

# Cryptocurrencies – Decrypting the accounting

by Donal Boyle

**This article looks at how to recognise and measure transactions involving cryptocurrencies and the accounting issues to be considered by the holder of cryptocurrencies.**

Resisting change is something we can all relate to, especially when the change relates to how our wealth is recorded. The double-entry bookkeeping system, which has been in use in one form or another since the 11th century AD, is considered to be the cornerstone of modern accounting and financial reporting. So, are we ready to embrace a potential challenger to the book-keeping throne in the form of 'blockchain' and embrace a new form of monetary measurement in the form of 'cryptocurrency'? The jury is out on that, particularly if history is anything to go by - change of this nature has been met with skepticism and challenge throughout the ages. One of the best examples of this resistance was during the introduction of paper currency in the UK which replaced Tally Sticks as the accepted form of recording wealth.

Originating in the middle ages, Tally sticks were a way of recording monetary transactions, and up to the mid-19th Century were used by the Exchequer as their primary accounting and book-keeping system. Much to the resistance of citizens, who were attached to tally sticks as a reliable physical ledger of wealth, the Government of the time (1834) ordered the burning of tally sticks in support of the Bank of England's introduction of paper currency.

The sticks were burnt in a stove in the Houses of Parliament resulting in a chimney fire that destroyed the entire building, over six centuries worth of financial records up in flames!

So, what exactly is blockchain and cryptocurrency? Blockchain, often referred to as the digital ledger, keeps a record of all transactions that take place across a peer-to-peer network and enables the encryption of information and cryptocurrencies, such as Bitcoin, Ethereum, Dogecoin and many others. These digital tokens/coins are supported by blockchain and are exchanged or traded on this peer to peer network and offer an alternative to more common digital monetary transfer mechanisms.

While blockchain and cryptocurrency have more to prove before challenging as an enduring contender to the traditional book-keeping throne, the use of cryptocurrencies has proliferated the business world over the last decade and while exposed to significant levels of volatility over the past number of years, their development and use continues to evolve at breakneck speed.

So why is cryptocurrency proving to be so popular? Well mainly because it solves a lot of the existing challenges of more traditional money transfer systems including:

- cryptocurrencies are a secure digital representation that are designed in such a way that they cannot be copied or duplicated,
- the blockchain technology is decentralised across a peer network and much less exposed to cyber-attack,
- much quicker than traditional monetary transfer systems; and
- typical of technology disruptors in the market, it removes the middle man - the bank!

## Accounting considerations

The evolution of cryptocurrency has not gone unnoticed by accounting standard setters and has been a topic of discussion by the IASB since 2015 culminating in a July 2018 decision to ask the IFRS Interpretations Committee to consider guidance for the accounting of transactions involving cryptocurrencies. The key financial reporting issue at hand is how to recognise and measure transactions involving cryptocurrencies for both the instrument issuer and holder. In this article we focus on some of the accounting issues to be considered by the holder of cryptocurrencies.

In the absence of specific IFRS accounting guidance that addresses the recognition, measurement and disclosure implications of holding cryptocurrency assets, we need to look at the existing IFRS standards and apply a principles-based approach.

