov. 1, 2002).

staking arrangement, the Receipt Tokens may correspond on a one-to-one basis with the staked cryptoassets or a portion of cryptoassets maintained within a pool or fungible bulk.³⁵ Similar to a ticket that one receives after checking one's coat at a coat check, which represents one's claim on a coat, Receipt Tokens merely represent a claim on the Liquid Staker's staked cryptoassets rather than a new entitlement. Relatedly, when one person transfers a physical commodity to another party who has the obligation to return identical property, the first person retains tax ownership and the recipient is merely a bailee.³⁶

Although the IRS has never issued guidance on the tax treatment of liquid staking, the authorities dealing with American Depositary Receipts (“**ADRs**”) support treating the Liquid Staker as the continuing tax owner of the staked cryptoassets. An ADR is a receipt issued by a bank or other custodian representing rights to a deposited asset that would be difficult for a U.S. person to hold directly. The ADR may be transferred, entitles its holder to income from the underlying asset, and allows the holder to exercise voting rights with respect to the underlying asset. The holder may redeem the ADR for the underlying asset at any time, and the bank or custodian may not dispose of the underlying asset. The IRS has held that the holder of the ADR is treated as the owner of the underlying asset for tax purposes.³⁷

The tax principles that apply in these IRS authorities apply with equal force to liquid staking.³⁸ Like ADRs, Receipt Tokens allow a Liquid Staker to transfer its rights in the underlying cryptoassets, to earn any Network Rewards with respect to those cryptoassets, and to reacquire the staked cryptoassets. As noted above, in the context of liquid staking, Receipt Tokens operate as a title instrument to staked cryptoassets. The Liquid Staker retains all of the rights indicating tax ownership and should continue to be treated as the tax owner. Thus, the deposit of cryptoassets and the receipt of Receipt Tokens should be viewed as a non-taxable custodial or agency arrangement and not as a taxable transaction.

Receipt Tokens Do Not Differ Materially in Kind or Extent from Staked Cryptoassets

One of the core principles of U.S. federal income taxation is the realization requirement. As the Supreme Court has explained, “[r]ather than assessing tax liability on the basis of annual fluctuations in the value of a taxpayer's property, the Internal Revenue Code defers the tax consequences of a gain or loss in property value until the taxpayer ‘realizes’ the gain or loss.”³⁹ Certain liquid staking arrangements arguably involve more than a custodial or agency arrangement, because the Liquid Staker can be viewed as exchanging cryptoassets for new property in the form of the Receipt Tokens. This may be the case, for example, where the cryptoassets of different Liquid Stakers

³⁵ Liquid staking arrangements that can be viewed as a pool are discussed further in Section III.C below.

³⁶ Gen. Couns. Mem. 35,183 (Jan. 2, 1973) (title never vests in manufacturer that must return product in refined form to original party). The relationship is still a bailment if the manufacturer is entitled to retain a share of the manufactured article, or a share of net profits, as a fee, *see also* Rev. Rul. 65-218, 1965-2 CB 566; Rev. Rul. 72-271, 1972-1 CB 369 (obsoleted by Rev. Rul. 74-625, 1974-2 CB 407).

³⁷ *Id.*

³⁸ The IRS does not necessarily follow Securities and Exchange Commission and Commodity Futures Trading Commission (“**CFTC**”) determinations as to the meaning of terms under the Investment Company Act of 1940 and Commodities Exchange Act, *see, e.g.*, GCM 38994 (May 27, 1983) (treating futures contracts on government securities as securities for purposes of Section 851(b)(2), notwithstanding a CFTC conclusion to the contrary), and other agencies are not bound by IRS determinations.

³⁹ *Cottage Sav. Ass'n v. Comm'r*, 499 U.S. 554, 559 (1991).

are pooled and the Network Rewards accrue to the Receipt Tokens.⁴⁰ Even if a Liquid Staker can be viewed as relinquishing tax ownership of the cryptoassets in exchange for the Receipt Tokens, the exchange should not result in a “realization” of gain because the cryptoassets and the Receipt Tokens do not differ “materially either in kind or in extent.”⁴¹ Without a realization event, the Liquid Staker does not have a taxable transaction.⁴²

A material difference under the realization requirement means that the exchanged properties embody legally distinct entitlements, such as debt instruments issued by different borrowers or shares of stock issued by different corporations.⁴³ This standard is not met under the Protocol Model because the Receipt Tokens correspond exactly to the staked cryptoassets and thus do not differ from them materially in kind or extent. The same result holds in the Provider Model, where the Receipt Tokens evidence ownership of a number of fungible tokens maintained within a smart contract and a corresponding number of new tokens created in the staking process. The staked and newly created tokens in the smart contract are fungible and do not differ from each other in kind or extent.

