

IFRS Viewpoint

Accounting for cryptocurrencies – the basics

Our ‘IFRS Viewpoint’ series provides insights from our global IFRS team on applying IFRSs in challenging situations. Each edition will focus on an area where the Standards have proved difficult to apply or lack guidance. This edition provides guidance on some of the basic issues encountered in accounting for cryptocurrencies, focussing on the accounting for the holder. A future IFRS Viewpoint will explore other more complex issues, such as those relating specifically to cryptocurrency miners.

What’s the issue?

The popularity of cryptocurrencies has soared in recent years, yet they do not fit easily within IFRS’ financial reporting structure. For example, an approach of accounting for holdings of cryptocurrencies at fair value through profit or loss may seem intuitive but is incompatible with the requirements of IFRS in most circumstances. In this Viewpoint, we explore the acceptable methods of accounting for holdings in cryptocurrencies while touching upon other issues that may be encountered.

Relevant IFRS

IAS 38 Intangible Assets

IAS 2 Inventories

IFRS 13 Fair Value Measurement



Executive summary

Accounting for cryptocurrency assets does not fit easily within the IFRS framework. For reasons which we will explain, our view is that in the majority of cases, it will be appropriate to account for them in accordance with IAS 38 'Intangible Assets' either at cost or at revaluation. Use of the revaluation method depends on there being an active market for the cryptocurrency in concern.

In limited circumstances, it may be appropriate for an entity to account for cryptocurrency assets in accordance with the guidance set out in IAS 2 'Inventories' for commodity broker-traders. IAS 2's default measurement approach is to recognise inventories at the lower of cost and net realisable value. However, the Standard states that commodity broker-traders are instead required to measure their inventories at fair value less costs to sell, with changes in fair value less costs to sell being recognised in profit or loss in the period of the change. Our view is that this will only be appropriate in narrow circumstances where cryptocurrency assets are acquired by the reporting entity with the purpose of selling them in the near future and generating a profit from fluctuations in price or broker-traders' margin.

What is a cryptocurrency?

Cryptocurrency is digital or ‘virtual’ money, which uses cryptography to secure its transactions, to control the creation of additional currency units, and to verify the transfer of assets. Cryptography itself describes the process by which codes are written or generated to allow information to be kept secret.

In contrast to traditional forms of money which are controlled using centralised banking systems, cryptocurrencies use decentralised control. The decentralised control of a cryptocurrency works through a ‘blockchain’, which is a public transaction database, functioning as a distributed ledger. This has advantages in that two parties can transact with each other directly without the need for an intermediary, saving time and cost.

Types of cryptocurrency

Bitcoin was the first decentralised cryptocurrency (the first ‘genesis’ block was created in 2009), and currently has the highest market capitalisation. Since then however, numerous other cryptocurrencies have been created and there are now estimated to be over 1,600 digital currencies in existence.

The second biggest cryptocurrency in terms of market capitalisation is currently Ethereum. Like Bitcoin, Ethereum exists as part of a blockchain-based network. The main difference between the two currencies is that Bitcoin focuses on tracking ownership of the digital currency with a set of rules for independent transaction validation known as proof-of-work, while Ethereum’s decentralised computing software

enables its users to run programs and codes to develop smart contracts. In contrast to a standard contract which outlines the terms of a relationship (which are typically enforceable by law), a smart contract actually enforces the relationship by virtue of the program executing exactly as it has been set up to by its creators. This allows developers to build various types of distributed apps and technologies that would not be compatible with Bitcoin.

Other major cryptocurrencies include, but are not limited to, the following:

- Ripple
- LiteCoin
- EOS
- Cardano
- Stellar Lumens
- NEO.

Evaluation of accounting approaches for holdings of cryptocurrency assets

In this section we consider how an entity reporting under IFRS might account for holdings of cryptocurrencies, and whether these are acceptable or not under IFRS. The table provides a summary.

