Crypto assets

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pwc

About the Crypto assets guide

PwC is pleased to offer the first edition of our *Crypto assets* guide. This guide discusses the relevant accounting and reporting considerations related to crypto assets.

This guide summarizes the applicable accounting literature, including relevant references to and excerpts from the FASB's Accounting Standards Codification. It also provides our insights and perspectives, interpretative and application guidance, illustrative examples, and discussion on emerging practice issues.

This guide should be used in combination with a thorough analysis of the relevant facts and circumstances, review of the authoritative accounting literature, and appropriate professional and technical advice.

References to US GAAP

Definitions, full paragraphs, and excerpts from the FASB's Accounting Standards Codification are clearly labelled. In some instances, guidance was cited with minor editorial modification to flow in the context of the PwC Guide. The remaining text is PwC's original content.

References to other PwC guidance

This guide provides general and specific references to chapters in other PwC guides to assist users in finding other relevant information. References to other guides are indicated by the applicable guide abbreviation followed by the specific section number. The other PwC guides referred to in this guide, including their abbreviations, are:

- □ *Derivatives and hedging (DH)*

- □ *Financial statement presentation (FSP)*

- □ *Not-for-profit entities (NP)*

- □ *Revenue from contracts with customers (RR)*

Guidance date

This guide considers existing guidance as of August 31, 2021. Additional updates may be made to keep pace with significant developments. Users should ensure they are using the most recent edition available.

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Chapter 1: Introduction

1.1 Introduction

Cryptographic assets (crypto assets) are transferable digital representations that are designed in a way that prohibits their copying or duplication. The technology that facilitates the transfer of crypto assets is referred to as blockchain or distributed ledger technology. Blockchain is a digital, decentralized ledger that keeps a record of all transactions that take place across a peer-to-peer network and enables the encryption of information.

Crypto assets come in a variety of forms, and new crypto assets (sometimes referred to as digital tokens or digital assets) continue to be created. These assets may function as a medium of exchange, provide a right to use a product or service, provide rights to an underlying asset, provide voting rights, or provide rights to profits and losses among others.

1.1.1 Crypto asset terminology

The following figure summarizes some of the common terms used when discussing crypto assets.

Figure CA 1-1
Frequently used terminology

Term	Definition
Asset-backed token	A crypto asset that derives its value from something that does not exist on the blockchain but instead is a representation of ownership of a physical asset (e.g., natural resources, such as gold or oil)
Coin/Token	Other terms used to describe crypto assets. The terms can be used interchangeably because there is no universally-accepted definition of either.
Cryptocurrency	Crypto assets that operate independent from a central bank that are intended to function as a medium of exchange or store of value
Initial Coin Offering (ICOs)	A capital raising activity in which the issuer receives consideration in exchange for issuing coins to investors. ICOs might be subject to local securities law, and significant regulatory considerations may apply
Security token	Crypto assets that provide an economic stake in a legal entity. Sometimes it is a right to receive cash or another financial asset, which might be discretionary or mandatory. Sometimes it conveys the ability to vote in company decisions and/or represents a residual interest in the issuer entity.
Stablecoin	Crypto assets that peg their value to a traditional asset, such as fiat money. They are often backed by collateral.

Term	Definition
Utility token	Crypto assets that provide users with access to a product or service.

1.2 *Classification*

In some situations, crypto assets provide the holder with an interest in an underlying asset. The underlying assets might be commodities (such as gold or oil), intangible assets (such as a license or a patent), artwork, real estate, or some other tangible asset. While some asset-backed tokens represent a claim on the asset itself, others have no ability to redeem the underlying asset. When the crypto asset represents a contractual right to receive cash equivalent to the value of the underlying asset, it might meet the definition of a financial asset. If the crypto assets represent a right to the asset itself, it might be accounted for in a manner similar to the underlying asset and therefore measured following the relevant accounting standard for the underlying asset.

A holder should analyze the characteristics of crypto assets and the rights the holder obtains to determine its classification and resulting accounting to apply:

Cash

A crypto asset may be cash if it is accepted as legal tender and issued by a government. If the crypto asset is not cash, it would not meet the definition of a foreign currency.

Financial instruments

Financial instruments include contracts that impose an obligation on one party and convey a right to another party to deliver/receive cash or another financial instrument. If a crypto asset provides a contractual right to receive cash or another financial instrument, it would be classified as a financial asset. See CA 2.1.2 for the classification and measurement of crypto assets that meet the definition of a financial asset.

An investment company may determine that its appropriate to account for a crypto asset as an "investment." See CA 2.1.

Inventory

Crypto assets are often purchased or mined with the intent to sell them. Thus, crypto assets may meet some of the characteristics of inventory. However, as crypto assets are not tangible assets, they do not meet all the requirements in ASC 330, *Inventory* to be considered inventory.

Broker-dealers that are subject to ASC 940, *Financial services – Brokers and dealers,* might consider their crypto asset holdings "inventory." See CA 3.1.3 for accounting by broker-dealers.

Intangible assets

Crypto assets will often meet the definition of an intangible asset. The ASC master glossary defines intangible assets.

ASC master glossary

Assets (not including financial assets) that lack physical substance. (The term intangible assets is used to refer to intangible assets other than goodwill.)

Given their lack of physical substance, unless the crypto assets fall within the scope of other asset classes, they should be classified as intangible asset and reporting entities should follow the accounting guidance in ASC 350, *Intangibles – Goodwill and other*.

