Accounting for the Purchase, Sale and Receipt of Cryptocurrencies

OVERVIEW

The creation and evolution of blockchain technology over the past decade has accelerated exponentially and is disrupting traditional business models. Blockchain offers a new and secure way to process and store financial and non-financial information that is easily accessible to users.

Blockchain is made up of a series of “blocks”, each of which contains data for multiple transactions, a hash (similar to a unique record number), and the hash of the previous block. Each block is validated by a decentralized network of participants (i.e., peer-to-peer network without a central authority) and is linked to another block using cryptography (i.e., code). The decentralization of the validation process and use of cryptography makes it nearly impossible, or at least cost prohibitive, to tamper with information in the block.

Blockchain is the foundation for all forms of crypto assets, such as cryptocurrencies (e.g., Bitcoin, Ether) and tokens (e.g., utility tokens, non-fungible tokens, security tokens).

However, with new and evolving technology comes new and unique risks and challenges that may affect processes and related controls (e.g., safeguarding of assets through key encryption and splitting or multi-signature wallets) and financial reporting (e.g., impairment or fair value measurement).

This publication discusses certain topics related to accounting and internal controls over financial reporting related to the purchase, sale and receipt of cryptocurrencies. It does not cover specialized industry guidance in ASC 940, *Financial Services—Brokers and Dealers,* and in ASC 946, *Financial Services—Investment Companies*.

PURCHASE OF CRYPTOCURRENCIES

SCOPE OF THIS PUBLICATION

To determine the accounting for investments in cryptocurrencies, such as Bitcoin, Ether and Litecoin, we must first define “cryptocurrency.” This publication uses a definition of cryptocurrency based on the definition of “crypto assets” in the AICPA Practice Aid, *Accounting for and auditing of digital assets* (“AICPA Practice Aid”), which consists of two components:

- “Functions as a medium of exchange and
- Possesses the following characteristics:
  - It is not issued by a jurisdictional authority (for example, a sovereign government).
  - It does not give rise to a contract between the holder and another party.
  - It is not considered a security under the Securities Act of 1933 or the Securities Exchange Act of 1934.”

ACCOUNTING CONSIDERATIONS

Cryptocurrencies are generally intangible assets because they are “[a]ssets (not including financial assets) that lack physical substance” as defined in the Financial Accounting Standards Board’s (FASB’s) Accounting Standards Codification Master Glossary.

Cryptocurrencies generally are not considered to be any other type of asset for the following reasons:

Asset Category	FASB Master Glossary Definition	Reason for Rejection
Cash	Cash includes not only currency on hand but demand deposits with banks or other financial institutions. Cash also includes other kinds of accounts that have the general characteristics of demand deposits in that the customer may deposit additional funds at any time and also effectively may withdraw funds at any time without prior notice or penalty.	Cryptocurrencies are not backed by sovereign governments and are generally not accepted as legal tender, which are two other characteristics that are generally viewed to be necessary to meet the definition of cash.
Cash Equivalents	Cash equivalents are short-term, highly liquid investments that have both of the following characteristics: • Readily convertible to known amounts of cash • So near their maturity that they present insignificant risk of changes in value due to changes in interest rates Generally, only investments with original maturities of three months or less qualify under that definition. Original maturity means original maturity to the entity holding the investment.	Cryptocurrencies can be highly volatile and typically do not have stated maturity dates.
Financial Instrument	Cash, evidence of an ownership interest in an entity, or a contract that: • Imposes on one entity a contractual obligation either to deliver cash or another financial instrument to a second entity or to exchange other financial instruments on potentially unfavorable terms with the second entity • Conveys to that second entity a contractual right either to receive cash or another financial instrument from the first entity or to exchange other financial instruments on potentially favorable terms with the first entity	As discussed above, cryptocurrencies are not cash. They generally also are not an ownership interest in an entity and do not create a contractual right (or obligation) to receive (or deliver) cash or another financial instrument.
Inventory	The aggregate of those items of tangible personal property that have any of the following characteristics: • Held for sale in the ordinary course of business • Process of production for such sale • To be currently consumed in the production of goods or services to be available for sale	Cryptocurrencies are not tangible personal property because they lack physical substance.
Security	A share, participation, or other interest in property or in an entity of the issuer or an obligation of the issuer that has all of the following characteristics: • It is either represented by an instrument issued in bearer or registered form or, if not represented by an instrument, is registered in books maintained to record transfers by or on behalf of the issuer. • It is of a type commonly dealt in on securities exchanges or markets or, when represented by an instrument, is commonly recognized in any area in	As discussed above, cryptocurrencies do not provide ownership interest in an entity or a property.

	which it is issued or dealt in as a medium for investment. • It either is one of a class or series or by its terms is divisible into a class or series of shares, participations, interests or obligations.	