Standard	Categorisation	Acceptable under IFRS
IAS 7 Statement of Cash Flows	Cash and cash equivalents	No
IAS 39 Financial Instruments: Recognition and Measurement	Financial asset at Fair Value Through Profit or Loss	No
IAS 40 Investment Property	Investment property	No
IAS 16 Property, Plant and Equipment	Property, plant and equipment	No
IAS 38 Intangible Assets	Intangible assets	Yes
IAS 2 Inventories	Inventories	Yes*

* under certain conditions.

Cash and cash equivalents

Cash

As a form of digital money, it might be expected that a cryptocurrency holding could be accounted for as cash. Unlike cash, however, cryptocurrencies are not backed by a government or central bank. Furthermore, they are not considered legal tender in virtually all jurisdictions.

Putting this in an accounting context, IAS 7 'Statement of Cash Flows' does not provide a definition of cash, merely stating that "cash comprises cash on hand and demand deposits". IAS 32 'Financial Instruments: Presentation' however says that "currency (cash) is a financial asset because it represents the medium of exchange and is therefore the basis on which all transactions are measured and recognised in financial statements". Looking at this description, it appears clear that cryptocurrencies cannot be considered equivalent to cash as defined in IAS 7 as they cannot readily be exchanged for any good or service.

Cash equivalents

As well as covering cash, IAS 7 defines a second category of 'cash equivalents' – instruments that are almost as good as cash because they are cash-like in nature. Could cryptocurrencies meet this definition?

IAS 7 states that "cash equivalents are short-term, highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value". Looking at this definition, it seems clear that cryptocurrencies cannot be classified as cash equivalents as they are subject to considerable price volatility (Bitcoin for example lost about 28% of its value in January 2018).

Financial asset at Fair Value Through Profit or Loss

Another seemingly intuitive approach to accounting for cryptocurrency holdings would be to account for them as financial assets at Fair Value Through Profit or Loss (FVTPL)*.

For such an approach to be possible however, a cryptocurrency would need to meet the definition of a financial instrument as set out in IAS 32. The Standard defines a financial asset as being “any asset that is:

- 1 cash
- 2 an equity instrument of another entity
- 3 a contractual right:
 - i to receive cash or another financial asset from another entity; or
 - ii to exchange financial assets or financial liabilities with another entity under conditions that are potentially favourable to the entity
- 4 a contract that will or may be settled in the entity’s own equity instruments and is:
 - i a non-derivative for which the entity is or may be obliged to receive a variable number of the entity’s own equity instruments; or
 - ii a derivative that will or may be settled other than by the exchange of a fixed amount of cash or another financial asset for a fixed number of the entity’s own equity instruments...

Given that cryptocurrencies are not equity instruments or contracts to be settled in equity instruments, and that we have already concluded that they are not cash, only part (c) of this definition needs to be considered. Possession of cryptocurrency does not however give the holder any contractual right to receive cash or another financial asset.

Our view is that the definition of a financial asset is therefore not met. If any further support is needed, it is notable that IFRS 9 considers the question of whether gold bullion is a financial instrument in its guidance on implementing the Standard. IFRS 9 notes that although gold bullion “is highly liquid, there is no contractual right to receive cash or another financial asset inherent in bullion” and is therefore not a financial instrument. The same could be said of a cryptocurrency holding.

Investment property

Some commentators have proposed to account for cryptocurrency holdings at FVTPL on the basis that they can be considered as investment property.

IAS 40 however defines investment property as:

“property (land or a building – or part of a building – or both) held ... to earn rentals or for capital appreciation...”

Although cryptocurrencies are held by some entities for capital appreciation, our view is that it would be inappropriate for an entity to classify them as investment property and measure them at fair value through profit or loss, as cryptocurrencies are not physical assets.

“In contrast to traditional forms of money which are controlled using centralised banking systems, cryptocurrencies use decentralised control.”