Chapter 2:
Holding crypto assets

2.1 Initial recognition and measurement

In many cases, reporting entities acquiring crypto assets for investment purposes will follow the guidance of ASC 350, *Intangibles – Goodwill and other*, which requires acquired intangible assets to be recorded at cost.

Reporting entities that qualify as investment companies under ASC 946, *Financial services – Investment companies* should determine if the crypto assets they acquire represent debt securities, equity securities, or other investments. These investments should be initially measured at the purchase price, including transaction costs, and subsequently adjusted to fair value each reporting period. The remainder of this chapter focuses on accounting for crypto assets when an entity does not qualify as an investment company under ASC 946.

2.1.1 Receipt of crypto assets accounted for as intangibles

If a reporting entity purchases a crypto asset using cash, the value of the cash paid, including transaction costs, represents the cost of the crypto asset for the buyer.

Transactions involving the receipt of crypto assets in exchange for goods or services provided in the ordinary course of business with customers should follow the noncash consideration guidance in ASC 606, *Revenue from Contracts with Customers* (see CA 3). The receipt of crypto assets as part of an acquired business should be accounted for in accordance with ASC 805, *Business combinations*.

If a reporting entity obtains crypto assets from a non-customer in return for non-financial assets, ASC 610-20, *Gains and Losses from the Derecognition of Nonfinancial Assets,* should be applied to determine the initial measurement of the acquired crypto asset. ASC 610-20 refers to the measurement principles of ASC 606-10-32-21, *Measurement,* to determine the transaction price when noncash consideration is received.

> **ASC 606-10-32-21**
>
> To determine the transaction price for contracts in which a customer promises consideration in a form other than cash, an entity shall measure the estimated fair value of the noncash consideration at contract inception (that is, the date at which the criteria in paragraph 606-10-25-1 are met).

The estimated fair value of the crypto asset received as noncash consideration is determined as of the contract inception date, which may differ from the date the crypto asset is received. See CA 3.1.3.

Example CA 2-1 addresses how to determine the transaction price when an exchange is denominated in crypto assets.

EXAMPLE CA 2-1

Noncash consideration – Accounting for crypto assets earned in connection with a revenue transaction

Security Inc enters into a contract to provide security services to Manufacturer over a six-month period in exchange for 12,000 units of crypto assets. The contract is signed and work commences on January 1, 20X1. The performance is satisfied over time and Security Inc will receive the units of crypto assets at the end of the six-month contract. For purposes of this example, assume that the crypto asset is readily convertible to cash.

How should Security Inc account for this transaction?

Analysis

Security Inc should determine the transaction price by measuring the fair value of the 12,000 units of crypto assets at contract inception (i.e., on January 1, 20X1). Security Inc would measure its progress toward complete satisfaction of the performance obligation and recognize revenue each period based on the transaction price determined at contract inception. Security Inc should not adjust revenue to reflect any changes in the fair value of the crypto assets after contract inception.

Security Inc. separately determined that an embedded derivative was present in the receivable or contract asset. (See FSP 33.3.1 for a determination of whether the right to consideration is a receivable or contract asset.) In reaching that conclusion, Security Inc considered whether the embedded derivative should be separated from the host contract pursuant to ASC 815-15-25-1. It specifically also evaluated the definition of a derivative in ASC 815-10-15-83, including whether the crypto asset would meet the net settlement criteria.

Security Inc would recognize any changes in the embedded derivative through earnings separate from revenue.

2.1.2 Accounting for purchases of stablecoin

Stablecoins differ from other forms of crypto assets because they peg their value to a traditional asset, such as a fiat currency, in order to minimize price volatility. The issuer of the stablecoin may achieve this by collateralizing the stablecoin with the asset to which it is pegged (e.g., maintaining a reserve of the fiat currency).

To determine the appropriate accounting for a stablecoin, the holder of the crypto asset must determine if it represents a financial asset. Financial assets include contracts that provide a right to receive cash or another financial instrument from another entity.

Stablecoins may meet the definition of a financial asset if the contractual arrangement includes a right to receive cash from the issuer. Understanding the rights to demand redemption under the contract are critical to making this assessment as the contract may include provisions that limit the holder's ability to redeem the stablecoin for cash. Conditions that limit redemption at the discretion of the issuer would likely impact the ability to classify the holding as a financial asset. Contractual limitation on redemption based on conditions

outside the control of the issuer (e.g., laws that prohibit redemption to those engaged in criminal activity) may require further legal analysis. In determining the classification, we believe a holder should consider:

□   the legal form of the stablecoin,

□   redemption rights,

□   collateralization,

□   counterparty risks,

□   contractual rights, and

□   applicable laws and regulations.

See CA 2.1.3 for the accounting if a stablecoin meets the definition of a financial asset. A stablecoin that does not meet the definition of a financial asset should be evaluated to determine if it is an intangible asset, which is described in CA 1.2.

2.1.3   *Accounting for purchases of financial assets*

If a crypto asset meets the definition of a financial asset, it should be analyzed to determine if it is a debt security under ASC 320, *Investments – Debt securities*, an equity security under ASC 321, *Investments – Equity securities,* or a receivable under ASC 310, *Receivables*. Additionally, ASC 825, *Financial instruments,* permits fair value accounting for instruments that meet the definition of a financial asset.

2.2   *Impairment of crypto assets classified as intangibles*

If a crypto asset is determined to be an intangible asset, ASC 350, *Intangibles – Goodwill and other,* requires reporting entities to determine whether the asset has a finite or indefinite life. The useful life of an intangible asset should be considered indefinite if no legal, regulatory, contractual, competitive, economic, or other factors limit its useful life to the reporting entity. Given the nature of many crypto assets, they will usually have an indefinite useful life.