Treating cryptocurrencies as intangible assets is consistent with the views shared by the SEC staff at the 2021 and 2022 AICPA & CIMA Conferences on Current SEC and Public Company Accounting Oversight Board (PCAOB) Developments that when crypto assets are not deemed securities or subject to specialized guidance (e.g., ASC 940, ASC 946), they are likely accounted for as intangible assets under U.S. GAAP. See our publication, the 2021 AICPA SEC & PCAOB Conference Highlights and 2022 AICPA SEC & PCAOB Conference Highlights for more guidance.

However, not all cryptocurrencies are alike and therefore a careful evaluation of the characteristics of the assets is needed to determine the proper accounting. For example, while many cryptocurrencies are accounted for as indefinite-lived intangible assets, others may meet the definition of a financial instrument. Certain stablecoins, for which the prices are pegged to reference assets (such as the USD) to minimize price volatility, may meet the definition of a financial asset. This publication focuses solely on cryptocurrencies recognized and accounted for as intangible assets.

An entity only recognizes in its financial statements cryptocurrencies that it **controls**. To determine whether an entity controls a cryptocurrency, including when an entity deposits it in a third-party hosted wallet, all facts and circumstances between the entity and other parties (e.g., custodian) involved in the transaction should be considered. An entity may need a legal analysis, such as an evaluation of legal ownership of the cryptocurrency, and assessment of the terms of any agreements among the parties. Further, an entity should consider the definition of an "asset" in the FASB Concepts Statement No. 8—Chapter 4, *Elements of Financial Statements*, and the factors in Question 10 of the AICPA Practice Aid to reach a conclusion on whether it controls the cryptocurrency.

The following table summarizes the accounting for cryptocurrencies accounted for as intangible assets:

Accounting Topic	Considerations
Indefinite vs. finite useful life	Cryptocurrencies accounted for as intangible assets are indefinite-lived intangible assets because there are no imposed foreseeable limitations on cryptocurrencies. This classification is in accordance with ASC 350-30-35-4, which states: *"[i]f no legal, regulatory, contractual, competitive, economic, or other factors limit the useful life of an intangible asset to the reporting entity, the useful life of the asset shall be considered to be indefinite. The term indefinite does not mean the same as infinite or indeterminate. The useful life of an intangible asset is indefinite if that life extends beyond the foreseeable horizon—that is, there is no foreseeable limit on the period of time over which it is expected to contribute to the cash flows of the reporting entity."*
Initial Recognition and Measurement	Indefinite-lived intangible assets are initially recognized at their acquisition date and measured at cost (i.e., purchase price) under ASC 350-30-25-1 and 30-1. Therefore, an entity that purchases cryptocurrencies for cash recognizes them at the cash price paid,

