HOT TOPIC

Digital assets

Accounting for staking activities

August 2022 (updated December 2024)[1]

This Hot Topic explores the accounting for staking activities by validators and delegators.

Introduction

Two KPMG Issues In-Depth provide a high-level overview of the accounting for digital assets that meet the definition of an intangible asset (hereafter, 'crypto intangible assets') under US GAAP:

- Accounting and reporting for crypto intangible assets; and
- Accounting for crypto intangible assets – investment companies.

In this Hot Topic, we explore the accounting for crypto intangible asset staking.

There is currently no explicit US GAAP that directly addresses the accounting for crypto intangible asset staking. In addition, the accounting for staking and many other digital asset-related activities, as well as the activities themselves, continue to evolve and can differ by blockchain. Therefore, the views we express herein may not be the only acceptable views, or the only views currently being applied in practice. Our perspectives may change, and we may continue to update this Hot Topic for such changes and new issues as practice evolves, the FASB establishes US GAAP in relation to staking, or the SEC staff provides guidance. We encourage entities to discuss the specific facts of their staking activities and related accounting with their auditors or other accounting advisors.

Applicability

All entities that stake crypto intangible assets; including both:

- validators; and
- delegators.

[1] Sections or items added or substantially updated or revised in December 2024 are identified with ** and #, respectively.

Key concepts

The following key concepts underlie this Hot Topic.

Concept	Application in this Hot Topic
Crypto intangible asset**	A crypto intangible asset: • is created or resides on a distributed ledger based on blockchain (or similar) technology; • is secured through cryptography; and • meets the US GAAP definition of an intangible asset. See section 1.3 of KPMG Issues In-Depth, Crypto intangible assets, for additional detail.
Proof of stake	A blockchain consensus mechanism (or consensus protocol) in which only holders of the blockchain's native digital asset are permitted to validate transactions on the blockchain.
Staking	The act of posting digital assets as collateral to a proof-of-stake (PoS) blockchain network either as (1) a 'validator' or (2) a 'delegator'.
Liquid staking**	Liquid staking permits participants to engage in staking, but retain liquidity and the ability to participate in other decentralized finance (DeFi) activities at the same time. Participants transfer the native token of the blockchain (e.g. ETH) to a liquid staking provider and receive a liquid staking 'receipt' token in exchange. The liquid staking token can be transferred or further deployed in other DeFi activities.
Node	A device connected to the blockchain that maintains a full or partial copy of the blockchain. The node operator is the blockchain participant (e.g. an individual or entity) that operates the node.
Validator	A blockchain participant (e.g. an individual or entity) that verifies transactions on a PoS blockchain as part of the blockchain's consensus mechanism. Validators generally must be node operators to sign blocks of transactions as valid.
Delegator	An individual or entity that stakes its digital assets with a trusted validator instead of operating a node and validating blockchain transactions itself.
Burning	The act of permanently removing a digital asset token from circulation.
Bonding (unbonding) period	On some blockchain networks, a bonding period may be required before a staking entity can earn staking rewards; the bonding period establishes the entity's commitment to the network before the entity can begin to earn staking rewards. When an entity elects to de-stake digital assets, an unbonding period may apply. During this period, the entity typically no longer earns staking rewards on the de-staked digital assets, but cannot sell (or otherwise transfer) those tokens. A

Concept	Application in this Hot Topic
	delegator may, depending on the blockchain, be permitted to redelegate its de-staked tokens during the unbonding period. Some blockchains use different, but analogous, terms to refer to bonding or unbonding periods – e.g. warm-up or cooldown periods, respectively. By contrast, on some other blockchains, warm-up and cooldown periods may be different from bonding or unbonding periods.
Transaction fees	Transaction fees are paid by the transaction initiator. For example, if Participant A wants to send 100 crypto units to Participant B, A may need to post more than 100 crypto units (e.g. 101 or 102 units) to pay the transaction fee and have B receive 100 crypto units. Transaction fees vary by blockchain, both in (1) terms of amount and (2) how they are distributed. In some blockchain networks, the transaction validator receives the entire fee. In others, the validator may receive only some or none of the fee because the blockchain's protocols (1) burn all or a portion of the fee or (2) use all or a portion of the fee to pay staking rewards.
Staking rewards	This term generally refers to tokens, typically of the blockchain's native token, awarded to those participating in validating transactions on the blockchain. Staking rewards may be comprised of either, or both, newly minted tokens (often referred to as inflationary rewards) or redistributed transaction fees.
Slashing	Slashing refers to losing a portion of one's staked digital assets on a PoS blockchain for misbehavior. Examples of misbehavior include excessive downtime (i.e. the validator is unavailable to validate transactions) and double signing (i.e. signing two blocks simultaneously). In some validator-delegator arrangements, the validator agrees to reimburse any slashed tokens of its delegators.
Epoch	On a blockchain network, a defined period of time (which may be described in terms of a number of activities or actions, instead of a time interval) used to specify when blockchain events occur, such as when new validators are assigned or staking rewards distributed. The epoch duration varies by blockchain but is often a few days. 'Era' is another term used by some blockchains that has a similar meaning.