Indefinite-lived intangible assets are not amortized. Instead, they are tested for impairment annually or upon a triggering event that indicates it is more likely than not that the asset is impaired. ASC 350-30-35-18B provides factors to consider in assessing whether it is more likely than not that an indefinite-lived intangible is impaired.

2.2.1   *Testing for impairment*

An indefinite-lived intangible asset is impaired when its carrying amount is greater than its fair value.

Reporting entities will need to have processes in place to monitor for events (e.g., trades that occur below the reporting entity's cost) that indicate that the fair value of the crypto assets may be below their carrying value. The impairment test under ASC 350 is a one-step test that compares the fair value of the intangible asset with its carrying value. If the fair value is less than the carrying value, an impairment is recorded. Once the intangible asset is impaired, the impairment loss is not reversed if the fair value subsequently increases.

> **ASC 350-30-35-19**
>
> The quantitative impairment test for an indefinite-lived intangible asset shall consist of a comparison of the fair value of the asset with its carrying amount. If the carrying amount of an intangible asset exceeds its fair value, an entity shall recognize an impairment loss in an amount equal to that excess. After an impairment loss is recognized, the adjusted carrying amount of the intangible asset shall be its new accounting basis.
>
> **ASC 350-30-35-20**
>
> Subsequent reversal of a previously recognized impairment loss is prohibited.

Example CA 2-2 illustrates the accounting for a crypto asset that was impaired and subsequently increased in value.

EXAMPLE CA 2-2

Fair value recovery before end of reporting period

On October 1, 20X1, Reporting Entity acquired one unit of crypto asset for $20,000. On November 15, 20X1, it was observed that the price of the crypto asset had declined to $18,000/unit. Reporting Entity deemed this a triggering event for impairment and wrote down its crypto asset to a new carrying value of $18,000 and recorded an impairment loss for the decline in value. On December 31, 20X1, Reporting Entity's year end, the price of the crypto asset increased to $19,000/unit.

Can Reporting Entity write up the carrying value of its crypto asset to the new fair value of $19,000?

Analysis

No. Recognizing a recovery after an impairment has been taken is not permitted. Accordingly, Reporting Entity should reflect a carrying value of $18,000 for its crypto asset at year-end and report the full impairment loss of $2,000 in earnings for the period.

2.2.2 *Determining the unit of account*

Reporting entities may acquire crypto assets in various separate transactions. Each individual acquisition of crypto asset held by a reporting entity represents a unit of account for impairment testing purposes. Accordingly, reporting entities should maintain the carrying values of each acquisition in order to perform impairment testing. Reporting entities should not combine purchases of crypto assets across multiple acquisition dates with different cost bases.

Example CA 2-3 addresses how to determine the unit of account when testing crypto assets for impairment.

EXAMPLE CA 2-3

Determining unit of accounting for impairment testing

During the year, Reporting Entity completed the following transactions to purchase the same type of crypto asset:

Acquisition date	Units acquired	Price/Unit	Carrying value
January 10, 20X1	7	$20,000	$140,000
April 20, 20X1	5	$21,000	$105,000
October 15, 20X1	2	$26,000	$52,000
Total	14	$21,214*	$297,000

*$297,000/14 = $21,214

On November 1, 20X1, Reporting Entity tests its crypto assets for impairment and determines the current trading price of the crypto asset is $23,000/unit.

Does Reporting Entity need to record an impairment loss as of November 1, 20X1?

Analysis

Yes. Reporting Entity should record an impairment for crypto assets with a value higher than $23,000/unit. Accordingly, the two units acquired on October 15, 20X1 are impaired as the carrying value per unit is $26,000 compared to the fair value of $23,000. Reporting Entity should record an impairment loss equal to $6,000 and write down the carrying value of the two crypto assets acquired on October 15, 20X1 to $23,000 each.

It would be incorrect to compare the $21,214 average carrying value for all 14 units to the $23,000 fair value and conclude that an impairment did not occur.

2.3 *Disposal and derecognition*

ASC 610-20, *Gains and Losses from the Derecognition of Nonfinancial Assets*, provides specific guidance for transfers of certain nonfinancial assets, such as intangible assets, to non-customers. Accordingly, sales of crypto assets (that are accounted for as intangible assets) to non-customers should be accounted for under ASC 610-20.

> **ASC 610-20-25-1**
>
> To recognize a gain or loss from the transfer of nonfinancial assets or in substance nonfinancial assets within the scope of this Subtopic, an entity shall apply the guidance in Topic 810 on consolidation and in Topic 606 on revenue from contracts with customers as described in paragraphs 610-20-25-2 through 25-7.

2.3.1 *Determining whether a sale is to a customer*

Determining whether the counterparty to a disposal arrangement is a customer is important as proceeds received from customers will follow the guidance in ASC 606, *Revenue from Contracts with Customers*.

If a counterparty to a contract engages with an entity to obtain the output of the reporting entity's ordinary activities in exchange for consideration, that counterparty is considered a customer. Otherwise, the counterparty is considered a non-customer.

Transactions with customers will be reported in revenue and cost of goods sold under ASC 606 while transactions with non-customers will usually be presented as a gain or loss included in income from continuing operations under the applicable guidance. See CA 2.3.2.

Example CA 2-4 addresses how to determine if a sale is to a customer within its ordinary business activities.