	including transaction costs, such as service fees, consistent with the guidance in ASC 805-50-30-2.
Subsequent Measurement	Indefinite-lived intangible assets are measured at their initial carrying amount (cost) less any impairment. Therefore, entities may not write up the value of cryptocurrencies beyond the initial carrying amount, even if the quoted market price of the cryptocurrency exceeds the carrying amount at the end of the reporting period.
Impairment	Indefinite-lived intangible assets are evaluated for impairment at least annually and more often if events or changes in facts and circumstances indicate that it is more likely than not that the asset is impaired. When determining whether a cryptocurrency is impaired, the factors in ASC 350-30-35-18B and 35-18C should be considered. However, in practice for cryptocurrencies, entities generally record an impairment based on the lowest observable fair value within the reporting period. Entities often transact in multiple units of a cryptocurrency in each period. ASC 350-30-35-24 suggests that because each unit of cryptocurrency (or a fractional unit of cryptocurrency) can be bought and sold independently of each other, each such unit (or such fractional unit) is the unit of account for impairments. Therefore, entities should track the carrying amounts of cryptocurrencies on a unit (or fractional unit) of account basis. However, we are aware that in practice, entities evaluate impairment in batches based on the same purchase date and same purchase price (carrying amount), consistent with Question 7 of the AICPA Practice Aid. When measuring an impairment, an entity applies ASC 820, *Fair Value Measurement*, which assumes that the asset is exchanged in an orderly transaction between market participants to sell the asset at the measurement date under current market conditions. Cryptocurrencies trade in various markets. Therefore, one of the potential challenges with valuation of cryptocurrencies may be the determination of the principal market (or in the absence of a principal market, the most advantageous market) under ASC 820-10-35-5 and 35-5A. Another potential challenge may be determining whether a market is active or inactive, is orderly, and produces reliable information. Questions 16 through 21 of the AICPA Practice Aid discuss these and other measurement considerations. Once the fair value of a cryptocurrency is determined and if such fair value is less than the carrying amount, an impairment loss for the excess of the carrying amount of the cryptocurrency over its fair value is recognized in the income statement as part of income from operations. The adjusted carrying amount is the cryptocurrency’s new cost basis. Reversal of a previously recognized impairment loss is prohibited under ASC 350-30-35-20.

Example 1 – Impairment of Cryptocurrencies

FACTS

- Entity A does not qualify to apply the industry-specific guidance in ASC 940 or ASC 946.
- Entity A bought 10 Bitcoins for cash at $30,000 per unit on April 1, 20X2 and paid $250 in transaction fees per Bitcoin.
- On April 30, 20X2, Entity A bought another 10 Bitcoins for cash at $27,000 per unit and paid $225 in transaction fees per Bitcoin.
- From June 10, 20X2 through June 20, 20X2, Bitcoin traded on XYZ exchange market for as low as $20,000 per unit.
- Entity A determined that XYZ is the principal market under ASC 820.
- As of June 30, 20X2 (the end of Entity A's reporting period), Bitcoin traded at $28,000 per unit on XYZ.

ANALYSIS

- Entity A accounts for the Bitcoins as indefinite-lived intangible assets and recognizes $300,000 of Bitcoin (10 Bitcoins x $30,000 per unit) on April 1, 20X2, plus transaction fees of $250 per Bitcoin, a total of $302,500.
- Entity A recognizes $270,000 of additional Bitcoins (10 Bitcoins x $27,000 per unit) on April 30, 20X2, plus transaction fees of $225 per Bitcoin, a total of $272,250, which results in a grand total carrying amount of $574,750 for 20 Bitcoins.
- Entity A determines that all of its Bitcoin are impaired after considering the facts and circumstances, including that the Bitcoins traded as low as $20,000 per unit on XYZ during the period from June 10, 20X2 through June 20, 20X2, which is below the carrying amounts of the 10 Bitcoins purchased on April 1, 20X2 and the 10 Bitcoins purchased on April 30, 20X2.
- Entity A recognizes an impairment of $174,750 (carrying amount of $574,750 less fair value of $400,000, or 20 Bitcoins x $20,000 per unit), even though the trading price of Bitcoins on XYZ as of June 30, 20X2 exceeds the purchase price for the 10 Bitcoins purchased on April 30, 20X2.
- Even though the Bitcoins traded at a price on June 30, 20X2 which exceeds Entity A's adjusted carrying amount after the impairment, Entity A does not reverse its previously recognized impairment.

FASB Project on Accounting for and Disclosure of Crypto Assets

Stakeholders expressed concerns that accounting for cryptocurrencies as indefinite-lived intangible assets does not reflect the economics of those assets because the measurement does not usually reflect the fair value at the end of the reporting period, and therefore does not provide decision-useful information to investors. In response to that feedback, the FASB added a project on crypto assets to its agenda. You can follow the FASB project on crypto assets here.