The remaining classification possibilities

Having set out our view that it is not possible to classify cryptocurrency holdings as either cash or cash equivalents; financial instruments; or investment property, we are left with just three remaining classification categories – property, plant and equipment; intangible assets; or inventories.

The classification category of property, plant and equipment can instantly be discounted for the same reason as investment property above – namely that IAS 16 ‘Property, Plant and Equipment’ defines the category in terms of “tangible items” and cryptocurrencies do not have physical form. We can concentrate solely then on the intangible assets and inventories classifications.

Intangible assets

IAS 38 ‘Intangible Assets’ defines an intangible asset as “an identifiable non-monetary asset without physical substance”.

The definition can be broken down into three components. The table shows this and how each part of the definition is met:

Definition

<p>Identifiable</p>	<p>Looking at the first aspect of this definition, IAS 38 states that an asset is identifiable “if it either:</p> <ul style="list-style-type: none"> a is separable, ie is capable of being separated or divided from the entity and sold, transferred, licensed, rented or exchanged, either individually or together with a related contract, identifiable asset or liability, regardless of whether the entity intends to do so; or b arises from contractual or other legal rights, regardless of whether those rights are transferable or separable from the entity or from other rights and obligations”. <p>Cryptocurrency holdings can be traded on an exchange or in peer-to-peer transactions, and therefore meet this part of the definition.</p> <p>As discussed above, cryptocurrency holdings can be traded on an exchange or in peer-to-peer transactions and an entity can therefore expect an inflow of economic benefits from them meeting IAS 38’s overall definition of an asset.</p>
<p>Non-monetary asset</p>	<p>In terms of whether they are a monetary asset or a non-monetary asset, IAS 38 defines monetary assets as “money held and assets to be received in fixed or determinable amounts of money”. The value of a cryptocurrency is not fixed or determinable but subject to major variations that arise from supply and demand and cannot be predicted. Therefore it is not monetary but non-monetary in nature.</p>
<p>Without physical substance</p>	<p>Cryptocurrencies are a form of digital money and do not have physical substance.</p>

To summarise, given that cryptocurrencies are a form of digital money and have no physical form, our view is that in the majority of cases this will be the most appropriate classification for them (in some circumstances it may be appropriate to account for them under IAS 2 ‘Inventories’ as we will discuss later).

Having determined that intangible assets is an appropriate classification for cryptocurrencies, there is then a question of how they should be accounted for under IAS 38.

Accounting approaches under IAS 38

IAS 38 contains two potential accounting approaches – cost or revaluation:

Cost

Under this approach, intangible assets are measured at cost on initial recognition and are subsequently measured at cost less accumulated amortisation and impairment losses.

Cost is defined as “the amount of cash or cash equivalents paid or the fair value of other consideration given to acquire an asset at the time of its acquisition or construction, or, when applicable, the amount attributed to that asset when initially recognised in accordance with the specific requirements of other IFRSs, eg IFRS 2 Share-based Payment”.

Revaluation

It is possible to account for intangible assets at a revaluation amount under IAS 38, provided there is an active market in which they are traded (which may not be the case for all cryptocurrencies).

Under the revaluation model, intangible assets are measured at cost on initial recognition and subsequently measured at fair value less accumulated amortisation and impairment losses.

	Step 1	Step 2
Increase in value	Recognise in profit and loss to the extent of reversal of any decrease recognised in profit and loss in earlier periods	Recognise revaluation reserve in other comprehensive income for remaining balance if any
Decrease in value	Reverse revaluation reserve balance, if any	Recognise the balance in profit and loss

IAS 38 requires a revaluation increase to be recognised in other comprehensive income and accumulated in equity under the heading of revaluation surplus. However, a revaluation increase shall be recognised in profit or loss to the extent that it reverses a revaluation decrease of the same asset that was previously recognised in profit or loss.