EXAMPLE CA 2-4

Determining whether a sale is to a customer

Aircraft manufacturer had excess capital that it invested in crypto assets. It subsequently sold those assets to a third party as it needed additional working capital.

How should Aircraft manufacturer present the sale in its income statement?

Analysis

The sale of the crypto assets is outside the manufacturer's ordinary business activities and therefore the third party would be deemed a non-customer. Accordingly, the proceeds should not be reported in revenue but rather the excess over carry value should be reported as a gain or loss.

See CA 3 for the accounting for sales of crypto assets to customers.

2.3.2 *Derecognition of crypto assets*

In order for a reporting entity to derecognize crypto assets, it must evaluate whether it transferred control based on how it classifies the crypto assets it holds. Crypto assets classified as intangible assets would be subject to ASC 610-20, *Gains and Losses from the Derecognition of Nonfinancial Assets*. Crypto assets classified as financial instruments would require evaluation under ASC 860, *Transfers*.

For crypto assets classified as intangibles, an entity must determine whether it has transferred control of the crypto assets in accordance with ASC 610-20. The seller should first evaluate whether it has (or continues to have) a controlling financial interest under ASC 810, *Consolidation*. If the seller has a controlling financial interest, derecognition would not be appropriate as it would continue to consolidate the applicable subsidiary.

If the seller determines it does not have a controlling financial interest, the seller should next evaluate the guidance in ASC 606, *Revenue from Contracts with Customers,* to assess whether control has transferred. The reporting entity should first evaluate the criteria in ASC 606-10-25-1 to determine whether a contract exists.

If a contract does not exist (e.g., if collection of consideration from the counterparty is not probable), the entity would continue to recognize the crypto asset as required by ASC 350-10-40-3. Additionally, the entity will record a liability for any consideration received. Subsequently, the entity will continue to assess the contract to determine the point at which the criteria for revenue recognition are met in accordance with ASC 606-10-25-1. Alternatively, the reporting entity would derecognize the liability when one of the events described in ASC 606-10-25-7 occurs (e.g., the contract is terminated).

Once the seller determines the criteria for revenue recognition are met, the seller would need to determine the point at which the counterparty obtains control as described in ASC 606-10-25-30. For crypto assets, the transfer of control analysis should consider which entity bears the risks and rewards of ownership. Once control is transferred, the crypto asset will be derecognized and the seller would recognize the resulting gain or loss.

Crypto assets are typically fungible (i.e., each unit is identical and has the same fair value at any given time). When an entity sells a portion of its crypto asset holdings, it will need to determine a systematic and rational approach to identify the units sold. Reporting entities should have a method for tracking the acquisition date and purchase price for their crypto asset holdings. In addition, entities should adopt a method, such as specific identification, first in, first out (FIFO), or last in, first out (LIFO) to identify the units sold and determine the cost basis to use.

If the counterparty has not yet obtained control over a crypto asset, but has paid cash to the seller, the seller should not derecognize the crypto asset but instead apply the guidance in ASC 606-10-45-2 and record a liability for any consideration received.

For many transactions involving crypto assets within the scope of ASC 610-20, control over each crypto asset in the contract will transfer at the same time. This means that the crypto assets transferred would be derecognized at the same time. Therefore, in practice, the reporting entity may not need to separate and allocate the consideration to each distinct crypto asset. However, for other transactions, control over each distinct crypto asset may not transfer at the same time. This would result in those crypto assets being derecognized at different points in time, making it necessary to separate and allocate consideration to each distinct crypto asset in the transaction.

2.3.3 *Measuring the gain or loss on disposal*

Once a reporting entity determines that it should derecognize a crypto asset under ASC 610-20, *Gains and Losses from the Derecognition of Nonfinancial Assets,* the gain or loss on the transfer must be determined. The gain or loss is calculated as the difference between the consideration allocated to each distinct crypto asset and its carrying amount.

When a contract includes the transfer of more than one distinct asset, an entity should allocate the consideration to each distinct asset in accordance with ASC 606-10-32-28 through ASC

606-10-32-41. Generally, this means that the consideration will be allocated to the distinct assets based on their relative standalone selling prices.

Crypto assets will likely be subject to impairment testing prior to derecognition, therefore significant losses are not expected upon derecognition.

Noncash consideration received in exchange for the transfer of crypto assets needs to be measured at fair value at contract inception. If a reporting entity exchanges one crypto asset for another crypto asset, the reporting entity may not be able to reliably determine the fair value of noncash consideration received. In this case the value of the noncash consideration received should be measured indirectly by reference to the standalone fair values of the crypto assets sold or transferred by the reporting entity.

Example CA 2-5 addresses how to determine the cost basis for the sale of a portion of a reporting entity's crypto assets.

EXAMPLE CA 2-5

Determining cost basis for crypto assets sold

On March 1, 20X1, Reporting Entity sold 50 units of the same crypto asset to Buyer. The sale is outside Reporting Entity's ordinary business activities and therefore Buyer is not considered a customer of Reporting Entity. Buyer agrees to pay Reporting Entity $35,000/unit for the 50 units. Reporting Entity uses FIFO to determine the cost basis for its crypto asset sales. The following table shows Reporting Entity's holdings of the crypto asset.

Acquisition date	Units acquired	Units remaining	Purchase price/unit
January 10, 20X1	100	35	$20,000
February 15, 20X1	60	60	$30,000
Total	160	95	$23,750*

*Weighted-average purchase price per unit: $3,800,000/160 = $23,750

How should Reporting Entity calculate the gain or loss on sale?