## Initial recognition

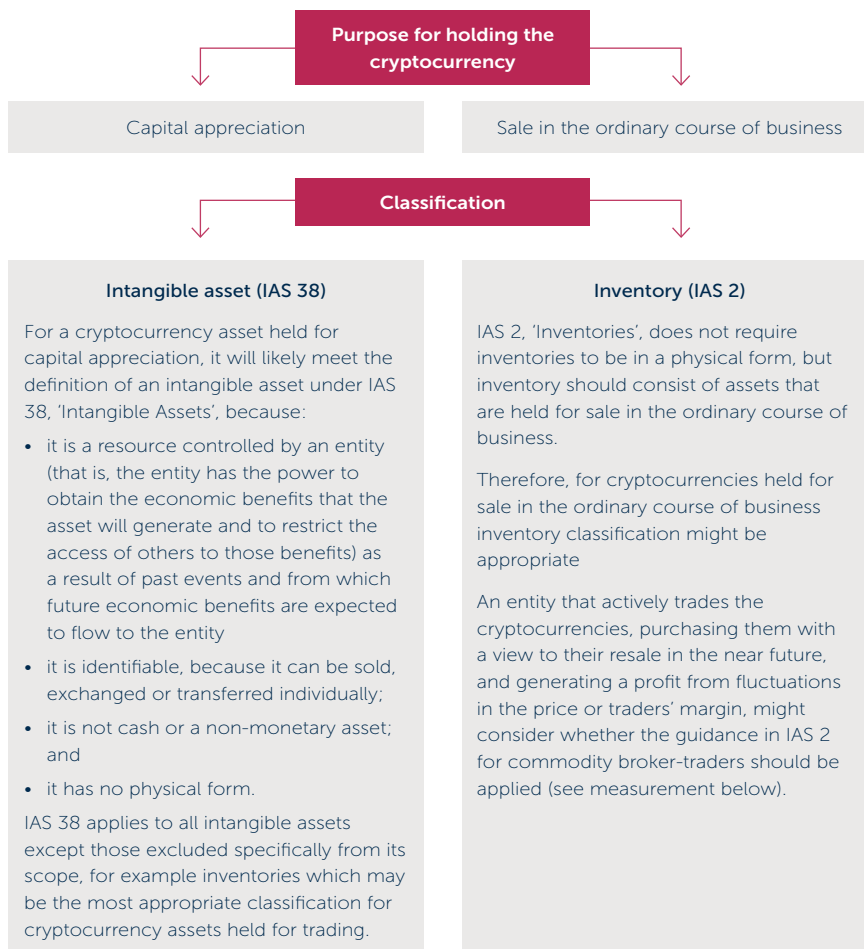
So, what are the possible accounting standards that could be applicable to the holding of cryptocurrencies? The table below discusses some of the possible asset classifications available under IFRS.

Classification	Standard	Discussion
Cash	IAS 7	<p>As a form of virtual money, we might be forgiven for thinking that cryptocurrency would likely meet the definition of cash or currency for IFRS reporting purposes. There might be an argument that, for accounting purposes, the words 'cash' and 'currency' are interchangeable however cryptocurrencies do not share the typical properties of cash and currency. These include:</p> <ul style="list-style-type: none"> <li>cryptocurrencies are not legal tender and mostly are not issued or backed by a government.</li> <li>cryptocurrencies are currently not capable of being directly exchanged in the broad sense of the word for goods and services. So, while cryptocurrencies might be accepted to settle some transactions, they are not directly related to the setting of prices for goods or services in an economy.</li> </ul> <p>Due to these restrictions, it is difficult to see how cryptocurrency assets would meet the cash classification requirements of IAS 7. This may change as the nature and use of cryptocurrency evolves but judgement would be required of the factors set out above to determine if it meets the definition of cash.</p>
Financial asset - other than cash.	IAS 32	<p>IAS 32 requires that in order for an instrument to be classified as a financial asset, it must give the holder a contractual right to receive cash or another financial asset. Cryptocurrencies fail on two fronts here - they typically do not give the holder any right to receive cash or other financial asset nor does the cryptocurrency asset arise as a result of a contractual relationship. So, similar to cash above, cryptocurrencies in their current form would not meet the definition of a financial asset.</p>
Property, Plant and Equipment	IAS 16	<p>Cryptocurrencies do not fall into the scope of IAS 16, 'Property, Plant and Equipment', because they are not tangible items with a physical property.</p>

So, having looked at some of the asset classifications under IFRS that don't seem to allow sufficient scope for the recognition of cryptocurrencies, let's take a look at some that may work. For the purpose of determining the appropriate accounting model to apply to the initial recognition and measurement of cryptocurrencies it is useful to consider the purpose for which the entity is holding the cryptocurrency –

- Is it for use in the ordinary course of business? or
- Does the entity intend to trade in cryptocurrencies?