A revaluation decrease is recognised in profit or loss. However, the decrease shall be recognised in other comprehensive income to the extent of any credit balance in the revaluation surplus in respect of that asset.

In order to apply IAS 38’s revaluation model, the fair value of an intangible asset must be capable of reliable measurement. It is generally rare for intangible assets to be revalued as active markets for them are uncommon, however where cryptocurrencies are traded on an exchange it may be possible to apply IAS 38’s revaluation model.

Active markets

IFRS 13 'Fair Value Measurement' defines an active market as "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".

There is little additional guidance within IFRS to support this definition, so judgement needs to be applied in deciding whether there is an active market for particular cryptocurrencies.

For the better known currencies such as Bitcoin where extensive daily trades take place, it may be relatively easy to demonstrate that an active market exists. For lesser known cryptocurrencies, however, this may not be the case, particularly where transactions do not take place for cash. Our view is that while it might be possible to look beyond cash transactions in some circumstances (for example, exchanges for other cryptocurrencies that are themselves considered to have an active market) much more weight should be attached to cash transactions.

Entities holding cryptocurrency under a revaluation model will also need to address details such as how to track movements in the revaluation and present them in other comprehensive income. For example, whether this is done on an individual coin basis, which exchange is used for measurement and at what time (given many exchanges operate on a 24 hours a day, 7 days a week basis).

GTIL comment

We are aware that accounting for cryptocurrency assets under IAS 38 is neither very satisfying nor intuitive. Accounting for the assets at cost may have little resemblance to their worth, while the mechanics of the revaluation method with its requirements to recognise gains and losses in profit and loss in some circumstances and in other comprehensive income in others, are complicated. We would therefore encourage the IASB to undertake a project addressing the accounting for these assets.

Amortisation and impairment

IAS 38 requires an entity to assess whether the useful life of an intangible asset is finite or indefinite. In making this assessment, the Standard notes that an intangible asset shall be regarded by the entity as having an indefinite useful life when there is no foreseeable limit to the period over which the asset is expected to generate net cash inflows for the entity.

Given that cryptocurrencies are designed to act as a store of value over time, our view is that they would be considered to have an indefinite life for the purposes of IAS 38. We note however that changes in technology can be rapid, and that the term 'indefinite' under IAS 38 does not mean 'infinite'.

An intangible asset with an indefinite useful life is not amortised but must be tested for impairment by comparing its recoverable amount with its carrying amount annually, and whenever there is an indication that the intangible asset may be impaired.

Under IAS 36 ‘Impairment of Assets’, an impairment loss shall be recognised immediately in profit or loss, unless the asset is carried at a revalued amount. Any impairment loss on a revalued asset is treated as a revaluation decrease in accordance with the Standard under which it has been revalued. As noted above, IAS 38 states that a decrease in the carrying amount of an intangible arising from a revaluation is recognised in profit or loss. However, the decrease shall be recognised in other comprehensive income to the extent of any credit balance in the revaluation surplus for that asset.

IAS 36 also states that a reversal of an impairment loss for an asset other than goodwill shall be recognised immediately in profit or loss, unless the asset is carried at a revalued amount. The Standard requires any reversal of an impairment loss of a revalued asset to be treated as a revaluation increase in accordance with the Standard under which it has been revalued. IAS 38 states that “if an intangible asset’s carrying amount is increased as a result of a revaluation, the increase shall be recognised in other comprehensive income and accumulated in equity under the heading of revaluation surplus. However, the increase shall be recognised in profit or loss to the extent that it reverses a revaluation decrease of the same asset previously recognised in profit or loss”.

Inventories

Depending on an entity’s business model, it could be appropriate to account for cryptocurrencies under IAS 2 ‘Inventories’.

While cryptocurrency holdings meet the definition of intangible assets, IAS 38 states that intangible assets held by an entity for sale in the ordinary course of business are outside the scope of the Standard and should be accounted for under IAS 2.