Analysis

Reporting Entity has entered into an agreement to sell crypto assets (nonfinancial assets) that are not an output of its ordinary business activities. ASC 610-20 requires that Reporting Entity follow the measurement principles in ASC 606, *Revenue from Contracts with Customers,* to calculate the gain or loss recognized upon sale. Accordingly, the total consideration received by Reporting Entity of $1,500,000 is compared to the carrying value of the 50 units of crypto assets sold equal to $1,150,000 (see calculation using FIFO below). The difference results in a gain of $350,000 that Reporting Entity would recognize in its income statement. The Reporting Entity should not use the weighted-average purchase price as the cost basis.

FIFO cost basis calculation

Acquisition date	Units sold	Carrying value/unit	Total cost
January 10, 20X1	35	$20,000	$700,000
February 15, 20X1	15	$30,000	$450,000
Total	50		$1,150,000

Example CA 2-6 addresses when a reporting entity enters into a contract to exchange one unit of a crypto asset for another unit of crypto asset.

EXAMPLE CA 2-6

Exchanging one crypto asset for another crypto asset

Company A exchanges one unit of crypto asset it holds for one unit of another crypto asset held by Company B. The fair value of Company B's crypto asset is determined to be $12,000. The carrying value of Company A's crypto asset is $10,000.

How should Company A account for the exchange?

Analysis

ASC 610-20, *Gains and Losses from the Derecognition of Nonfinancial Assets,* requires an entity to measure the fair value of noncash consideration in accordance with ASC 606, *Revenue from Contracts with Customers*. The difference between the fair value of the noncash consideration received and the carrying value of the asset sold results in a gain or loss that should be recognized in the income statement. In an arm's length transaction, it would be rare to recognize a loss as the crypto asset being sold would likely have been previously impaired.

Accordingly, Company A should derecognize its one unit of crypto asset at carrying value and record the one unit of crypto asset acquired at fair value:

Dr Crypto asset acquired	$12,000	
Cr Crypto asset sold		$10,000
Cr Gain on sale		$2,000

Example CA 2-7 addresses the determination of cost basis when a bundle of crypto assets is sold for a stated contract price.

EXAMPLE CA 2-7

Sale of multiple crypto assets for single contract price

On March 1, 20X2, Company A sold a bundle of crypto assets to Buyer for a stated contract price of $225,000. The crypto assets sold under the contract are shown below. Assume no prior impairment was incurred for these crypto assets.

Crypto asset	Acquisition date	Units	Purchase price/unit	Carrying value
A	January 10, 20X1	3	$20,000	$60,000
A	April 20, 20X1	2	$23,000	$46,000
B	October 15, 20X1	6	$18,000	$108,000

On the date of the sale, Company A observes that the fair value of Crypto Asset A is $21,000/unit and the fair value of Crypto Asset B is $20,000/unit.

How should Company A account for the sale?

Analysis

Company A should first record the impairment of its two Crypto Asset A units acquired on April 20, 20X1 as the carrying value of $23,000/unit exceeds the observed fair value of $21,000 on the date of sale. Company A should record an impairment loss of $4,000.

Impairment Loss	$4,000	
Crypto Asset A		$4,000

The contract price of $225,000 should then be allocated to each crypto unit based on the fair value of each type of crypto assets on the date of sale as follows:

Crypto asset	Acquisition date	Units	Carrying value	Transaction price	Gain/ (Loss)
A	January 10, 20X1	3	$60,000	$63,000	$3,000
A	April 20, 20X1	2	$42,000*	$42,000	-
B	October 15, 20X1	6	$108,000	$120,000	$12,000
	Total			$225,000	$15,000

*Reflects the new carrying value of the crypto assets after impairment

Company A should therefore record a gain on sale of $15,000:

Cash	$225,000	
Crypto Asset A		$102,000
Crypto Asset B		108,000
Gain on sale		15,000

Chapter 3:
Crypto transactions

3.1 Receipt of crypto for goods and services

Reporting entities may accept crypto assets as a form of payment in exchange for goods or services they offer to customers. To determine the classification of the crypto asset received, the reporting entity would consider the guidance in CA 1.

Crypto assets that meet the definition of intangible assets and are received by a reporting entity as payment for goods or services are a form of noncash consideration. Reporting entities should follow the guidance in ASC 606, *Revenue from Contracts with Customers,* on accounting for the receipt of noncash consideration, which requires the consideration to be recorded at fair value at contract inception. That is, the entity should use the fair value of the crypto asset, measured at the time when all requirements of ASC 606-10-25-1 have been met, as the transaction price.

Refer to RR 4.5 for further guidance on the accounting for noncash consideration.

If the reporting entity continues to hold the crypto assets received, changes in value after contract inception are not reflected in revenue. For example, if the crypto asset is classified as an indefinite-lived intangible asset, any impairments would be reflected as an operating expense.

If the crypto asset received is classified as a financial asset, changes in value after initial recognition will be reflected in other income/loss.

3.1.1 Accounting for crypto assets by broker-dealers

A broker-dealer that is within the scope of ASC 940, *Financial services – Brokers and dealers,* should recognize any commission income received from its customers as revenue as the services are performed. Any crypto assets held by a broker-dealer as an agent for its customers should not be reflected on the broker-dealer's balance sheet.

