Digital currency – A case for standard setting activity.

A perspective by the Australian Accounting Standards Board (AASB)

Principal author:

Henri Venter

Contents

1. Introduction

Over the last few years the prevalence of digital currencies has increased. However, a lack of clear guidance in IFRS has resulted in diversity in practice in accounting for such currencies. In this paper we provide an analysis of the current accounting issue and provide a recommended way forward.

1.1 Executive summary

In our opinion there is a lack of clear guidance in IFRSs and, as a consequence, digital currencies could be accounted for under IAS 2 *Inventory* or IAS 38 *Intangible Assets* depending on certain facts and circumstances. We do not think that the measurement guidance in IAS 2 and IAS 38 provides relevant information to users of financial statements in the context of digital currencies. We think that digital currencies should be measured at fair value with changes in fair value recognised in profit or loss. Furthermore, we think that the accounting for digital currencies highlights a broader issue with IFRSs in that there is no accounting standard that deals with investments in intangible assets or other commodity type assets that are not financial instruments or inventory. Consequently, we recommend that the IASB develop a standard that would address the accounting for investments in intangible assets and commodities.

1.2 Content of this paper

Section 2 Explains what digital currencies are and the relative size of the market for the biggest and best known digital currency.

Section 3 Analyses the current IFRS literature.

Section 4 Considers the relevance of accounting outcomes under current IFRS guidance.

Section 5 Considers alternative approaches to address the issues identified.

1.3 Questions contained in this paper

Based on the analysis provided and the issues identified in this paper we pose the following questions to ASAF:

Question 1: Do you agree that there are significant interpretation issues in viewing digital currencies as “cash”?

Question 2: Do you agree that there is a gap in IFRS literature around the accounting for digital currencies?

Question 3: Do you agree that there are significant interpretive issues in IFRS literature around accounting for intangible assets and commodities held for investment purposes (such as digital currencies, emission rights and water rights)?

Question 4: If you agree digital currency issues need to be addressed, should the IASB address digital currency as part of a broader project (which would address investments in intangible assets and commodities) or should it be as a limited scope project?

2. Background

In this section we consider what digital currencies are, the size of the Bitcoin market (currently the biggest of the digital currencies) and the growth in its market capitalisation. The information presented only reflects activity on currency exchanges. The quantum of activity outside exchanges is not known. The purpose of this section is not to provide an argument for the absolute size of the digital currency market, but rather, to provide the reader with context on the rapid expansion of digital currencies in recent years and expectations for future use.

2.1 What is a digital currency

Digital currencies should not be confused with electronic occurrences of cash (for example, an online bank account with a retail bank). An online bank account with a retail bank shows the amount of, for example, AUS dollar held in a specified account. In other words, electronic occurrences of cash is linked to a physical currency. On the other hand, a digital currency refers to a form of exchange that only exists digitally and is not linked to any physical currency. The best known example of a digital currency is Bitcoin. However, there are many examples of digital currencies at different stages of maturity in existence today.

Below is the top 10 digital currencies as at 24 October 2016 according to the website Coinmarketcap.com (https://coinmarketcap.com/):

Digital currency	Market Cap US$ bn[1]
1. Bitcoin	10,59
2. Ethereum	1,10
3. Ripple	0,33
4. Litecoin	0,19
5. Ethereum Classic	0.90
6. Monero	0,86
7. Dash	0,68
8. Augur	0,58
9. Maidsafecoin	0,39
10. Steem	0,37

To better understand what a digital currency is, it is worth highlighting what we understand "cash"[2] to be.

When we refer to "cash"[3] in the traditional sense of the word, we are referring to an inconvertible piece of paper made legal tender by a government decree (otherwise known as fiat money). Fiat money is not backed by a physical commodity. The value of fiat money is derived from the relationship between supply and demand rather than the intrinsic value of the material that the money is made of. Historically, most currencies were based on physical commodities such as gold or silver, but fiat money is based solely on the faith and credit of the economy. In a fiat system, the public must have confidence and faith in "money's" ability to serve as a storage facility for purchase power.

[1] Total USD value of currency supply in circulation, as calculated by the daily average market price across major exchanges

[2] This paper will use the terms "currency", "money" and "cash" interchangeably.

[3] There is currently no definition in IFRS for "cash".

Similarly, a digital currency is not backed by a physical commodity nor does it exist in physical form. It is also not linked to any physical currencies either although digital currencies are often quoted on an exchange against other currencies like US dollar. Like fiat money its value is derived from the relationship between supply and demand. If we take Bitcoins as an example, scarcity was introduced by limiting the number of bitcoins that could ever exist to 21 million. However, unlike fiat money, digital currencies are not backed by a government, central authority or legal entity (Sunderland, 2013) (Bamert et al, 2013).

Why is backing by a government or some sort of central authority so important? Because fiat money is not linked to a physical commodity it is easy for it to become worthless if people lose faith in that currency as a medium to serve as a storage facility for purchase power. “Money’s” purchase power is directly affected by how a country governs itself and the state of its economy.

2.2 Why are digital currencies used?

Digital currencies are developed and held for a number of purposes, as a medium of exchange, similar to cash, but also for speculative purposes (short term investment) and investment like purposes (long term appreciation in value) depending on whether a holder is intending to benefit from reduced transaction costs or longer term plays that its value will continue to increase.

Given the lack of government or central authority backing it, a digital currency’s ability to serve as a storage facility for purchase power reflects market sentiment and investors believing that a digital currency will become a widespread or more commonly used medium of exchange of the future.

The speculative nature of Bitcoin is demonstrated by the severe volatility in its value. The diagram below illustrates the volatility in Bitcoin over one year. As at 22 October 2016, the average USD market price across major exchanges was US$655.49.