This treatment is reinforced by IRS guidance addressing loans of fungible units of a particular security. Since 1978, taxpayers entering into securities loans have been able to rely on non-recognition rules in Section 1058 of the Internal Revenue Code of 1986, as amended (the “Code”).⁴⁴ In a securities lending transaction, the owner of a security transfers the security to a counterparty, who is obliged to return substantially similar property and to make payments to the securities lender equal to any income received on the property (such as dividends or interest). The counterparty will typically sell the borrowed security short and later repurchase the same security on the market (ideally at a lower price) to be returned to the securities lender. Section 1058 applies only to loans of “securities,” defined generally as debt instruments and stock. Loans of non-security property, such as partnership interests or cryptoassets, can rely on authorities issued before the enactment of Section 1058, which treat lending transactions meeting certain requirements as non-realization events. Section 1058 is best understood as a safe harbor providing for non-recognition in transactions when gain would otherwise be recognized, but not requiring recognition for transactions outside its scope unless they would be taxable under general principles.⁴⁵

General Counsel Memorandum 36,948 (Dec. 10, 1976) concludes that gain is not realized in a typical securities lending transaction because the lender starts and ends the transaction with substantially identical property. “In the typical case where the broker-dealer satisfies his contractual obligation by delivering securities not differing materially in either kind or extent, there will be no realization of gain or loss under Code section 1001 because of Treas. Reg. section 1.1001-1(a).”⁴⁶ Proposed regulations under Section 1058, though never finalized, also support this approach by requiring gain or loss recognition in accordance with Section 1001 and its regulations if a securities lending transaction does not meet the requirements of Section 1058.⁴⁷ Consistent with the statute, this language

⁴⁰ See Jason Schwartz, *The Taxation of Decentralized Finance*, Tax Notes (Feb. 7, 2022) at 778.

⁴¹ Treas. Reg. § 1.1001-1(a); 26 U.S.C. § 1001(a).

⁴² A realized gain or loss is generally “recognized” – that is, taken into account in computing a taxpayer’s tax liability – unless a special rule provides for non-recognition. See, e.g., 26 U.S.C. §§ 351(a)(1), 721(a) (providing non-recognition on the contribution of property to a corporation or partnership, respectively).

⁴³ *Cottage Sav. Ass’n v. Comm’r*, supra note 39; *United States v. Phellis*, 257 U.S. 156, 173 (1921); *Marr v. United States*, 268 U.S. 536, 540-542 (1925); but see *Weiss v. Stearn*, 265 U.S. 242, 253-254 (1924) (no realization even when old shares are exchanged for new shares of the same corporation).

⁴⁴ “Section” references below are to the Code or the Treasury regulations issued thereunder.

⁴⁵ See, e.g., American Bar Association Tax Section, “Securities Loans Task Force Report on Securities Lending Transactions Governed by Section 1058” (Apr. 22, 1991) (“The final regulations should make clear that Section 1058 is a safe harbor from tax recognition and that whether a disposition of loaned securities occurs, resulting in the realization of income or loss, should be determined by reference to Section 1001 realization principles rather than by regulations promulgated under Section 1058.”).

⁴⁶ Gen. Couns. Mem. 36,948 (Dec. 10, 1976). Rev. Rul. 57-451, 1957-2 C.B. 295, also concludes that a securities loan does not result in gain recognition, by relying on a non-recognition provision for the exchange of corporate stock (section 1036) and without directly addressing whether a realization event occurs. As noted above, the transaction will generally be taxable for the securities borrower when it sells the securities.

⁴⁷ Prop. Treas. Reg. § 1.1058-1(e)(1).

indicates that a transaction failing to comply with Section 1058 is not automatically subject to tax, but rather must be analyzed under the general rules in Section 1001 to determine if gain or loss has been realized.