IAS 2’s default measurement approach is to recognise inventories at the lower of cost and net realisable value. However, it also states that the Standard does not apply to the measurement of inventories held by commodity broker-traders. IAS 2 states that commodity broker-traders are instead required to measure their inventories at fair value less costs to sell, with changes in fair value less costs to sell being recognised in profit or loss in the period of the change.

It is not clear however how to interpret the measurement exception for commodity broker-traders in the context of cryptocurrencies. On the one hand, following IAS 2’s accounting for broker-traders would intuitively seem to be an appropriate approach for those entities that hold cryptocurrencies under a business model which involves actively buying and selling them. On the other hand, cryptocurrencies do not have physical form and analogising to a scope exception which is specific to commodities might be seen by some as inappropriate.

Our view is that the lack of clarity over this scope exception means it could be applied but only in very narrow circumstances involving a business model under which cryptocurrency assets are acquired by the reporting entity with the purpose of selling them in the near future and generating a profit from fluctuations in price or broker-traders’ margin.

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Other issues to be aware of

Currency translation

Cryptocurrencies will need to be translated into an entity's functional currency in accordance with the requirements of IAS 21 'The Effects of Changes in Foreign Exchange Rates'.

In terms of initial recognition, this means that a cryptocurrency holding will be recorded using the spot exchange rate between the functional currency and the cryptocurrency at that date.

Turning to subsequent recognition, IAS 21 requires the following at the end of each reporting period:

- foreign currency monetary items shall be translated using the closing rate
- non-monetary items that are measured in terms of historical cost in a foreign currency shall be translated using the exchange rate at the date of the transaction
- non-monetary items that are measured at fair value in a foreign currency shall be translated using the exchange rates at the date when the fair value was measured.

Monetary items are units of currency held and assets and liabilities to be received or paid in a fixed or determinable number of units of currency. In our view, cryptocurrency holdings fail the definition of monetary items. Accordingly the guidance on non-monetary items above applies.

Disclosure

Entities holding cryptocurrency assets will need to comply with the disclosure requirements of either IAS 2 or IAS 38 as appropriate.

Given that cryptocurrencies do not fit easily within the IFRS framework, entities may need to consider additional disclosures in order to comply with the overall objective in IAS 1 'Presentation of Financial Statements' which is to provide useful information to the users of the financial statements. With this in mind, entities should give consideration to disclosing factors such as:

- the nature of the cryptocurrency assets held
- the accounting policy for them and how this was determined
- how fair value has been determined with appropriate reference to the disclosure requirements of IFRS 13 'Fair Value Measurement', in particular those relating to the fair value hierarchy.

Entities adopting a cost approach under IAS 38, should consider disclosing the fair value of the assets held as additional information. Disclosure of changes in the fair value of the assets after the reporting date (non-adjusting events) and historical information on the volatility of the cryptocurrency should also be considered irrespective of whether the assets are accounted for at cost or at revaluation.

Mining issues

Cryptocurrency mining describes the process in which transactions for various forms of cryptocurrency are verified and added to the blockchain digital ledger.

A number of additional issues arise for entities that are 'mining' cryptocurrencies. Cryptocurrency 'miners' for example use large amounts of computing power to solve blockchain algorithms. Once a block has been solved by the miner they may, depending on the mining algorithm, be entitled to 'transaction fees' as consideration for verifying cryptocurrency transactions and entering them in the blockchain ledger. Such transaction fees are specified by the original transacting parties. Again depending on the mining algorithm, the miner may also receive a reward of newly minted cryptocurrency for solving the block, the amount of the reward being determined by the underlying blockchain software. Questions arise as to whether the transaction fees earned by cryptocurrency miners and also the reward of newly created cryptocurrency can be recognised as revenue.

Additional considerations can also arise in situations where individual miners' pool together, combining their computing resources in order to solve a block quicker. We will look to discuss some of these issues in a future Viewpoint.



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