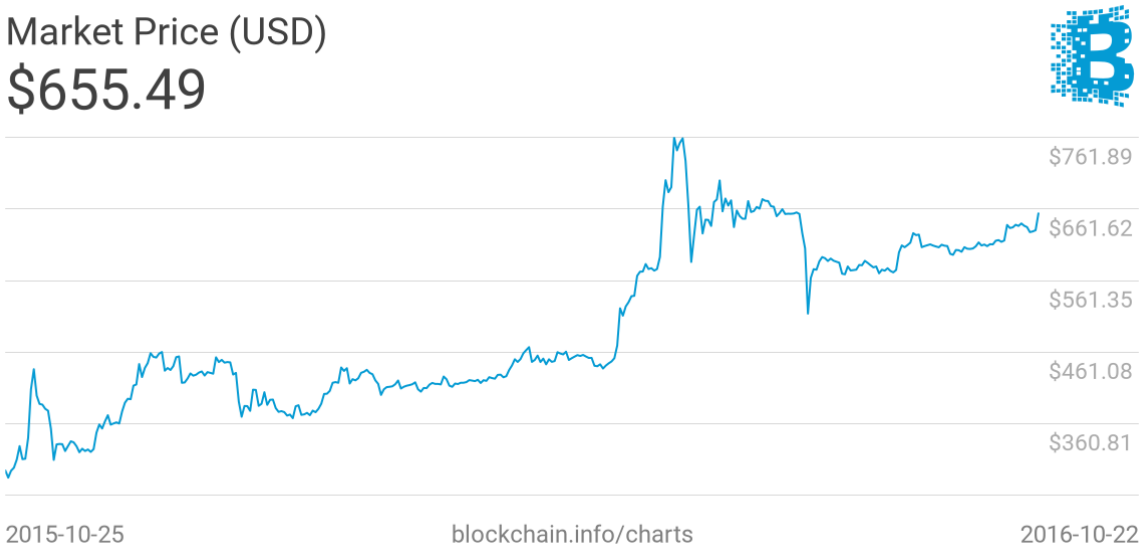

Figure 1 Average USD market price across major bitcoin exchanges (https://blockchain.info/charts/market-price)

Conversely, it is this lack of government or central authority interference that gives a digital currency one of its benefits, a digital currency is fungible and transcends borders. For example, 1 Bitcoin in Australia is the same as 1 Bitcoin in Germany, is the same as 1 Bitcoin in Argentina and so on. Unlike fiat money, a digital currency is not influenced by macroeconomic variables such as interest rates, GDP and fiscal policy (Ciaian et al, 2014).

Referring back to the concept of a digital currency as the method of exchange. What does a digital currency do that fiat money does not? The main value proposition for a digital currency is that it allows peer-to-peer transactions. Simply put, it allows one party to transact with another party directly without the need for an intermediary (for example, a bank or payment merchant). This saves significant amounts of time in doing transactions and saves expensive fees and transaction costs charged by banks and payment merchants.

In summary, a digital currency is able to sidestep traditional financial institutions and normal cross border regulations in handling payments as a result of the technology underpinning it. This technology is known as blockchain technology. Using blockchain technology every transaction ever made using a specific digital currency is recorded. The technology uses complicated algorithms to verify each transaction. Due to the specific way the technology is used, a digital currency cannot be counterfeited per se and hence introduces security and trust into the system.

With regard to security, it is worth understanding what is meant by references to "hacking of digital currencies" which have been in the media lately. A digital currency cannot be counterfeited due to the unique way in which the algorithm works that verifies each transaction. However, digital currencies held in e-wallets can be stolen. In other words, if someone gains unlawful access to passwords that give them access to legitimate bitcoins, those bitcoins could be stolen.

The premise of a digital currency as a method of exchange is still misunderstood by many and not yet widely applied. However, its acceptance as a method of payment is increasing and trading activity is increasing at a rapid rate. It is possible that future growth in digital currencies could be similar to the global adoption of the World Wide Web.

Therefore we ask: is digital currencies a material enough phenomenon to require the attention of standard setters? In our opinion, yes. In the next section we have summarised some of the key market developments.

2.3 Is digital currencies a material enough phenomenon to require the attention of standard setters?

There are numerous digital currencies in existence to date. However, to best demonstrate the level of activity we have focussed our attention on the biggest and best known digital currency – Bitcoin. This is not meant to be an in-depth analysis of the depth or sophistication of the entire digital currency market, rather, we demonstrate that the rate of growth and the size of Bitcoin market alone is enough to warrant action. This is summarised below.

There is a significant number of daily transactions in Bitcoins. The confirmed number of Bitcoin transactions on 22 October 2016 was 216,708 transactions. Over a one year period the level of activity was highly volatile but a sustained level of activity was generally maintained. However, this only represents transactions on exchanges. This does not reflect the total number of all transactions in Bitcoin (for example, this does not include transactions between individuals outside of an exchange).

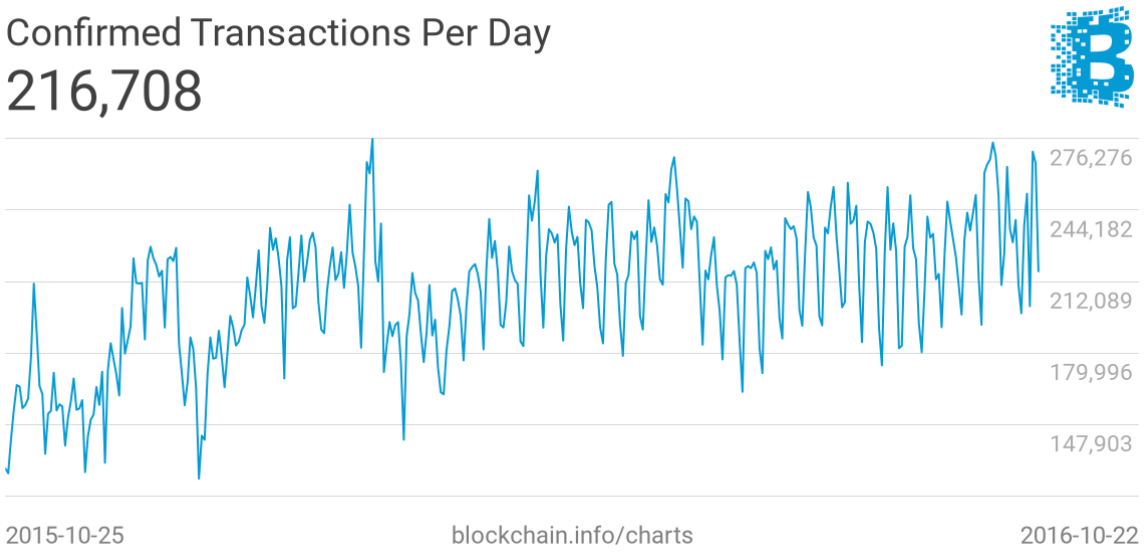

Figure 2 Number of daily confirmed Bitcoin transactions (https://blockchain.info/charts/n-transactions)

Trading volumes, even though highly volatile, are significant. The total USD value of trading volume on major Bitcoin exchanges on 22 October 2016 was US$ 23 million. Over a one year period, the daily trading volume was similarly volatile with highs of US$ 240 million in November 2015.