INTERNAL CONTROL OVER FINANCIAL REPORTING CONSIDERATIONS

Owning cryptocurrencies and relying on blockchain-based technologies exposes an entity to new and unique risks that management needs to understand and sufficiently mitigate. Therefore, it is critical that entities design and operate effective processes and controls over the safeguarding and financial reporting for cryptocurrencies, even private companies that do not obtain an audit over the internal controls over financial reporting. Failure to identify and understand relevant risks, and to sufficiently address those risks through processes and internal controls, may result in financial losses (e.g., unauthorized cryptocurrency transactions) or other business challenges, and accounting errors and restatements. Therefore, management should design a governance model over cryptocurrencies that includes understanding the risks introduced by this new technology and implementing properly designed controls. Communicating proactively and frequently with auditors about these matters also may help streamline the audit process.

Establishing adequate internal controls over safeguarding and financial reporting for cryptocurrencies requires an appropriate mix of IT controls and business process controls. Some key internal control objectives to consider regardless of whether these assets are custodied internally (i.e., through self-custody) or externally (i.e., via a third-party wallet service provider) include the following:

Safeguarding	Financial Reporting
Securing and controlling an entity's private keys, which may involve multiple layers of security including: ▶ Private key encryption and splitting or multi-signature wallets (e.g., three of five scheme) ▶ Security of the entity's (or third party's) data centers or physical storage locations ▶ Processes for private key backup and recovery ▶ Segregation of duties for authorizing cryptocurrency transactions	Determining the appropriate recognition and measurement guidance to apply. Internal-control documentation should clearly articulate how the entity: ▶ Assesses whether it controls cryptocurrencies (e.g., when the entity deposited the cryptocurrencies in a third-party hosted wallet) ▶ Assesses the classification and cutoff for recognizing and measuring cryptocurrency transactions ▶ Tracks and records cryptocurrency transactions at the appropriate unit of account, including the methods used to extract blockchain data for reconciliation against internal records ▶ Monitors for impairment triggering events and measures impairments, when necessary

Those charged with establishing internal controls should monitor the types of cryptocurrencies held by the entity and establish protocols to update processes and controls related to (a) safeguarding cryptocurrencies and (b) accounting policies and procedures when cryptocurrencies are purchased on new blockchains with different security protocols than previous blockchains used.

SALE OF CRYPTOCURRENCIES

ACCOUNTING CONSIDERATIONS

An entity may decide to sell cryptocurrencies to a third-party. As discussed above, cryptocurrencies are generally accounted for as indefinite-lived intangible assets and, therefore, the derecognition guidance in ASC 350-10-40-1 and ASC 610-20, *Other Income – Gains and Losses from the Derecognition of Nonfinancial Assets* (ASC 610-20) applies, unless a scope exception applies. For example, ASC 610-20-15-4 excludes from its scope certain transactions, including (a) the derecognition of a nonfinancial asset in a contract with a customer, for which ASC 606, *Revenue from Contracts with Customers* (ASC 606) applies, and (b) nonmonetary transactions in the scope of ASC 845, *Nonmonetary Transactions* (ASC 845).

Accordingly, if the entity sells cryptocurrencies and such a sale is an output of its ordinary activities to a customer, the sale is accounted for under ASC 606. However, if the sale is not an output of the entity's ordinary activities and the counterparty is not a customer, the sale may be accounted for under ASC 610-20 or ASC 845, depending on the nature of the transaction. For example, if cryptocurrencies are an output of an entity's ordinary activities and the entity exchanges Ether for Bitcoin to facilitate a sale to a customer and the transaction is not in the scope of ASC 606 or ASC 610-20, the guidance in ASC 845 may apply.

BDO Insight

A sale of a cryptocurrency for another cryptocurrency would result in an initial measurement of the cryptocurrency received at fair value, regardless of whether the entity applies ASC 606, ASC 610-20, or ASC 845. However, fair value under ASC 845 is measured for the asset *surrendered*, unless the fair value of the cryptocurrency received is more clearly evident; while fair value under ASC 606 and ASC 610-20 is measured using the noncash consideration *received*. Further, the timing of the measurement and recognition may vary because different derecognition requirements (risks and rewards principle under ASC 845, versus transfer of control principle under ASC 606 and ASC 610-20) may result in different conclusions, and presentation may vary. Therefore, entities should carefully determine which accounting guidance applies. Refer to Question 8 of the AICPA Practice Aid.