Sometimes broker-dealers will hold crypto assets for their own proprietary trading. ASC 940-320-35-1 indicates that proprietary trading inventory should be measured at fair value with changes in fair value recognized in profit and loss. We believe that it is acceptable to interpret the reference to inventory in this context to include crypto assets as the term inventory has historically been interpreted to include other assets such as physical commodities.

3.1.2 Crypto assets held on behalf of third parties by a custodian

Crypto assets may be held by a custodian for safe keeping on behalf of its customers. Arrangements for holding the crypto assets can vary, but generally there will be a contract, or terms and conditions, that sets out the nature of the arrangement.

If the custodian does not meet the criteria to be in the scope of ASC 940, *Financial services – Brokers and dealers,* this guidance should not be applied by analogy. Rather, the determination as to whether the custodian should record an asset and a related liability for the crypto assets it holds on behalf of its customers will require the use of judgment based on the facts and circumstances. In determining whether to reflect the assets on or off-balance sheet, the custodian may need to consider the following factors, among others:

□ The extent to which the rights and obligations of the parties are defined under legal or regulatory frameworks, or under the terms of a contract

□ The rights of the customers to the crypto assets held on their behalf in the event the custodian files for bankruptcy

□ The ability of the customer or custodian to transfer, loan, pledge, or encumber the crypto assets

□ The ability of the customer to access the private key or transfer the crypto assets to another wallet at any time

□ Which party bears the risk of loss as a result of fraud or theft

□ Which party obtains the benefits of price appreciation and the impact of price depreciation

□ The degree of segregation of crypto assets held on behalf of customers from crypto assets owned by the custodian

□ The evidence of ownership of the crypto assets that are held on behalf of the customers (e.g., is the crypto in a separately named wallet or are there off-chain transaction records)

If the custodian determines that it has control of the asset and therefore should reflect the asset on its balance sheet, it will also need to reflect a corresponding liability. The liability will need to be assessed to determine whether it contains an embedded derivative under ASC 815, *Derivatives and hedging*.

3.1.3 Receivable settled in crypto asset

A reporting entity may satisfy its performance obligation prior to receiving the consideration. When the expected consideration is a crypto asset, the reporting entity should consider whether the resulting contract asset or receivable includes an embedded derivative. In determining if an embedded derivative is present, specific consideration should be given to whether the crypto asset meets the criteria for net settlement (i.e., whether it is readily convertible to cash). See DH 4 for guidance on embedded derivative instruments. A similar analysis would be necessary for a reporting entity that has an obligation to deliver crypto assets.

3.2 Principal vs. agent considerations

When a reporting entity is an intermediary between a seller and buyer of crypto assets, the reporting entity will need to assess whether it is an agent facilitating the sale or the principal to the buyer for the sale of crypto assets. A reporting entity that is a principal will recognize revenue (assuming sale of crypto assets is part of the reporting entity's ordinary business activities) for the gross amount paid by the buyer for the crypto assets and cost of sales for the cost of the crypto assets. A reporting entity that is an agent will only recognize as revenue the net amount it retains (i.e., its commission) after remitting amounts to the seller for the crypto assets provided by that party and will not present the crypto assets on its balance sheet.

To determine whether it is the principal or agent in a revenue contract, ASC 606, *Revenue from Contracts with Customers,* requires a reporting entity (intermediary) to identify the specified goods or services to be provided to the customer (end consumer) and assess whether it controls each specified good or service.

Excerpt from ASC 606-10-55-36A

To determine the nature of its promise (as described in paragraph 606-10-55-36), the entity should:

(a) Identify the specified goods or services to be provided to the customer (which, for example, could be a right to a good or service to be provided by another party [see paragraph 606-10-25-18])

(b) Assess whether it controls (as described in paragraph 606-10-25-25) each specified good or service before that good or service is transferred to the customer.

In most transactions, the crypto asset is the specified good to be provided to the customer. The reporting entity must then consider whether it controls the crypto asset before it is transferred to the customer. Control of an asset refers to the ability to direct the use of, and obtain substantially all of the remaining benefits from, the asset. Control also includes the ability to prevent other entities from directing the use of, and obtaining the benefits from, an asset. ASC 606-10-55-39 includes indicators that an entity controls a good or service:

☐ Which entity is primarily responsible for fulfilling the promise to provide the crypto asset to the customer?

☐ Does the reporting entity have inventory risk before or after the crypto asset has been transferred to a customer?

☐ Which entity has discretion in establishing the price paid by the customer for the crypto asset?

Refer to RR 10 for further discussion of principal vs. agent assessments. Due to the nature of crypto assets, the assessment of whether a reporting entity takes control of the asset may require significant judgment. If a reporting entity fulfills purchase requests from customers using both crypto assets it holds directly and crypto assets held by third-party suppliers, this may indicate that the reporting entity is primarily responsible for fulfilling the promise and therefore, the principal for the sale of crypto assets. If a reporting entity is solely matching buyers and sellers of crypto assets and does not take ownership of the crypto assets at any time, it is likely an agent facilitating the transfer of crypto assets.

3.3 *Mining—consensus mechanisms*

To validate crypto transactions, there are two types of consensus mechanisms, proof of work and proof of stake. Proof of work can be resource demanding, accordingly, as an alternative, some platforms verify transactions through proof of stake. The proof of stake consensus mechanism provides holders of the crypto assets the ability to validate transactions based on their proportionate holdings in the asset.

Upon execution of a transaction utilizing crypto assets, reporting entities known as miners often perform a complex computation to create the hash necessary for the public ledger. In proof of work, miners provide computing power in order to participate in the block validation process. Each block is verified by a miner before its information is stored. When the block is added to the chain and consensus exists regarding the block, it is shared by all network nodes.