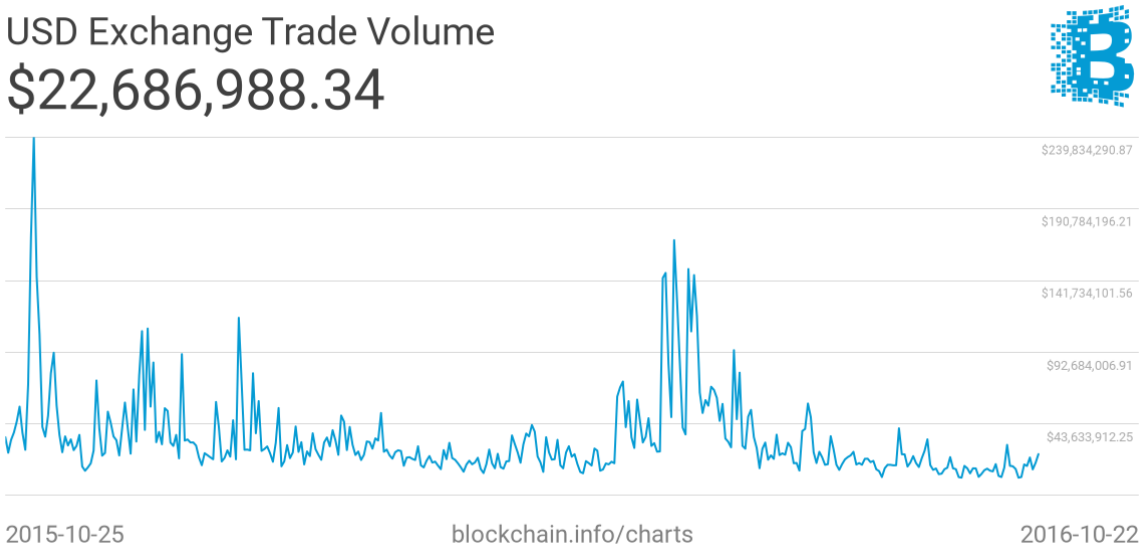

Figure 3 Total USD value of trading volume on major bitcoin exchanges (https://blockchain.info/charts/trade-volume)

Market capitalisation has more than doubled in the last 12 months. The total value in US$ of Bitcoins in circulation (based on the daily average market price across major exchanges) was US$10.59bn as at 22 October 2016. The market capitalisation has more than doubled in just 12 months from US$4.33bn on 25 October 2015.

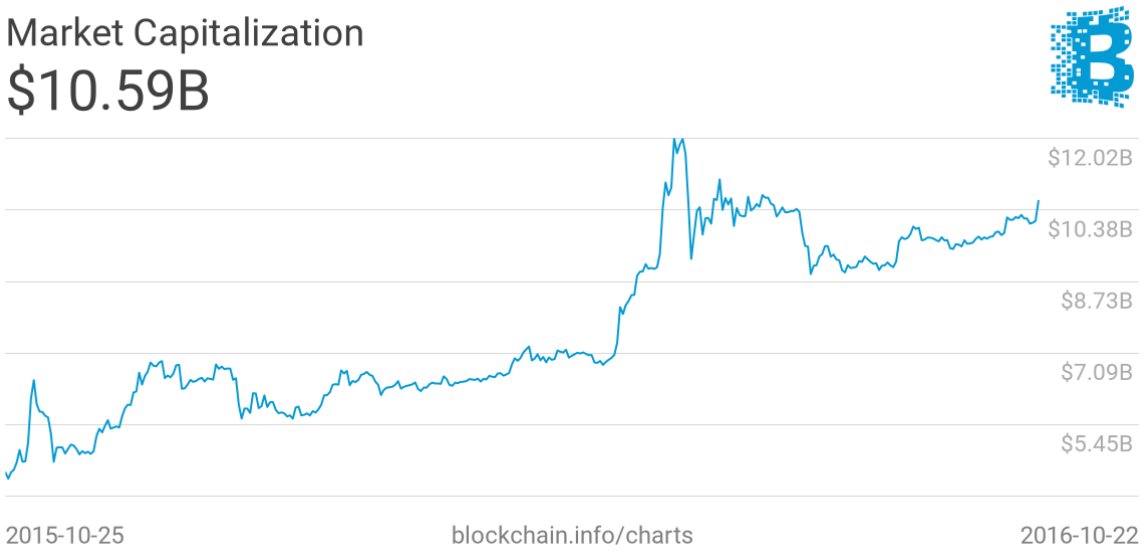

Figure 4 Total USD value of bitcoin supply in circulation, as calculated by the daily average market price across major exchanges (https://blockchain.info/charts/market-cap)

In our opinion, given the increase in the number of transactions and the market capitalisation, the expectations of use of similar currencies and the time it takes to develop a standard it is imperative that accounting standards should be able to cope with a significant market development such as digital currencies.

3. Current IFRS literature

The *Conceptual Framework* defines an asset as a resource controlled by the entity as a result of past events and from which future economic benefits are expected to flow to the entity. In our opinion, a holding of digital currency would meet this definition. This is because an entity would either buy, "mine" or receive a digital currency unit as payment (i.e. past event) and would be able to control that digital currency unit as it would be able to decide when to sell it or use it as a medium of exchange (i.e. resource controlled). Finally, if an entity sells or otherwise exchanges a digital currency for some other goods or services, the economic benefit is expected to flow to that entity.

However, different views have been expressed in determining which International Financial Reporting Standard (IFRS) to apply when accounting for holdings of digital currencies under. These include accounting for the holding of digital currencies as cash or cash equivalents under IAS 7 *Statement of Cash Flows*, as financial instruments under IAS 39 *Financial Instruments: Recognition and Measurement* (or IFRS 9 *Financial Instruments*), as intangible assets under IAS 38 *Intangible Assets* or as inventory under IAS 2 *Inventory.* These different views have already resulted in diversity in practice.

Appendix A contains some examples of accounting policies for holdings of digital currencies that have been adopted by IFRS compliant companies with publicly available financial statements.

3.1 Summary of analysis of accounting literature

In our opinion, a digital currency:

- does not meet the definition for **cash or cash equivalents** under IAS 7 as it lacks broad acceptance as a means of exchange (at present) and it is not issued by a central bank. This is discussed further in section 3.2.

- does not meet the definition of a **financial instrument (other than cash)** under IAS 39 as there is no contractual relationship that results in a financial asset for one party and a financial liability for another. This is discussed further in section 3.3.
- meets the definition of an **intangible asset** under IAS 38 as it is an identifiable non-monetary asset without physical substance. However, it is not clear how to interpret IAS 38's scope exception for assets held for sale in the ordinary course of business in the context of digital currencies. This is discussed further in section 3.4.
- could be scoped into IAS 2 as **inventory**, however, it is not clear how to interpret the measurement exception for commodity broker-traders in the context of digital currencies. This is discussed further in section 3.5.
- highlights a broader issue in IFRSs with regard to intangible assets and commodities held for investment purposes. This is discussed further in section 3.6.

Furthermore, we do not believe that application of the measurement requirements in IAS 38 or IAS 2 (except for instances where an entity is considered to be a commodity broker-trader) provide relevant or useful information to users of financial statements in the context of digital currencies. This is examined further in section 3.6.