Accounting for staking activities

The main body of this Hot Topic is divided into the following sections aligned to key accounting issues.

- Whether to derecognize staked crypto intangible assets (staked tokens)
- Determining the principal to validation activities
- Transaction fees earned by a validator
- Staking rewards

Whether to derecognize staked crypto intangible assets (staked tokens)

When staking, the question arises about whether the staking entity, validator or delegator, should continue to recognize staked tokens as its own assets on its balance sheet.

Accounting guidance to apply

As intangible assets, staked tokens are subject to Section 350-10-40 for derecognition. Under that guidance, intangible assets are derecognized when the criteria in Subtopic 610-20 (gains and losses from the derecognition of nonfinancial assets) are met, unless a scope exception applies. [350-10-40-1, 40-3; 610-20-15-4]

- In most staking scenarios, none of the scope exceptions in Subtopic 610-20 are expected to apply (section 17.2.50 of KPMG Handbook, Revenue recognition, details these scope exceptions).
- Subtopic 610-20 relies on the transfer of control guidance in Topic 606 (revenue from contracts with customers) to determine when and whether to derecognize a nonfinancial asset, such as a crypto intangible asset (sections 7.2 and 7.5 of KPMG Handbook, Revenue recognition, detail the Topic 606 transfer of control guidance). [606-10-25-25, 25-30; 610-20-25-6 – 25-7]

In addition to the above, we believe SEC staff guidance with respect to derecognizing loaned crypto intangible assets (see KPMG Hot Topic, Lenders' accounting for crypto intangible asset loans) is also relevant to consider by analogy in the context of staked tokens.

Derecognition evaluation

In general, staked tokens are not derecognized by the staking entity. This is because, regardless of whether the staked tokens continue to reside in the staking entity's digital wallet, no other entity obtains the right or ability to direct their use (e.g. the right or ability to sell, lend or otherwise transfer those crypto intangible assets) or to obtain their remaining economic benefits (e.g. the right to sell them for their current market value or realize any appreciation in such value). Therefore, the derecognition requirements in section 350-10-40 are not met and the conditions outlined by the SEC staff for loaned crypto intangible asset derecognition do not exist.

Therefore, the staked tokens remain recognized assets of the staking entity and the staking entity continues to account for them in the same manner as its other held crypto intangible assets (see chapter 4 of KPMG Issues In-Depth, Crypto intangible assets).

Liquid staking **

We have observed an exception arise with respect to derecognition in 'liquid staking' (see *Key concepts*). As illustrated below, the staking entity derecognizes its staked tokens in this scenario.

In place of the staked tokens, the staking entity recognizes the liquid staking 'receipt' tokens received in exchange and accounts for those in the same manner as it does any other acquired crypto intangible asset, which includes determining whether the receipt token is in the scope of Subtopic 350-60 (see chapters 2 to 4 of KPMG Issues In-Depth, Crypto intangible assets). A receipt token, in general and by design, entitles the holder to redeem the crypto intangible asset(s) for which it was exchanged. Therefore, we would expect it to fail the 'other goods and services criterion' in paragraph 350-60-15-1(b), and thus be outside the scope of Subtopic 350-60, unless there is a basis to assert that the redemption right is not enforceable (which is a *legal*, rather than an accounting, determination).