This gives rise to a unique transaction history. For validating the transaction, the miner may receive a transaction fee from a participant in the transaction and/or a block reward. A block reward is the receipt of newly issued crypto assets issued to the miner for successfully validating the block of transactions.

If the miner receives a transaction fee from a participant in the transaction, the miner should consider whether the transaction is a contract with a customer in the scope of ASC 606, *Revenue from Contracts with Customers*. If so, the miner would generally recognize the transaction fee as revenue when it satisfies its performance obligation (i.e., validates a transaction on the distributed ledger).

If the miner receives a block reward under the consensus protocols of the crypto asset, the miner will need to assess whether the receipt of the block reward is a contract with a customer in the scope of ASC 606, which may require judgment.

3.4 Borrowing and lending transactions

A reporting entity may lend crypto assets to a counterparty in return for a fee. A lending arrangement would require the borrower to return the crypto assets to the lender at the end of its term.

The crypto asset may be accounted for by the lender as a non-financial asset under ASC 350-10-40-1 and therefore subject to the derecognition guidance in ASC 610-20, *Gains and Losses from the Derecognition of Nonfinancial Assets*. In such cases, the lender would often not meet the derecognition criteria, as control has not transferred to the borrower since the borrower will be returning the assets.

If the lender does not apply ASC 350, *Intangibles – Goodwill and other,* but rather other accounting guidance, the applicable derecognition guidance should be considered (e.g., if the crypto assets is considered a financial asset, ASC 860 would apply).

The borrower in a crypto lending arrangement may determine that it has obtained control of the asset and would accordingly recognize the crypto asset on its balance sheet. It would also recognize an obligation to return the crypto asset to the lender. While the asset may be accounted for under ASC 350 as an intangible, the obligation to return the asset could be viewed as a hybrid instrument with a debt host contract and payments linked to the fair value of the crypto assets. Accordingly, the borrower may need to assets whether bifurcation of the embedded feature is required under ASC 815, *Derivatives and hedging,* with specific consideration given to whether the crypto assets could be net settled.

3.5 Initial Coin Offerings

An Initial Coin Offering (ICO) is a form of fundraising that harnesses the power of cryptographic assets and blockchain-based trading. An ICO allocates tokens instead of shares to investors. Each ICO will have unique terms and conditions. It is important for potential investors to review the whitepaper or underlying documents accompanying the ICO token offering, and to understand what exactly is being offered. In situations when rights and obligations arising from a whitepaper or their legal enforceability are unclear, legal advice might be needed to determine the impact of the terms.

ICOs might be considered to be securities by a securities regulator. As a result, issuers should understand the regulatory environment and the impact that it has on financial reporting.

Issuers of ICOs will need to determine the applicable accounting standard for the ICO token issued. This will depend on the nature of the ICO token issued, and the rights and obligations it provides to an owner. For example, the token may provide a right to cash (financial instrument) or a residual interest in the entity (equity), it may be in substance a contract with a customer (revenue transaction), or other GAAP may apply.

Similarly, investors in ICOs will need to assess the rights they obtain through the acquisition of the token to determine the applicable accounting as discussed in CA 2.

3.6 *Not-for-profit entity crypto transactions*

Not-for-profit entities (NFPs) may hold crypto assets for purposes of investment, to execute transactions with customers, or for other reasons. In most cases, NFPs follow the same accounting guidance for crypto assets as business entities. Differences may arise, however, if an NFP is holding the crypto asset as an investment. ASC 958-325 and ASC 954-325 provide guidance on accounting for investments in nonfinancial assets, such as intangible assets, when those assets are acquired for purposes of earning an investment return.

For NFPs, other than healthcare entities within the scope of ASC 954, *Health care entities,* measurement of nonfinancial investments that GAAP does not require to be measured at fair value is based on the portfolio-wide accounting policy selected for reporting investments, as explained in NP 9.3. The method selected (carrying value or fair value) must be consistently applied to all alternative investments within a portfolio. If a non-healthcare NFP elects the portfolio-wide fair value option, and holds crypto assets in an investment portfolio managed for total return (such as an endowment), then we believe the crypto assets should be carried at fair value.

For NFP healthcare entities, ASC 954-325-35-1 requires subsequent reporting of investments in nonfinancial assets at amortized cost subject to impairment considerations for property, plant, and equipment, consistent with those in ASC 360-10, *Property, plant, and equipment.* Since most crypto assets are indefinite lived, they would be reported at cost less any impairment recognized.

In some cases, a donor may contribute crypto assets to an NFP. ASC 958 requires that donated nonfinancial assets be measured at fair value at the date of the gift (see NP 7.4.2 for further information on measuring donations of noncash assets). Subsequent accounting for the contributed crypto asset will depend on its use. If the donated crypto asset is held as an investment, the discussion above applies. Otherwise, the crypto asset should be accounted for as an intangible asset. In that case, the fair value of the crypto asset at the date of gift becomes its carrying value for purposes of subsequent measurement.

Chapter 4:
Fair value of crypto assets

4.1 *Fair value measurement*

The fair value of a crypto asset might be accounted for, or disclosed, in the financial statements.