3.2 Is it cash or cash equivalents?

IAS 32 *Financial instruments: Presentation* specifically includes "cash" in the definition of a financial asset. However, the concepts of cash and cash equivalents are defined in IAS 7. We have considered "cash" and "cash equivalents" separately below.

It is our opinion that, at present, digital currencies should not be considered cash or cash equivalents for the reasons explained below.

3.2.1 Cash

Some argue that a digital currency is just another form of cash and that it should be accounted for as such.

IAS 7 defines cash as cash on hand and demand deposits. [IAS 7:6] No further definition of "cash" or "demand deposits" is provided.

What is "cash on hand"? Arguably, until the advent of digital currencies we never had to question what "cash on hand" included or represented. Until now the concept of "cash" was intuitively well understood as an accounting concept. For example, IAS 32 *Financial instruments: Presentation* includes "cash" in the definition of a financial instrument and provides the following reason for doing so in paragraph AG3:

> 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. A deposit of cash with a bank or similar financial institution is a financial asset because it represents the contractual right of the depositor to obtain cash from the institution or to draw a cheque or similar instrument against the balance in favour of a creditor in payment of a financial liability. [IAS 32:AG3]

Interestingly, IAS 32 uses the term "currency" and "cash" interchangeably in paragraph AG3. This introduces another dimension to the debate (which will not be elaborated on further); is there a difference between "cash" and "currency"?

Looking to the second element in the definition of “cash”, i.e demand deposits, it does not add any clarity. Generally, the term “demand deposits” is taken to refer to deposits where the reporting entity can withdraw cash without giving any notice and without suffering any penalty. In other words, it is as good as cash on hand.

This leaves us with the guidance in IAS 32:AG3 which is that; “cash” (or “currency”) represents a medium of exchange.

As at 20 September 2016, a report by 99Bitcoins listed all companies that accept bitcoin as a means of payment (99Bitcoins, 2016). Coincidently, according to 99Bitcoins, 99 companies accept Bitcoins as a means of payment (including companies like Microsoft and Dell). This list only looked at the use of one digital currency, namely Bitcoin. However, as the biggest and most well-known digital currency it serves as a good representation of the use of digital currencies as a medium of exchange. Whether or not the list is complete, the point is that in the context of global trading, only a small number of entities currently accept digital currency as a means of payment. However, the list is growing.

Furthermore, while not all jurisdictions have made formal statements, nobody seems to recognise digital currency as legal tender (yet). Also, almost all jurisdictions that have issued formal views on digital currencies have warned about its volatility and have concerns around the lack of regulation around it (Hill, 2014). It is worth noting that even though there is a lack of recognition as legal tender, numerous jurisdictions have tax-laws and anti-money laundering regulations in place. In other words, tax and other government authorities have definitions and views on digital currencies while IFRSs do not. It has been reported that some central banks are considering the use of digital currencies, and it is not an inconceivable outcome.

Given the above, it is fair to say that as a means of exchange, digital currencies have not yet achieved widespread acceptance, and they are clearly not supported by a central bank, or recognised as legal tender. Therefore, it is difficult to conclude that, at present, digital currencies meet the definition of cash with reference to the guidance in IAS 32:AG3. However, this position might change as digital currencies gain acceptance in future.

There are also a number of accounting related issues with increasing the scope of items considered cash. Cash drives the functional currency in which financial statements are presented. Does it make sense that financial statements could be presented in a functional currency of bitcoins? Where would the line be drawn? Would customer loyalty points and other forms of barter transactions be included as they are also capable of being widespread mediums of exchange? In our view the most important, implicit, aspect of cash for accounting purposes is the central bank support and designation as legal tender.

3.2.2 Cash equivalents

If digital currencies are not considered cash (yet), could they be considered “cash equivalents”?

Some financial instruments are cash-like. In other words, they are almost as good as cash. IAS 7 refers to such financial instruments as “cash equivalents” and requires them to be presented together with cash for the purposes of a Cash Flow Statement. IAS 7 defines cash equivalents as 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.

At first glance, it would seem that a digital currency would fail the definition of a "cash equivalent" as a result of the significant volatility in the price of digital currencies. However, there are different schools of thought on this point.

Digital currency prices, as traded on exchanges, are always represented in some other currency (for example, US Dollar, Euros, Aus Dollar etc). Some would argue that the exchange traded price volatility for digital currencies is too significant and as a result, digital currencies would therefore fail the definition of a cash equivalent.

However, others would argue that the volatility related to exchange traded prices is irrelevant when assessing "insignificant risk of changes in value". In other words, the fact that a cash equivalent in a foreign currency is very volatile in an entity's functional currency does not affect its accounting as a cash equivalent.

Following this logic, an "insignificant risk of change in value" can only be assessed if the "value" is based in the same currency. For example, the significance of the risk of changes in value of a 1-month USD term deposit would be assessed in USD. Consequently, the significance of the risk of changes in value of a digital currency can only be assessed with "cash" existing in the same currency. However, as discussed above, digital currency is not considered "cash". It therefore would fail the definition of a cash equivalent.

No matter which school of thought is followed, a digital currency seems to fail the definition of a cash equivalent.

3.2.3 A broader understanding of cash

Looking beyond the accounting literature, "cash" is typically understood to be anything that (a) stores value, (b) provides a common base for prices and (c) serves as a medium of exchange (Asmundson and Oner, 2012).

For cash to be a storage facility for value, it should not be subject to severe volatility. However, as discussed above, digital currency does not (as yet) provide a vehicle that could be regarded as a storage facility for value (refer to section 3.2.2).

As a unit of account (i.e. a common base for prices), a digital currency (as yet) falls short. Goods and services are not quoted in, for example, Bitcoin. Even though it is accepted as a mean of payment by some, it is not a common base for prices generally.

This leads us to the final criterion of cash; a medium of exchange. Digital currencies also fall short as a widely accepted medium of exchange for the reasons explained above (refer to section 3.2.1).

Consequently, even if we consider what "cash" is outside of accounting literature, we do not believe that a digital currency could be considered cash or cash equivalent (yet).

Question 1 to ASAF

Do you agree that there are significant interpretation issues in viewing digital currencies as "cash"?

3.3 Is it a financial instrument (other than cash)?

The definition of a financial instrument is relatively broad; a financial instrument is defined as any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity. [IAS 32:11]

The problem with applying the definition of a financial instrument to a digital currency is the requirement for there to be a **contractual relationship**. For example, if Entity A issued a bond to Entity B, Entity A has a contractual obligation to pay a specified amount of cash to Entity B. At the same time Entity B has a contractual right to receive a specified amount of cash from Entity A. It would therefore meet the definition of a financial instrument for both Entity A and Entity B.

However, holding 1 unit of a digital currency does not give a **contractual** right or obligation to pay cash or another financial asset. Consequently, it fails the definition of a financial instrument.