Example: Liquid staking derecognition **

Scenario

ABC Company decides to participate in Liquid Staking Protocol (Liquid). ABC deposits units of crypto intangible asset X into the Liquid smart contract and receives an equal number of LX tokens issued by the smart contract in return. LX is a crypto intangible asset 'receipt token' that entitles the holder to redeem each LX token for one X token. While the X tokens are deposited, ABC cannot sell, pledge, loan or otherwise use or deploy them.

The Liquid smart contract distributes deposited X tokens to trusted validators with whom Liquid has an arrangement. Liquid alone has the right and ability to deploy the X tokens to its chosen validators until ABC redeems its LX receipt tokens. Liquid distributes a share of the staking rewards earned from validating blockchain transactions using those X tokens to LX holders in the form of additional LX tokens, which, at all times, maintain a 1:1 value with X tokens, just like those received when ABC originally deposited its X tokens.

Evaluation

ABC concludes it should derecognize its deposited X tokens based on the following considerations.

- Liquid has the unilateral right and ability to deploy the X tokens until ABC redeems its LX receipt tokens. Liquid solely determines which validators to permit into (i.e. become node operators in) its ecosystem and how to delegate X tokens that have been deposited into the Liquid smart contract.
- While held in the Liquid smart contract or with a Liquid validator, ABC cannot sell, pledge, loan or otherwise use or deploy X tokens it has deposited; therefore, it does not have any present rights to the economic benefits associated with the deposited X tokens until it redeems its LX tokens.
- ABC is exposed to non-performance risk related to the return of its staked X tokens. This is because there is no written contract between ABC and Liquid, or between ABC and any validator that receives all or a portion of ABC's X stake. ABC is therefore at risk of losing its staked X tokens if the Liquid smart contract is hacked or otherwise fails. ABC would either have no recourse (because there is not a contract) or, if it had recourse, that recourse would be subject to the counterparty's ability to fulfill that responsibility.

ABC records the LX tokens at fair value (see section 3.2.30 of KPMG Issues In-Depth, Crypto intangible assets) as of the concurrent receipt thereof and derecognition of the deposited X tokens. There is no written contract that obligates ABC to deposit X tokens with Liquid; therefore, contract inception for purposes of measuring the LX tokens' fair value is the point in time ABC actually deposits the X tokens.

Determining the principal to validation activities

When no delegators are involved

When a validator's stake – i.e. that which earned it the right to participate in validation – does not include delegated tokens, the validator is the only party involved in the validation activities that give rise to the staking rewards. Therefore, it must be the principal to those validation activities (see. [606-10-55-36, ASU 2016-08.BC7]

The validator records the entire amount of the staking rewards to which it is entitled for the validation activities as its own revenue (see *Staking rewards*).

When delegators are involved

When a validator's stake includes the staked tokens of delegators, the question arises about which entity, the validator or the delegator, is the principal to the 'specified service' of completing the required transaction validation activities (e.g. block proposals, attestations or synching). Is the validator providing this specified service or, instead, is the delegator providing it (i.e. with the validator, in effect, serving as a subcontractor)? The entity's accounting for the staking rewards will differ based on that determination. [606-10-55-36, ASU 2016-08.BC7]

- If the **validator** is determined to be the principal to the validation activities on the blockchain:
  - the validator records the entire staking reward earned by its validator node for validating transactions as its revenue in the same manner as it records staking rewards earned on its owned tokens, and records the portion remitted to the delegator as a cost of that revenue (**gross basis**); while
  - the delegator records only the portion of the staking rewards that will be remitted to it as staking revenue (**net basis**).
- If the **delegator** is determined to be the principal to the validation activities on the blockchain:
  - the validator records staking revenue only for the portion of the staking rewards to which it is entitled (**net basis**); while
  - the delegator records the entire staking reward to which its stake is entitled, *inclusive of the portion (i.e. fee or commission) that the validator will earn for operating the node*, as staking revenue, and the portion remitted to the validator as a cost of that revenue (**gross basis**).

Accounting guidance to apply

We believe an entity should look to the principal-agent guidance in Topic 606 to make this determination (chapter 9 of KPMG Handbook, Revenue recognition, explains this guidance in detail). Applying the principal-agent guidance requires judgment and consideration of all relevant facts and circumstances. However, we believe the validator is typically the principal to the specified service of completing the necessary validation activities for the reasons that follow.