Also, as discussed earlier, cryptocurrency units might be bought for different amounts or impaired. Cryptocurrencies are typically fungible units that can be bought and sold in fractional units. Therefore, it can be challenging for entities to identify which specific units (or fractional units) of cryptocurrencies are sold. Entities should develop a reasonable and rational method for identifying which units (or fractional units) of cryptocurrency were sold and apply the method consistently, consistent with Question 8 of the AICPA Practice Aid. The first-in, first-out (FIFO) method is one reasonable and rational approach used in practice, but other approaches also may be acceptable.

Example 2 – Derecognition of Cryptocurrencies

FACTS

- Entity A bought 10 Bitcoins for cash at $30,000 per unit on April 1, 20X2 and 5 Bitcoins for cash at $22,000 per unit on June 25, 20X2. It accounts for the Bitcoins as indefinite-lived intangible assets.
- From June 10, 20X2 through June 20, 20X2, Bitcoin traded for as low as $20,000 per unit. Therefore, Entity A recognized an impairment loss of $10,000 ($30,000 less $20,000) per unit on June 20, 20X2 for each of the 10 Bitcoins bought on April 1, 20X2. As such, the new carrying amount of those 10 Bitcoins is $20,000 per unit (or $200,000). There were no other impairments during the reporting period.
- On June 30, 20X2, Entity A sold 3 Bitcoins for cash at $25,000 per unit, or $75,000 in total.
- Entity A is not in the business of selling cryptocurrencies in its ordinary activities. It also is not in the scope of ASC 940 or ASC 946.
- Entity A previously elected the FIFO method as a reasonable and rational method for identifying which units of cryptocurrencies to derecognize in sales transactions.

ANALYSIS

- Entity A accounts for the sale of 3 Bitcoins under ASC 610-20 because the sale is not an output of Entity A's ordinary activities with a customer, and they are intangible assets and therefore the transaction is not subject to other U.S. GAAP.
- Using the FIFO method, Entity A reduces the carrying amount of its Bitcoins by $60,000 (3 Bitcoins x $20,000 per unit, which is the post-impairment value of the first 3 Bitcoins owned) and recognizes a gain of $15,000 for the difference between cash receipt of $75,000 and the amount derecognized of $60,000.

INTERNAL CONTROL OVER FINANCIAL REPORTING CONSIDERATIONS

To appropriately derecognize a cryptocurrency and recognize a gain or loss upon sale, an entity must implement controls over the review and approval of cryptocurrency sales to confirm that the entity:

- Authorized the transaction
- Applied the appropriate derecognition guidance and measured any gains or losses using a reasonable and rationale basis (such as FIFO), and using fiat currency receipts (net of fees/commissions) or spot prices used in exchanges for other cryptocurrencies
- Recognized the transaction in the correct period

RECEIPT OF CRYPTOCURRENCIES IN EXCHANGE FOR GOODS OR SERVICES

ACCOUNTING CONSIDERATIONS

An entity may receive cryptocurrencies in exchange for selling goods or services to another party. Such a transaction typically is in the scope of ASC 606 if the counterparty is a customer (i.e., it contracted to obtain goods or services that are an output of the entity's ordinary activities), or in the scope of ASC 610-20 if the counterparty is not a customer (which refers back to the recognition and measurement requirements of ASC 606). ASC 606-10-32-21 explains that an entity should measure "the estimated fair value of the noncash consideration at contract inception." Any changes in the fair value of the noncash consideration after contract inception that are due to the form of the consideration are excluded from the transaction price and accounted for under other guidance. These changes should be reported outside of revenue from customers. If the changes are due to other than the form of the consideration, such changes are reflected in the transaction price and are subject to the guidance on constraining variable consideration in ASC 606.

Once recognized, cryptocurrencies generally are intangible assets accounted for under ASC 350, as discussed above.

If an entity provides a good or service in exchange for a right to receive cryptocurrencies in the future, the entity should evaluate whether the receivable contains an embedded derivative that must be bifurcated, which typically depends on whether the cryptocurrencies are readily convertible to cash. Refer to Question 24 in the AICPA Practice Aid for more guidance.

INTERNAL CONTROL OVER FINANCIAL REPORTING CONSIDERATIONS

To appropriately account for the receipt of cryptocurrencies in exchange for goods or services, an entity must design and operate effective internal controls over financial reporting, as discussed in the sections above.