This is further evidenced by illustrative guidance IG.B.1 in both IAS 39 and IFRS 9. In that guidance the IASB uses the example of gold bullion to explain the definition of a financial instrument. It states that although gold bullion is highly liquid, it gives no **contractual** right to receive cash or another financial asset inherent in gold bullion, and so therefore it is a commodity and not a financial instrument.

Digital currency is created via a process called "mining". This involves solving increasingly difficult cryptographic problems, and requires progressively more powerful computers for productive mining (Deloitte, 2014). Consequently, a digital currency does not come into existence as a result of a contractual relationship. So similar to the gold bullion example above, a digital currency would be closer to an intangible commodity than a financial instrument.

It is our opinion that digital currencies fail the definition of a financial instrument.

3.4 Is it an intangible asset?

If digital currencies are not regarded as financial instruments, it is necessary to consider what other type of asset it is. IAS 16 *Property, plant and equipment* includes in its definition of property, plant and equipment that it is "tangible" items. Given that digital currencies do not have a physical form, they are not tangible and are excluded from being regarded as property, plant and equipment. Similarly, in IAS 40 *Investment Property*, investment property is defined as land or buildings, which will exclude a digital currency. That leaves us with IAS 38 and intangible assets or inventory in certain circumstances.

IAS 38 defines an intangible asset as an identifiable non-monetary asset without physical substance. It goes on to define a monetary asset as money held and assets to be received in fixed or determinable amounts of money[4]. [IAS 38:8]

We considered the elements of the definition of an intangible asset separately:

- **Identifiable** – Under IAS 38 an asset is identifiable if it is separable (i.e. it is capable of being separated or divided from the entity and sold, transferred, licenced, rented or exchanged) or if it arises from a contractual or legal right. [IAS 38:12]

  Digital currency units are identifiable as they are sold in units on an exchange.

- **Asset** – Under IAS 38 an asset is defined as a resource controlled by an entity as a result of past events and from which future economic benefits are expected to flow to the entity. [IAS 38:8] Control in this context means that the entity has the power to obtain the economic benefits that the asset will generate and to restrict the access of others to those benefits. [IAS 38:13]

[4] For the purposes of this paper, we will assume that the IASB uses "cash", "currency" and "money" interchangeably.

After obtaining digital currency an entity will be able to obtain its economic benefits by being able to sell it or use it as a means of payment (where accepted).

- **Non-monetary** – We have already determined that digital currencies would not be considered "cash" (or "money" in the context of IAS 38) and therefore it would be a non-monetary asset.

- **Without physical substance** – Digital currencies are exactly that; digital. They have no physical substance.

In our opinion, based on current IFRS literature, digital currencies would meet the definition of an intangible asset. However, we do not believe that the accounting treatment under IAS 38 would provide relevant and useful financial information. This is discussed further in section4.

3.5 Is it inventory?

Even though digital currencies meet the definition of intangible assets, IAS 38 excludes from its scope intangible assets held by an entity for sale in the ordinary course of business. Such intangible assets should be accounted for as inventory under IAS 2. [IAS 38:3(a)]

In order to determine how to account for an asset (i.e. as either an intangible asset under IAS 38 or inventory under IAS 2) it is necessary to establish how the asset is used in the business.

For example, it would seem fair to say that an entity which trades with digital currencies, would be considered to hold such digital currencies for sale in the ordinary course of business. However, what about other entities, for example:

- Entities that hold digital currencies for investment purposes (i.e. capital appreciation)? Or,
- Entities that accept digital currency as means of payment for their goods or services?

We do not believe that it is necessarily clear how to interpret "held in the ordinary course of business" in the context of digital currencies more broadly.

Why does this matter? The way IAS 38's scope exception is interpreted will directly influence the subsequent measurement of digital currency held. Under IAS 38 it is either based on a cost model or a revaluation model (through OCI) and under IAS 2 it is based on lower of cost or net realisable value. We question whether IAS 38 and IAS 2 provides a relevant measurement basis for a holding of digital currencies. This is discussed further in sections 3.6 and 5.

However, if an entity determines that its holding of digital currency should be accounted for under IAS 2, it will need to determine if it is considered a commodity broker-trader under IAS 2. Under IAS 2 commodity broker-traders are exempted from the measurement criteria of IAS 2. Instead, commodity broker-traders are required to measure their assets at fair value less cost to sell, with changes in fair value recognised in profit or loss.

Under IAS 2, commodity broker-traders are those who buy or sell commodities for others or on their own account. The inventories held by commodity broker-traders are principally acquired for the purpose of selling in the near future and generating a profit from fluctuations in price or broker-traders' margin. When these inventories are measured at fair value less costs to sell, they are excluded from only the measurement requirements of IAS 2.

Again, it seems fair to say that those entities that trade with digital currencies could be considered commodity broker-traders. However, that assumes that a digital currency is viewed as a commodity.

If we refer to the illustrative guidance IG.B.1 in both IAS 39 and IFRS 9, it uses the example of gold bullion and states that it is a commodity rather than a financial instrument (see also 3.6.2)

In our opinion, it is not necessarily clear in the context of digital currencies, when digital currencies should be accounted for under the scope of IAS 2 or IAS 38. Furthermore, it is also not clear if a digital currency should be considered a commodity for the purposes of IAS 2's measurement exemption for commodity broker-traders. We are aware of a number of interpretations that currently exist with regard to the application of the commodity broker-trader guidance in IAS 2. While our intention is not to question those interpretations, it is our intention to highlight the fact that the guidance is not always clear, which results in significant interpretation issues.

This question and other broader issues are discussed further in section 3.6 below.

3.6 Broader issues identified

While we recognise that this paper is focussed on specific accounting problems with regard to digital currencies, we believe that those problems exist because there is a broader issue and that the current debate around digital currencies is actually putting a spotlight on a bigger issue. That issue is the lack of accounting guidance for intangible assets and commodities held for investment purposes.

We note that the superseded IAS 25 *Accounting for Investments* was an all-inclusive standard that addressed the accounting for investments. IAS 25 defined an investment as an asset held by an enterprise for the accretion of wealth through distribution (such as interest, royalties, dividends and rentals), for capital appreciation or for other benefits to the investing enterprise such as those obtained through trading relationships. However, IAS 25 was superseded as a result of issuing IAS 39 and IAS 40 and consequently left a gap that would have addressed the accounting for investments in intangible assets[5] and commodities held for investment purposes.

Examples of intangible assets that are sometimes held for investment purposes include emission rights, water rights and as demonstrated in this paper digital currencies (unless they evolve to meet the definition of "cash"). Commodities that are often held for investment purposes include gold, diamonds and other minerals. Some would also include artwork under commodities held for investment purposes. Digital currencies, whilst intangible in nature, also have a number of similarities to commodities (not defined but typically thought of as being tangible in nature – see 3.6.2), in the way they are used and the reasons they are held.