IRS rulings on changes to various types of securities also support treating a liquid staking exchange (*i.e.*, cryptoassets for Receipt Tokens) as a non-realization event. The conversion of bonds of one corporation into stock of a different corporation, or a change in the identity of the insured under an insurance policy, were treated as realization events because these resulted in a change in the fundamental substance of the original contract.⁴⁸ However, the IRS has ruled that no gain or loss is realized on the conversion of a convertible debt instrument into stock of the same corporation, or upon an investor's receipt of an in-kind distribution of property representing the investor's pro rata stake in an investment trust.⁴⁹

Separate Entity Treatment is Not Appropriate

A staking protocol should not be treated as a separate entity for tax purposes because it lacks the hallmark characteristics for entity treatment: two or more parties who jointly conduct and share the profits from an activity that constitutes a business.

A joint venture or other contractual arrangement may be treated as a separate entity for federal tax purposes, even where no entity exists under local law, only if the participants “carry on a trade, business, financial operation, or venture and divide the profits therefrom.”⁵⁰ This standard, set forth in the entity classification regulations, is based on decades of case law that developed on the issue, starting with *Commissioner v. Culbertson*,⁵¹ in which the Supreme Court stated that a partnership exists for tax purposes when, “considering all the facts . . . the parties in good faith and acting with a business purpose intend to join together in the present conduct of an enterprise.” Later cases and IRS guidance distilled this into an overriding test—the joint proprietary conduct of a business with the sharing of profits and losses.⁵²

A liquid staking protocol generally does not meet this test. The hallmark of a partnership is whether the parties actually intended to join together in the present conduct of an enterprise. Liquid Stakers could be anywhere in the world, most likely have never met or even communicated with each other, have not contracted with each other and have no legal rights or obligations vis-à-vis each other. Each participant incurs its own expenses and does not share Network Rewards with other participants. The protocol itself merely sets forth the rules that govern the

⁴⁸ Rev. Rul. 69-135, 1969-1 CB 198; Rev. Rul. 90-109, 1990-2 CB 191.

⁴⁹ Rev. Rul. 72-265, 1972-1 CB 222; Rev. Rul. 90-7, 1990-1 CB 153.

⁵⁰ Treas. Reg. § 301.7701-1(a). Similarly, a business or commercial trust, although cast in trust form, will be classified as a business entity if it is created by the beneficiaries as a device for carrying on a profit-making business which ordinarily would have been carried on through a business organization such as a partnership or corporation. Treas. Reg. § 301.7701-4(b).

⁵¹ 337 U.S. 733 (1949).

⁵² See *Luna v. Commissioner*, 42 T.C. 1067 (1964) (setting forth eight non-exclusive factors bearing on whether a partnership exists for tax purposes). See also, *e.g.*, LTR 7923075 (March 12, 1979) (joint manufacturers of jet engine who divided gross receipts from the sale of jointly marketed engines were not partners because they did not jointly share a net profit); FSA 1999-835 (management arrangement between U.S. insurance company acting as a “managing general agent” and four foreign insurance companies did not constitute a partnership, primarily because agent did not share in risk of loss, notwithstanding that agent received commissions based on net profits); TAM 199922014 (Feb. 12, 1999) (purchase of assets, provision of services and some profit sharing did not constitute a partnership). See also McKee, et al., *Federal Taxation of Partnerships and Partners* ¶ 3.02[2] (emphasizing that two or more of the persons must share profits as proprietors).

participants' staking activities, and the presence of a common rulebook does not cause the participants to jointly conduct a trade or business where the profits are divided therefrom.

Further, a liquid staking protocol is not a profitmaking business within the meaning of the income tax law. To have a business, the taxpayer's primary purpose for engaging in the activity must be for income or profit.⁵³ A liquid staking protocol, however, does not itself generate income, and each participant in the staking process can seek profit, or not, with the fruits of its activities. Treasury regulations provide a helpful analogy, stating that two or more persons who jointly construct a ditch merely to drain surface water from their properties have not created a separate entity for federal tax purposes.⁵⁴ The construction of the ditch is an improvement to the ecosystem that they share, but how each person makes use of that ditch is that person's own business.