The answer to this question will help narrow the possible accounting scenarios.



## Measurement of cryptocurrency

### Inventories

If it is determined, based on the entity's business model, that inventory accounting is appropriate, inventories would typically be measured at the lower of cost and net realisable value. However, if a broker-trader concludes that a cryptocurrency asset represents a commodity that the entity actively trades to generate profit then it may be appropriate to use the measurement exemption included in IAS 2 to measure this type of inventory at fair value less cost to sell with changes in fair value recognised in profit or loss. The term 'commodity' is not defined in IAS 2 and therefore the decision to apply the broker-trader exemption in IAS 2 would require judgement by the reporting entity.

### Intangible assets

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

- Under the cost approach, intangible assets are measured at cost on initial recognition and are subsequently measured at cost less accumulated amortisation and impairment losses, or
- Intangible assets may be carried at a revalued amount (based on fair value) less any subsequent amortisation and impairment losses only if fair value can be determined by reference to an active market (which may not be the case for all types of cryptocurrency).

Under the revaluation model, revaluation increases are recognised in other comprehensive income and accumulated in the "revaluation surplus" within equity except to the extent that they reverse a revaluation decrease previously recognised in profit and loss. If the revalued intangible has a finite life and is, therefore, being amortised (see below) the revalued amount is amortised. For the majority of cryptocurrencies, amortisation is not expected.

## Measurement possibilities:

Applicable standard	Initial measurement	Subsequent measurement	Movements in carrying value
Inventory (IAS 2)	Cost	Lower of cost and net realisable value	Movements above cost – N/A Movements below cost – Profit and loss
Inventory (IAS 2) – broker trader	Cost	Fair value less costs to sell	Profit and loss
Intangible assets (IAS 38) – cost model	Cost	Cost less any accumulated amortisation and impairment	Movements above cost – N/A Movements below cost – Profit and loss
Intangible assets (IAS 38) – revaluation model	Cost	Fair value less any accumulated amortisation and impairment	Movements above cost – Other comprehensive income Movements below cost – Profit and loss

### A word on fair value

Two of the possible measurement models above require that the fair value of the cryptocurrency to be determined and it may also be necessary to determine fair value for disclosure purposes, even in cases where the asset is measured using a cost model. The determination of fair value comes with its own set of challenges.

IFRS 13, 'Fair Value Measurement', defines fair value as "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", and it sets out a framework for determining fair values under IFRS. 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; and
- Level 3: unobservable inputs.

Some of the challenges in applying the requirements of IFRS 13 to cryptocurrencies include:

- Determining whether an active market exists - IFRS 13 defines an active market as one "in which transactions for the asset or liability take place with sufficient frequency and volume to provide pricing information on an ongoing basis".
- In some cases, there might be several markets for a particular cryptocurrency and each of those markets might have different prices at the measurement date. In these situations, IFRS 13 requires the entity to determine the principal market for the asset (the market with the greatest volume and level of activity).
- Then, even if a primary market is identified, in many cases cryptocurrencies are not traded for fiat currency but rather other cryptographic assets so it becomes difficult to conclude that an active market exists if 'pricing information' for the cryptocurrency is not available in a currency equivalent.

- If the cryptocurrency does not have an active market as described by IFRS 13, the assets will need to be valued using a valuation technique. This determination of an appropriate valuation methodology as well as estimating the relevant inputs into the valuation model will be subject to significant judgement and estimation uncertainty.

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## Conclusion

The number of potential classifications within the financial statements as well as the further complexities with respect to the initial recognition and measurement of cryptocurrency assets including the challenge with respect to the estimation of fair values, highlights the importance of understanding the entity’s business model and purpose for holding the cryptocurrency.

This increases the importance of establishing clear and specific accounting policies and ensuring their consistent application to similar transactions, as well as appropriate disclosures, to ensure the users of the financial statements have a clear understanding of the impact and relevance of cryptocurrencies on the business.



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