Holding an asset for investment purposes could mean many things. For example, short-term profit making, capital appreciation or holding to collect dividends, rent or royalties, or for use as a medium of exchange. In our opinion, the definition of "investment" in IAS 25 would be broad enough to capture all of these elements. We are not advocating the use of this definition in IFRSs, however, for the purposes of this paper, we believe it captures the essence of what we refer to as "for investment purposes" and makes a clear enough distinction from assets held for own-use or consumption.

3.6.1 Lack of guidance around intangible assets held for investment purposes

IAS 38 provides a scope exception for intangible assets held for sale in the ordinary course of business, however, this is not the same as investing in an intangible asset. As explained earlier in this paper, even if an asset is excluded from the scope of IAS 38 and accounted for under IAS 2 the

[5] IAS 25 allowed either cost, fair value (with accounting policy choices to recognise changes in profit or loss or equity) or the lower of cost and fair value as measurement bases. In respect of digital currencies, we do not think any basis other than fair value through profit or loss provides relevant information to users of financial statements (refer to section 3.6 of this paper).

measurement guidance of IAS 2 does not provide relevant information unless an entity is a commodity broker-trader. Not all entities that invest in intangible assets will necessarily meet the description of a commodity broker-trader given in IAS 2 (refer to section 3.5).

Consider the application of assets recognised under IAS 16 *Property, Plant and Equipment*. IAS 16 accounts for assets held to generate cash flows indirectly through the production of goods or services. However, IAS 40 *Investment Property* addressed the accounting specifically for land and buildings held for investment purposes. Similar to IAS 16, IAS 38 accounts for intangible assets held to generate cash flows directly. However, there is no IAS 40 equivalent for IAS 38.

Some argue that the guidance in IAS 38 is appropriate for all intangible assets irrespective of the reason for holding it. In other words IAS 38 does not need to make a distinction between intangible assets generating cash flows directly or indirectly, or from exploiting the intangible for own use (licensing of software, consumption use of water rights), speculation (trading of emission rights), or long term investment, or whether it's held as a long term medium of exchange.

However, IFRS does make a distinction between tangible assets held for investment purposes and other tangible assets. This is evidenced by the distinction between IAS 16 and IAS 40. Furthermore, under IAS 40 changes in fair value are required to be recognised in profit or loss while this is not the same for the revaluation model under IAS 16. This difference emphasises the relevance of changes in fair value in understanding the performance of an entity with regard to tangible property held for investment purposes versus other tangible assets held for own use or consumption and is borne out by the IASB discussions regarding the *Conceptual Framework* guidance on fair value measurement and when to recognise such movements in profit or loss and OCI. There has long been agreement that assets held for speculative purposes should be fair valued though profit and loss. Accounting issues have always been around whether assets held for own use and consumption or long term purposes should be fair valued or whether the costs outweigh the benefits. In our view whether an asset is tangible or intangible, if the purpose for holding the asset is similar, the accounting outcomes should be similar.

IAS 38 does not provide for a distinction between those held for investment purposes and other those held for own use or consumption. In our opinion, this is a gap in IFRS.

3.6.2 Lack of guidance around commodities held for investment purposes

Similar to the gap in IFRS guidance for intangible assets held for investment purposes, there is also a gap in IFRS guidance for commodities held for investment purposes.

Firstly, there is no specified definition of a commodity. What constitutes a “commodity”? Under United States Generally Accepted Accounting Principles (US GAAP) as set out in the Master Glossary of the Accounting Standards Codification, a commodity has been defined as products whose units are interchangeable, are traded on an active market where customers are not readily identifiable, and are immediately marketable at quoted prices. This definition is useful as it does not make a distinction between tangible and intangible items. Consequently, if this definition is applied in the context of a digital currency, we believe it would be a commodity.

Secondly, there is no specific accounting guidance for commodities held for investment purposes. For example, if an entity hold gold bullion for investment purposes it seems that such assets would have to be accounted for under IAS 2 as inventory. It would not meet the definition of investment property under IAS 40 as it is not land or a building. Unless the entity that holds gold bullion for investment purposes is also considered a commodity broker-trader under IAS 2, it would be subject to the measurement guidance in IAS 2 (i.e. lower of cost or net realisable value).

While we do not want to distract from the discussion on accounting for digital currencies, we believe that there are broader issue which need to be addressed at the same time.

4. What is the economic substance that accounting should reflect?

In section 3 we analysed the current accounting literature and concluded that digital currencies could be considered either as intangible assets under IAS 38, possibly as inventory under IAS 2 in certain circumstances, or possibly as commodity broker-trader transactions exempt from IAS 2. Focussing on the subsequent measurement requirements of these standards, a holding of digital currency could be measured as follows:

- **Intangible assets** – IAS 38 sets out two alternatives for subsequent measurement; the cost model and the revaluation model (using other comprehensive income rather than fully recognising changes through profit or loss).

- **Inventory** – IAS 2 requires inventory to be measured at the lower of cost and net realisable value. Net realisable value is the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to make the sale.

- **Commodity broker-trader** – IAS 2 requires commodity broker-trader transactions to be recognised at fair values less costs to sell through the profit and loss.

Ignoring the interpretive issues identified when determining whether IAS 38 or IAS 2 applies (see section 3.5), we do not think that IAS 38 or IAS 2 (except when the commodity broker-trader guidance is applied) provides relevant information to users of financial statements. Our reasons are detailed below.

We do not believe IAS 2's measurement guidance provides relevant information (except when commodity broker-trader guidance is applied), because:

- IAS 2 is written from the perspective of goods held being sold in the ordinary course of business and is not designed to deal with items held for investment purposes or for items with cash-like features used for payment of goods and services;
- Cost is a historical measurement and does not provide current information;
- The fact that the measurement is "lower of cost and net realisable value" results in **only** decreases in value being recognised; and
- "Net realisable value" is defined as the estimated selling price in the ordinary course of business less estimated costs of completion and the estimated costs necessary to make the sale. In other words, it is an entity-specific value. Observable market prices in an active market is more relevant to users of financial statements with regard to a holding of digital currency than an entity-specific value.