> **Excerpt from ASC 820-10-20**
>
> Fair value: The price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

ASC 820, *Fair value measurement,* establishes a framework for determining fair value. Fair values are divided into a three-level fair value hierarchy, based on the lowest level of significant inputs used in valuation models, as follows:

- **Level 1:** quoted prices in active markets for identical assets or liabilities that the entity can access at the measurement date

- **Level 2:** observable inputs other than level 1 inputs

- **Level 3:** unobservable inputs

Generally, ASC 820 gives precedence to observable inputs over unobservable inputs. If a valuation is not based on Level 1 inputs at the reporting date because there is not an active market, the value will need to be determined using a valuation model. The objective in such valuations should be to estimate what the exit price of the entity's position at the valuation date would be.

It should be noted that the hierarchy level of a crypto asset might evolve over time. For example, it is possible that a crypto asset that was previously valued using Level 3 inputs might become traded in an active market, or vice versa.

ASC 820 contains a number of disclosure requirements related to the level of the measurement hierarchy that a fair value measurement falls into, as well as the measurement basis used in the financial statements.

4.1.1 *Active market determination*

The first step in considering the fair value of a crypto asset is to determine if an active market exists for that crypto asset at the measurement date (in other words, whether it is a Level 1 valuation).

> **Excerpt from ASC 820-10-20**
>
> Active market: A market in which transactions for the asset or liability take place with sufficient frequency and volume to provide pricing information on an ongoing basis.

The accounting standards do not define specific thresholds that need to be exceeded with regard to frequency (such as active trading days) and volume (such as turnover ratio) to determine if an active market exists. As such, the determination is subject to judgment.

4.1.2 *Principal market determination*

In some cases, there might be several markets for a particular crypto asset that meet the definition of an active market, and each of those markets might have different prices at the measurement date. In these situations, ASC 820, *Fair value measurement,* requires a reporting entity to determine the principal market for the asset. The principal market will be the market with the greatest volume and level of activity for the relevant crypto asset that the entity holding the crypto asset can access.

The principal market must be available to and accessible by the reporting entity. If there is a principal market, fair value should be determined using prices in that market.

To determine the principal market, the reporting entity needs to evaluate the level of activity in various markets. However, the entity does not have to undertake an exhaustive search of all possible markets in order to identify the principal or most advantageous market; it should take into account all information that is readily available. In the absence of evidence to the contrary, the market in which an entity normally transacts is presumed to be the principal market.

If there is no principal market, or the reporting entity does not have access to the principal market, fair value should be based on the price in the most advantageous market (the market in which the entity would maximize the amount received to sell an asset).

If there is a Level 1 input (i.e., quoted price in an active market), that price should be used as fair value. There should not be any adjustment to reflect the size of the holding (e.g., blockage factor) of crypto assets (see ASC 820-10-35-36B). Rather, the fair value would be calculated as price multiplied by quantity.

4.1.3 *Post-market close events*

As discussed in ASC 820-10-35-41C(b), events may occur after the close of a market but before the end of the measurement date. When that is the case, a quoted market price may not be representative of fair value on the measurement date. Reporting entities should establish and consistently apply a policy for identifying and incorporating events that may affect fair value measurements. In addition, if a reporting entity adjusts the quoted price, the resulting measurement will not be classified in Level 1, but will be a lower-level measurement.

Chapter 5:
Disclosure of crypto assets

5.1 Disclosure related to crypto assets

Given there is no accounting standard that specifically addresses the accounting for crypto assets, there are no disclosure requirements specifically designed for crypto assets and related transactions. Rather, reporting entities will need to include disclosures based on the relevant accounting standard applied (e.g., indefinite-lived intangible, financial asset).

Figure CA 5-1 summarizes some of the more common topics for disclosure. However, this list is not exhaustive and will need to be tailored to develop disclosures that are specific to the entity and the relevant facts and circumstances.

Figure CA 5-1
Frequently required disclosures

Accounting guidance	Requirement	Additional information
ASC 235, Notes to financial statements	Disclosures should include the accounting policies and principles followed in accounting for the crypto assets and the method of applying them.	FSP 2.4
ASC 275, Risks and uncertainties	Given the risks and uncertainties associated with certain crypto assets, reporting entities should consider the need for disclosures about the nature of the crypto asset activities they are undertaking, the use of estimates for fair value, and any vulnerabilities due to concentration of risk due to a lack of diversification.	FSP 24
ASC 350, Intangibles – Goodwill and other	When an impairment is recognized on crypto assets accounted for as intangible assets, include a description of the circumstances leading to the impairment, the amount of the impairment, the caption in the income statement that includes the impairment loss, and the segment in which the impaired asset is reported.	FSP 8.8 and FSP 8.9
ASC 606, Revenue from Contracts with Customers	To the extent the crypto transaction is classified as a sale to a customer, include the relevant revenue disclosures, tailoring as appropriate based on whether the entity is a principal or agent.	FSP 33
ASC 820, Fair value measurement	When the crypto asset is a financial asset, include the relevant disclosures for an instrument that is recorded at fair value on a recurring basis. For crypto assets that are recognized as intangible assets, include the fair value disclosure for assets recorded at fair value on a non-recurring basis.	FSP 20

Accounting guidance	Requirement	Additional information
ASC 855, Subsequent events	Reporting entities may need to disclose significant subsequent events related to crypto assets, such as significant changes in the value of the crypto assets after period end or significant changes in the amount or nature of the crypto asset transactions.	FSP 28
Additional considerations for SEC registrants	S-X Article 5 requires registrants to separately state each class of intangible asset that is in excess of 5% of total assets. The amount of significant additions or deletions related to these assets should be disclosed in a footnote.	S-X 5-02