- The *validator*, not the delegator, operates the node (i.e. the hardware and software) that completes the validation activities.
- It is the validator node that is selected by the blockchain protocol (algorithmically) to validate a given transaction and is recognized for completing the validation activities. And at no point after this assignment and before the assigned validation occurs can the delegator withdraw its delegation to the validator. Therefore, it is *not* the case that a *delegator* is selected and can then assign *its* transaction validation obligation to one of multiple validators.
- The validator owns (or leases/licenses) the equipment and software necessary to operate the node; therefore, the validator has investment risk in the form of these costs it generally must recoup by earning staking rewards. The delegator has no equivalent cost risk in relation to providing the specified service.

In addition, in some validator-delegator staking relationships, the validator may agree to accept the risk of slashing from its node operations; that is, the validator may agree to compensate its delegators should they be slashed because of the validator's action(s) or inaction(s). In those cases, the fact that the

validator assumes the responsibility for the acceptability of the validation activities provides even more evidence that the validator is the principal thereto.

Unimpactful factors

Consistent with other principal-agent evaluations, the factors that follow generally do not affect the principal-agent analysis for staking activities.

- **How staking rewards are remitted (direction of funds flow)** – Staking rewards may be remitted by the blockchain protocol (1) entirely to the validator (and then distributed by the validator to its delegators); (2) directly to the validator *and* its delegators for their respective shares simultaneously; or (3) entirely to the delegator (i.e. gross of the validator's 'commission').[2] Direction of funds flow is generally not indicative of which party controls a specified service before it is provided, and often runs *contrary* to the conclusion reached about which party involved in providing a specified service is the principal.
- **Gross revenue margin** – Gross revenue recognition as a principal often results in small margins; validator margins (gross staking rewards minus the portion that must be remitted to delegators) in staking are also often thin (e.g. 5% or less). Margin size generally does not indicate whether an entity controls a specified service.

More than two parties involved **

In some circumstances, there may be more than two parties involved in the validation activities. For example, in liquid staking (see *Example: Liquid staking derecognition*), the staking entity, the liquid staking protocol and a validator are all involved. In that case and in other staking scenarios that may involve more than two parties, there is likely a question not only about which party is the principal to the validation activities, but also which of the other parties involved is the principal to lending the use of the staked tokens to the validator (see *Staking rewards*).

In liquid staking scenarios, we believe it is typically the liquid staking protocol that enlists and allocates delegator staked tokens to validators. In that case, we would expect the liquid staking protocol to be the principal to the validator and the staking entity to recognize staking revenue only in the amount to which it is entitled from the liquid staking protocol (i.e. net of any protocol fees).

Transaction fees earned by a validator

When transaction fees are not burned by the blockchain or added to the staking rewards pool, they are generally paid to the validator of the applicable transaction; delegators typically are not entitled to any portion of them.

Any transaction fee tokens added to the staking rewards pool are accounted for in the same manner as inflationary tokens included in the pool (see *Staking rewards*).

We believe transaction fees earned by a validator generally reflect revenue from a contract with a customer (i.e. the transaction initiator) under Topic 606 that should be recognized at the point in time the validator successfully validates the transaction to the blockchain. This view is consistent with the

[2] In ASU No. 2016-08, the Board removed the 'commission indicator', which stated that an entity's consideration being in the form of a commission was an indicator of agency, because it was deemed unrelated to the control principle underlying the principal-agent analysis in Topic 606. [ASU 2016-08.BC18(c)]

conclusion reached in Question 27 of the AICPA Guide[3] for transaction fees earned by miners on a proof-of-work (PoW) blockchain (e.g. Bitcoin). See Question 27 for additional detail.