Therefore, where a liquid staking protocol lacks two or more parties who jointly conduct and share the profits from an activity that constitutes a business, it should not comprise a separate entity under federal tax law.⁵⁵

In addition, viewing a liquid staking arrangement as a separate entity leads to complex and uncertain questions. Separate entity treatment would mean that a Liquid Staker should be viewed as exchanging the staked cryptoassets for equity interests in such an entity, and such an exchange would be a taxable event unless a non-recognition provision applied.⁵⁶ If non-U.S. law applies to a liquid staking arrangement, the deemed entity would be foreign and would default to partnership status; a foreign entity defaults to treatment as a corporation only if all members have limited liability "based solely on the statute or law pursuant to which the entity is organized."⁵⁷

Contributions of cryptoassets to a foreign partnership would likely qualify for non-recognition treatment and the deemed partnership might then need to issue tax reports (*i.e.*, Schedules K-1) to its U.S. members.⁵⁸ The entity could obtain a U.S. taxpayer identification number and elect to be treated as a corporation for U.S. tax purposes, or possibly could rely on rules that treat certain "publicly traded partnerships" as corporations for U.S. tax purposes.⁵⁹ U.S. persons would recognize gain but not loss on the contribution of assets to a foreign corporation in exchange for its stock.⁶⁰ A foreign corporation, however, would then face the question of whether it is a "passive foreign investment company" ("PFIC"), which turns on whether the cryptoassets produce or are held for the production of passive income.⁶¹ For U.S. taxpayers, PFIC treatment would create adverse tax consequences, which could be ameliorated if the PFIC, like a foreign partnership, made annual tax reports to its members.⁶² Treating a liquid staking arrangement as a tax non-entity that facilitates co-ownership would be a better approach, as discussed above, and avoid this thicket of issues.

⁵³ *Comm'r v. Groetzinger*, 480 U.S. 23, 35 (1987).

⁵⁴ Treas. Reg. § 301.7701-1(a)(2).

⁵⁵ In certain protocols, where participants' assets are pooled and they share proportionately in rewards and losses, the case for separate entity treatment may be stronger.

⁵⁶ See, *e.g.*, 26 U.S.C. §§ 351(a)(1), 721(a) (providing for non-recognition on the contribution of property to a corporation or partnership, respectively, in exchange for shares or interests in the entity).

⁵⁷ Treas. Reg. § 301.7701-3(b)(2)(ii).

⁵⁸ See 26 U.S.C. § 721(a); Treas. Reg. § 1.6031(a)-1(b)(1)(i) (a foreign partnership that has effectively connected income or U.S.-source income that is not effectively connected income generally must file a partnership return for its taxable year).

⁵⁹ Treas. Reg. § 301.7701-3(c). A partnership is a publicly traded partnership if interests in the partnership are traded on an established securities market, or readily tradable on a secondary market (or the substantial equivalent thereof). 26 U.S.C. § 7704(b). In determining whether partnership interests are "readily tradable," the regulations evince a bias against PTP status. For example, an entity providing liquidity through daily redemptions might not be treated as a PTP if interests in the partnership are not actually traded or redeemed, or are only traded or redeemed in stakes representing more than 2% of the total. Treas. Reg. §§ 1.7704-1(e)(2), -1(j).

⁶⁰ 26 U.S.C. §§ 351(a), 367(a).

⁶¹ 26 U.S.C. § 1297.

⁶² See 26 U.S.C. §§ 1291 (excess distributions and gain from PFIC stock treated as ordinary income and subject to interest charge); 1295 (if PFIC provides annual tax statements, shareholders may elect "qualified electing fund," or modified flow-through, treatment).

Other Tax Considerations

If a Liquid Staker does not have a taxable event as discussed above, the Liquid Staker must then grapple with the taxation of its continuing ownership of the staked cryptoassets, such as when Network Rewards (or losses) and any related expenses must be taken into account for tax purposes. The practical task of determining its share of these amounts can also present challenges, similar to tax reporting issues that arise throughout the cryptoasset ecosystem. Some of these issues would be avoided if the Network Rewards were taxed upon sale rather than receipt.⁶³ However, further IRS guidance or legislation may be needed to resolve these issues.

⁶³ See Rev. Rul. 77-176, 1977-1 C.B. 77 (miner in physical world has taxable income when ore is sold, not when it is mined); *Gamble v. Commissioner*, 68 T.C. 800 (1977) (owner of pregnant livestock has income when calf or foal is sold not born); Rev. Rul. 86-24, 1986-1 C.B. 80 (taxpayer's basis in calf at birth equals premium paid for cow's pregnancy); Rev. Rul. 79-431, 1979-2 C.B. 108 (frequent flier miles treated as discount coupons do not result in taxable income upon receipt and have a zero basis). *But see* New York State Bar Association Tax Section, "Report on Cryptocurrency and Other Fungible Digital Assets," April 18, 2022 (describing the arguments in favor of taxation upon sale but arguing that staking rewards should be taxed upon receipt).



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