We do not believe that IAS 38's measurement guidance provides relevant information, because:

- IAS 38 is written from the perspective of assets (without physical substance) used in the production of cash flows. It is not designed to deal with items held for speculative or investment purposes or for items with cash-like features used for the payment of goods or services;
- Cost approach:
    - Cost is a historical measurement and does not provide current information;
    - Amortisation reflects the pattern of consumption which is irrelevant for items held for investment purposes;

    - Impairments would only recognise decreases in value;
- Revaluation approach:
    - IAS 38 only allows a revaluation approach when active markets exist for an intangible assets. Under IAS 38, if a market becomes inactive, the entity will not be permitted to continue the use of the revaluation and records only subsequent amortisation and impairment from the point when the market became inactive. On the other hand, IFRS 13 *Fair Value Measurement* guidance adequately and robustly considers fair value measurements in scenarios where markets become inactive;
    - Revaluation changes are not always reflected in profit or loss. Consequently, profit and loss is not appropriately reflecting the performance of an asset held for speculative purposes or for items with cash-like features.

What measurement basis would provide relevant information to users of financial statements?

The *Conceptual Framework* sets out the concepts that underlie the preparation and presentation of financial statements for external users. On 28 May 2015 the IASB published an Exposure Draft (ED) that sets out the proposals for a revised *Conceptual Framework*. The objective of the *Conceptual Framework* project is to improve financial reporting by providing a more complete, clear and updated set of concepts. Even though the project is not finalised, we think it is useful to consider the tentative discussions under that project so far.

It is important to consider the following factors when considering the relevance of a measurement basis for an asset or a liability and the related income and expenses:

- **How that asset or liability contributes to future cash flows**
  For assets and liabilities that produce cash flows directly, such as assets that are capable of being sold independently, the most relevant measurement basis is likely to be one that reflects the present value of the future cash flows: that is, fair value or value in use (for liabilities, fulfilment value).

- **The characteristics of the asset or the liability**
  For assets and liabilities that are subject to variability in their cash flow, or whose value is sensitive to market factors or other risks, a current value such as fair value or value in use is likely to be more relevant than a cost-based measure.

A holding of digital currency produces its cash flows directly (i.e. capable of being sold independently) and it is sensitive to market factors. Consequently, according to the latest thinking in the *Conceptual Framework* project, a current value would be the most appropriate (i.e. either fair value or value in use) measurement basis for a holding of digital currency. Furthermore, digital currencies have no maturity date nor useful life on which to base a historical cost approach.

However, the enhancing qualitative characteristics of comparability, verifiability and understandability also have implications for the selection of a measurement basis. A value in use is based on entity-specific assumptions. A fair value measurement, on the other hand, is based on market participant assumptions. In our opinion a fair value measurement would provide information that is more comparable, verifiable and understandable to users of financial statement because digital currencies are traded on exchanges and observable market information is available. Furthermore, in the event that markets for a digital currency becomes inactive there is robust enough guidance in IFRS 13 that will result in comparable, verifiable and understandable information.

We also note that the *Conceptual Framework ED* includes a rebuttable presumption that all income and all expenses will be included in the statement or profit or loss[6]. However, if rebutted, those income or expenses (or components of them) are included in other comprehensive income. The *Conceptual Framework* broadly allows income and expenses in other comprehensive income if:

- this results in more relevant information in the statement of profit or loss;
- the income and expense is not based on historical cost numbers; and
- if a mixed measurement basis is applied for an asset or liability (for example, current value for statement of financial position and historical cost for statement of profit or loss).

We do not believe that any of the rebuttable presumptions apply to the accounting for digital currencies. Furthermore, we believe that recognising changes in fair value through profit or loss would also incorporate accountability of the holding decision, as these assets are more akin to investment properties and financial instruments that are generally fair valued through profit and loss. We note that whilst the publicly available sample of financial statements us small, even those using IAS 38 have chosen the fair value model, supporting the view that users consider fair value most relevant for these assets.

In our opinion, fair value measurements are the most appropriate measurement basis for both the Statement of Financial Position and the Statement of financial performance. Furthermore, we believe that the most relevant and useful information would be if changes in fair value are presented in the statement of profit or loss.

In section 3 we analysed the current IFRS literature and identified a number of issues. We then analysed what we think useful information would be given the result of our analysis of the IFRS literature in section 4. We are interested in ASAF's views on our analysis and welcome any observations.

However, we would specifically like to focus on the following questions:

Question 2 to ASAF

Do you agree that there is a gap in IFRS literature around the accounting for digital currencies?

Question 3 to ASAF

Do you agree that there are significant interpretive issues in IFRS literature around accounting for intangible assets and commodities held for investment purposes (such as digital currencies, emission rights and water rights)?

5. Standard setting activity

In section 3 of this paper we analysed the current IFRS literature and determined that a holding of digital currency would be accounted for as either an Intangible asset under IAS 38 or as inventory under IAS 2. This is not without some significant interpretive issues (refer to section 3.5). We have also identified some diversity that exists in practice with regard to the accounting for digital currencies. We also identified some broader issues related to the lack of IFRS guidance for intangible assets and commodities held for investment purposes (refer to section 3.6).

[6] The *Conceptual Framework* has not been finalised and the proposals in the exposure draft is subject to change.

In section 4 of this paper we found that the subsequent measurement guidance of both IAS 38 and IAS 2 (irrespective of which standard was being applied) did not provide useful information for holdings of digital currencies and that the most relevant measurement basis is fair value through profit or loss.

In our opinion, given the problems identified and the rapid growth of digital currencies, standard setting activity is required to provide clear accounting guidance for preparers and to ensure that financial statements provide relevant and useful information to users of those financial statements.

If you agree that standard setting activity is needed, we believe that there a number of way in which the IASB could address the problems identified. The IASB could:

- Issue a new IFRS
- Amend the definition of cash or cash equivalents
- Amend the definition of a financial asset
- Amend the measurement guidance in IAS 2 and IAS 38

This section provides some possible solutions and is not intended to be an exhaustive list of all possible solutions. Furthermore, it is only a brief discussion on each possible solution rather than an in-depth analysis of each.

We briefly explore some of the alternatives below.

5.1 Issue a new IFRS?

The IASB could issue a new IFRS to deal with the accounting for digital currencies. However, given the broader issues identified in section 3.6, we believe that such a project should address the broader issues concurrently with the accounting for digital currencies as they are related.

Advantages:

- Address a long standing problem in IFRSs with regard to investments in intangible assets and commodities.
- Assist in resolving issues around emission trading rights which has been a long standing issue.
- Provide clear guidance on the treatment of digital currencies and resolve diversity in practice that currently exists.
- Provide more relevant information to users of financial statements by measuring intangible assets held for investment purposes at fair value through profit or loss.

Disadvantage:

- Developing an IFRS is a lengthy process and may take some time before a current problem is addressed.

In our opinion, the most appropriate course of action is a new IFRS that provides clear guidance on the accounting for digital currencies but that also addresses the larger problem of intangible assets and commodities held for investment purposes. The same result could be achieved if the IASB undertook a comprehensive review of IAS 2 and IAS 38 to address the broader gap in IFRS guidance identified in section 3.6 together with the problems related to digital currencies.