Staking rewards

Income statement classification

Validators

US GAAP defines revenue as inflows earned from the entity's ongoing major or central operations. We expect validators' staking rewards will usually meet this definition. [ASC Master Glossary]

As similarly concluded for block rewards earned on a PoW blockchain like Bitcoin (see Question 27 of the AICPA Guide), whether staking rewards revenue earned is revenue from a contract with a customer under Topic 606 or 'other revenue' (which is required to be presented or disclosed separately from Topic 606 customer revenue) is based on the facts and circumstances, including the blockchain's protocols, and frequently involves judgment. Often, we have observed entities conclude that a decentralized blockchain network cannot, as a non-entity, be a customer and, therefore, the staking rewards are most appropriately characterized as 'other revenue'. However, even if staking rewards revenue is classified as other revenue, we believe analogizing to the revenue recognition guidance in Topic 606 will typically be appropriate. [606-10-50-4(a)]

Delegators – continue to recognize staked tokens

When the validator is the principal to the validation activities (which we believe is typically the case – see *Determining the principal to validation activities*), the delegator is, in effect, lending the use of its staked tokens to the validator for the purpose of increasing the number of validation activities the validator gets selected to complete. However, because the staked tokens are intangible assets, lending their use to the validator cannot be accounted for as a lease. [842-10-15-1(a)]

- We believe staking rewards earned by a delegator constitute 'revenue' if participating in staking activities is an 'ongoing major or central activity' for the delegator. Similar judgments to those of validators (see above) may be required to determine if the revenue earned is Topic 606 revenue or 'other revenue'. [ASC Master Glossary]
- If engaging in delegated staking is not revenue for the delegator, classification as other operating or nonoperating income outside of revenue would typically be appropriate (see Question 4.5.10 in KPMG Handbook, Financial statement presentation, for considerations around classifying other income as operating or nonoperating).

However the staking rewards are classified in the income statement, we believe it will typically be appropriate to apply the Topic 606 revenue guidance, either directly (if the rewards are revenue) or by analogy (if the rewards are other revenue or other income), to recognize and measure staking revenue or staking income earned.

[3] AICPA, Accounting for and auditing of Digital Assets practice aid ('the AICPA Guide').

Delegators – staked tokens are derecognized **

If a delegator concludes that it should derecognize its staked tokens (see 'Liquid staking' discussion in *Whether to derecognize staked crypto intangible assets (staked tokens)*) it will need to determine whether the transfer is a sale to a customer.

- If so, the gross proceeds from the transfer (e.g. a noncash crypto intangible asset receipt token) are recorded as Topic 606 revenue.
- If not, a net gain (loss) resulting from the derecognition (i.e. any difference between the gross proceeds received and the carrying amount of the staked tokens) is recorded as an item of operating income (loss) under Subtopic 610-20 (see Question 6.3.20 in KPMG Issues In-Depth, Crypto intangible assets).

This determination depends on the specific facts and circumstances. In the liquid staking scenario illustrated earlier (see *Example: Liquid staking derecognition*), while derecognition of the staked tokens was determined to be appropriate, the exchange of the staked tokens for the receipt tokens was concluded not to reflect a 'sale' in any conventional sense. The staking entity had a clear intent (not just right) to redeem the receipt tokens and there were significant restrictions on how the liquid staking protocol could deploy the staked tokens (i.e. as compared to how a purchaser would be permitted to deploy acquired crypto intangible assets in a conventional sale). The transfer of the staked tokens was more akin, economically and practically, to a loan of those tokens. Based on these considerations, net gain (loss) recognition was deemed appropriate.

Applying Topic 606 – staking entity continues to recognize its staked tokens

Applying Topic 606 (whether directly or by analogy) to staking rewards requires an evaluation of the specific facts and circumstances and often requires judgment. Its application may differ from one blockchain to another. This is because blockchains' staking protocols differ in ways that may affect how Topic 606 is applied (e.g. how staking rewards are calculated, when staking rewards are paid out and the existence and duration of bonding/unbonding or warm-up/cooldown periods). Delegators' revenue recognition may also be affected by the terms of their arrangements with validators (e.g. a staking service provider agreement).

The following, each discussed further below, also create complexity when applying Topic 606 to staking rewards:

- staking rewards are typically paid in the native token of the blockchain (i.e. noncash consideration); and
- the amount of the staking rewards to which an entity is entitled for validation activities is often variable.

Noncash consideration

Noncash consideration is measured at its contract inception date fair value under Topic 606; therefore, staking rewards revenue should be measured based on the fair value of the tokens to which the entity is entitled at contract inception. The amount of staking revenue recognized is not affected by the difference between the tokens' fair value at (1) contract inception and (2) the date of reward receipt, availability for withdrawal/transfer date, or any other date. For example, if an entity earns 1 token as a staking reward, with a fair value of $100 at contract inception and a fair value of $90 when it is remitted to the entity (e.g. at the end of the epoch), its staking rewards revenue is $100. The $10 difference does not affect recorded revenue; instead, it is recorded in the same manner as any other impairment (if the token earned is outside the scope of Subtopic 350-60) or fair value remeasurement (if the token earned is in scope of Subtopic 350-60). See section 5.6 of KPMG Handbook, Revenue recognition, on noncash consideration and chapter 4 of KPMG Issues In-Depth, Crypto intangible assets. [606-10-32-21, 32-23]

Contract inception may differ depending on the blockchain (and for a delegator, also its validator arrangement). For example, if the entity can de-stake its tokens at any time, a new contract may be deemed created with each validation activity the entity is assigned. By contrast, if the entity is obligated to remain staked for a defined period of time (e.g. an epoch) and is subject to slashing or other penalties for unresponsiveness or misbehavior throughout that period, the contract may be deemed to exist for that entire committed period; this would mean contract inception occurs at the start of each committed staking period instead of upon each assigned validation activity.

Recognition

Ignoring accounting conventions that they may be able to adopt based on materiality, staking entities may frequently conclude that they should recognize staking rewards revenue when the amount of the staking rewards to which they are entitled becomes known or calculable (i.e. using inputs upon which the amount depends, such as the total number of tokens staked or the total circulating supply of native tokens).

This amount may not be known or calculable by an entity at the time a validation activity entitling it to a staking reward is completed. For example, inputs or actions on which the amount depends may be outside of the entity's control. When this is the case, the staking rewards may be constrained under the Topic 606 guidance on variable consideration. While variable consideration is constrained, it is excluded from the 'transaction price' and therefore *not* recognized as revenue (see section 5.3 of KPMG Handbook, Revenue recognition, on variable consideration; section 5.3.40 specifically discusses the variable consideration constraint).

The specific facts and circumstances will affect whether and how the constraint applies to different staking scenarios. On one hand, if the amount of staking rewards to which the entity is entitled (1) depends on inputs or actions outside of the entity's control and (2) is subject to significant variability, all of the staking rewards may be constrained until those inputs or actions become known or knowable to the entity. On some blockchains, this may not occur until well after the validation to which the reward relates is completed (e.g. the end of the 'epoch' or 'era' during which the validation occurs or even a subsequent epoch or era). However, just because the staking rewards are variable does not automatically mean the entirety of those rewards should be constrained until they become known or calculable; it may be that relevant experience (e.g. during earlier epochs or eras) or limited variability permits the entity to estimate with sufficient reliability at least a minimum amount of such rewards to which it will be entitled. In that case, that minimum amount should be included in the transaction price when estimated and only any amount above that minimum constrained.

Applying Topic 606/Subtopic 610-20 – staking entity derecognizes its staked tokens **

If a staking entity has derecognized its staked tokens, the staking rewards it earns until it redeems those tokens may be treated as variable consideration *stemming from the initial transfer of the staked tokens* because there is no ongoing performance or service provided by the entity during the staking period (i.e. not redeeming the staked tokens does not constitute ongoing performance or providing a service).

At the time of initial staked token transfer, the staking entity will not know or be able to calculate precisely the staking rewards to which it will be entitled. Therefore, the staking entity will have to consider the Topic 606 guidance on variable consideration (which also applies to transfers of nonfinancial assets under Subtopic 610-20), including the constraint on such consideration. Consistent with the preceding section discussion, whether and how the constraint applies in these scenarios will be affected by the facts and circumstances; however, it *may* not be acceptable to constrain *all* such variable staking rewards. For example, relevant experience may suggest it is 'probable' that the staking entity will not redeem its staked tokens for a minimum period of time and that a minimum level of rewards can be estimated for that time period without the risk of a significant reversal.

Contract inception for the measurement of those noncash staking rewards is likely the date the staked token(s) were transferred. Consequently, staking rewards – regardless of when included in/added to the transaction price (and therefore recognized) – would be measured at their fair value as of that token transfer date.

For further information

This document highlights issues specific to the accounting for crypto intangible assets.

See KPMG Issues In-Depth and other digital asset Hot Topics.

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