5.2 Amend the definition of cash or cash equivalents?

The IASB could amend the definition of cash or cash equivalents to specifically include digital currencies.

Advantage:

- Existing accounting guidance exists to deal with recognition, measurement, presentation and disclosure (cash is included in the definition of a financial asset under IAS 32).

Disadvantages:

- Accounting for a digital currency as cash or a cash equivalent assumes that it is a widely accepted method for exchange, supported by a central bank and recognised legal tender, which it is not (yet).
- Changes in fair value would be categorised as a change in foreign exchange under IAS 21 *The Effects of Changes in Foreign Exchange Rates* in the Statement of Financial Performance which would not necessarily enhance understandability.

In our opinion, it would not be appropriate to amend the definition of cash until such time that a digital currency is a widely accepted method for exchange, supported by a central bank and recognised as legal tender. This will probably only be a relevant alternative when governments globally acknowledge a digital currency as legal tender.

5.3 Amend the definition of a financial asset?

The IASB could amend the definition of a financial asset to specifically include a digital currency similar to how it currently specifically includes cash. A similar outcome could be achieved by simply defining a digital currency and including it in the scope of IAS 39/IFRS 9.

Advantage:

- Existing accounting guidance exists to deal with recognition, measurement, presentation and disclosure.

Disadvantages:

- Amending the definition of a financial asset would introduce an exception to the principal that a financial instrument represents a contractual right for one party and a contractual obligation for another.
- Why create an exception for a digital currency and not for other intangible assets held for trading by non-commodity broker-traders or investment purposes (for example, carbon credits or water rights)?

In our opinion, it would not be appropriate to amend the definition of a financial asset to include digital currencies and create exceptions to a clear principal.

5.4 Amend the measurement guidance in IAS 2 and IAS 38?

The IASB could amend the measurement guidance in IAS 2 and IAS 38 to allow digital currencies to be measured at fair value through profit or loss (irrespective of an active market).

Advantage:

- Existing accounting framework exists to deal with recognition, measurement, presentation and disclosure

Disadvantages:

- Amending the measurement guidance in IAS 2 and IAS 38 will not address the scope issue identified in section 3.5 of this paper (i.e. when is a digital currency held for sale in the normal course of business?)
- Amending the measurement guidance in IAS 2 will not address the problems identified around commodity broker-traders in section 3.5 of this paper (i.e. is a digital currency a commodity?)
- Why amend the measurement guidance in IAS 2 and IAS 38 for digital currencies and not for other intangible assets held for trading by non-commodity broker-traders or held for investment purposes (for example, carbon credits or water rights) identified in section 3.6?

In our opinion, it would not be appropriate to amend the measurement guidance in IAS 2 and IAS 38 to address digital currencies as there are more fundamental scoping issues that need to be addressed (refer to section 3.5). In addition, questions around the accounting for other types of intangible assets and commodities held for trading by non-commodity broker-traders or for investment purposes need to be addressed if the accounting for digital currencies are to be addressed.

Question 4 to ASAF

If you agree digital currency issues need to be addressed, should the IASB address digital currency as part of a broader project (which would address investments in intangible assets and commodities) or should it be as a limited scope project?

Appendix A – Accounting policies of publically available financial reports.

Company	Country	IFRS	Accounting Policy	Available at:
BitCoin Group Ltd	Australia	IAS 38 (revaluation model)	Bitcoins are indefinite life intangible assets initially recognised at cost. Bitcoins are subsequently measured at fair value by reference to the quoted price in an active Bitcoin market. Increases in the carrying amount of Bitcoins on revaluation are credited to a revaluation surplus in equity. Decreases that offset previous increases are recognised against the revaluation surplus in equity; all other decreases are recognised in profit and loss. On disposal of Bitcoins, the cumulative revaluation surplus associated with those Bitcoins is transferred directly to retained earnings.	http://static.bitcoingroup.com.au/wp-content/uploads/2016/02/04053458/BGL_FY15-audited-financial-statements-final-signed.pdf
Digital X Ltd (formerly known as Digital CC Ltd)	Australia	IAS 2 (fair value)	(b) Bitcoin inventory Management considers that the Group's bitcoins are a commodity. As International Financial Reporting Standards do not define the term 'commodity,' management has considered the guidance in AASB 108 Accounting Policies, Changes in Accounting Estimates and Errors (AASB 108) that allows an entity to consider the most recent pronouncements of other standard-setting bodies that use a similar conceptual framework to develop accounting standards, other accounting literature and accepted industry practice to the extent that these do not conflict with the requirements of the International Financial Reporting Standards and the Annual Report 2015 71 Notes to the financial statements DIGITAL CC LIMITED AND CONTROLLED ENTITIES ABN 59 009 575 035 International Accounting Standards Board Conceptual Framework. Under United States Generally Accepted Accounting Principles (US GAAP) as set out in the Master Glossary of the Accounting Standards Codification, a commodity has been defined as "products whose units are interchangeable, are traded on an active market where customers are not readily identifiable, and are immediately marketable at quoted prices." Based on this definition and the guidance in AASB 108, management has therefore determined that Bitcoins are a commodity notwithstanding that Bitcoins lack physical substance. The Group's activities	https://digitalx.com/wp-content/uploads/2015/10/DCC-Annual_Report_2015.pdf

			include trading Bitcoins, primarily the buying and selling of Bitcoins and to a lesser extent trading in other Bitcoin trading products and, therefore, subsequent to initial recognition, Bitcoin inventory (whether received as consideration for mining activities or acquired through purchase) is held at fair value less costs to sell, reflecting the Group's purpose of holding such Bitcoin inventory as a commodity broker-trader in accordance with AASB 102 Inventories. As a result of the Bitcoin protocol, costs to sell Bitcoin inventories are immaterial and no allowance is made for such costs. Changes in the amount of Bitcoin inventories based on fair value are included in profit or loss for the period. Bitcoin inventory is derecognised when the Group disposes of the inventory through its trading activities or when the Group otherwise loses control, and, therefore, access to the economic benefits associated with ownership of the Bitcoin inventory. Inventory shrinkage arising from denial of access to the economic benefits associated with ownership of Bitcoin inventory are recognised as an expense in profit or loss on identification. (c) Fair value of Bitcoins Bitcoin inventory is measured at fair value using the quoted price in United States dollars on the Bitfinex exchange (www.Bitfinex.com) at closing Coordinated Universal Time. Management considers this fair value to be a Level 1 input under the AASB 13 Fair Value Measurement fair value hierarchy as the price on the Bitfinex exchange represents a quoted price (unadjusted) in an active market for identical assets. Management has selected the Bitfinex exchange as it is a major Bitcoin exchange with appropriate size and liquidity to provide reliable evidence of fair value for the size and volume of transactions that are reasonably contemplated by the Group.	

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