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## **METHODOLOGY OF FINANCIAL ACCOUNTING OF CRYPTOCURRENCIES ACCORDING TO THE IFRS**

The article considers the financial accounting of cryptocurrencies according to the IFRS. The article discusses different approaches and recent activities by accounting standard setters in relation to cryptocurrencies. The purpose of the study is to identify and substantiate the definition of cryptocurrency in the financial accounting and to determine the applicability of standard setters' published perspectives.

The author summarizes the existing achievements of Ukrainian and foreign researchers on the issue of the essence of cryptocurrency and its classification as an object of financial accounting and proposes accounting treatment of cryptocurrencies in the financial statements according to the International Financial Reporting Standards (IFRS).

**Keywords:** cryptocurrency, digital currency, tokens, blockchain, Bitcoin, initial coin offerings (ICOs), financial accounting of cryptocurrencies.

**Introduction.** It is known, that crypto-assets experienced a breakout year in 2017, when in December average market price across major Bitcoin exchanges has reached its peak of 19,499 USD. Cryptocurrencies, such as Bitcoin and Ether, have seen their prices surge as the public's awareness has increased, and financial market participants have thus increasingly turned their attention to the phenomenon. Simultaneously, a wave of new crypto-asset issuance has been sweeping the start-up fundraising world, sparking the interest of regulators in the process. Nowadays, the average market price of Bitcoin has mostly remained stable, and as at November 2018 it was 6,342 USD. According to Bloomberg, about 30% of people aged from 18 to 34 would rather own USD 1,000 worth of Bitcoins than USD 1,000 of government bonds or stocks<sup>1</sup>.

History also has proved that transparency, investor protection and market integrity are critical to ensuring that innovation continues. The SEC Chairman Jay Clayton concerns, that today we were seeing substantial [distributed ledger technology]-related market activity that showed little or no regard to the proven regulatory approach<sup>2</sup>.

The US and other international governments have also raised concerns regarding cryptocurrencies. Given the recent volatility, governments around the world continue to consider if and how cryptocurrencies can be regulated. Current accounting and reporting framework did not contemplate cryptocurrencies, so international standard setters and regulators have an opportunity to proactively provide guidance on a potentially transformative issue.

This also highlights the lack of a standardized cryptocurrencies taxonomy, which makes it difficult to determine the applicability of standard setters' published perspectives. Due to the diversity and place of innovation associated with cryptocurrencies, circumstances of each case will differ, making it difficult to prepare general accounting treatment. Such a background established an urgent need for accounting guidance of cryptocurrencies in Ukraine and all over the world.

**Analysis of recent research and publications.** Some separate theoretical aspects of financial accounting of cryptocurrencies were explored by D. Blake, H. Birmen, G. Welsh,

<sup>1</sup> Russo, C. (2017). Nearly a Third of Millennials Say They'd Rather Own Bitcoin Than Stocks. *Bloomberg* <<https://www.bloomberg.com/news/articles/2017-11-08/millennials-ready-to-ditch-stocks-to-keep-bitcoin-rally-alive>> (2018, November 07).

<sup>2</sup> PwC (2018). *Making sense of bitcoin, cryptocurrency, and Blockchain* <[www.pwc.com/us/en/industries/financial-services/fintech/bitcoin-blockchain-cryptocurrency.html](http://www.pwc.com/us/en/industries/financial-services/fintech/bitcoin-blockchain-cryptocurrency.html)> (2018, November 06).

F. Wood, M. Matthew, J. Maser, R. Russell and others. The issues of methodology of financial accounting of cryptocurrencies are considered in the works of Gura N. O., Dorosh N.I., Melnik T.G., Melnichenko O.V., Novak O.S., Petruk O.M., Shvets V. G. and others.

Australian Accounting Standards Board (AASB) has submitted a discussion paper on “digital currencies” to the International Accounting Standards Board (IASB)<sup>1</sup>, the Accounting Standards Board of Japan (ASBJ)<sup>2</sup> has issued an exposure draft for public comment on accounting for “virtual currencies”. In addition, the IASB discussed certain features of transactions involving digital currencies during its meeting in January 2018, and will discuss in future whether to commence a research project in this area. However, the methodology of financial accounting of cryptocurrencies requires further comprehensive research.

**The aim of the article.** The purpose of the article is to identify and substantiate the definition of cryptocurrency in the financial accounting; to determine the applicability of standard setters’ published perspectives and to propose accounting treatment of cryptocurrencies in the financial statements according to the IFRS.

**Research results and discussion.** The rapid rise and volatility of cryptocurrencies have led to increased global interest and scrutiny by organizations, investors, regulators, governments, and others. The most popular and widely used cryptocurrency is Bitcoin; however, there are over 1,500 cryptocurrencies in circulation. Interested parties are concerned about the accounting and tax implications associated with cryptocurrencies. Each of these cryptocurrencies has its own unique features and characteristics which makes understanding and accounting for them particularly challenging.

Cryptocurrency offerings in 2018 such as “initial coin offerings” (ICO) are gaining traction in the global financial markets with an average ICO size USD 31.08 million, which is almost two times more than last year (2017: USD 15.98 million).

Crypto-assets constitute an evolving, fast-growing, but still relatively new asset class. As a result, there are no specific pronouncements from accounting bodies that deal with the accounting of such assets from the holder’s perspective.

The market capitalization of Bitcoin as at November 2018 was USD 109,881 million<sup>3</sup>.

Given the increase in the number of transactions and the market capitalization, 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, as existing IFRS Standards do not explicitly refer to cryptocurrencies.

In December 2016, the AASB released the paper, “Digital currency – A case for standard setting activity”<sup>4</sup>. The AASB examined the current IFRS literature and evaluated whether digital currencies should be accounted for as cash or cash equivalents, financial assets, intangible assets or inventories.

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<sup>1</sup> The Accounting Standards Advisory Forum (ASAF) (2016). *Digital currency – A case for standard setting activity*. <[www.ifrs.org/-/media/feature/meetings/2016/december/asaf/digital-currency/asaf-05-aasb-digitalcurrency.pdf](http://www.ifrs.org/-/media/feature/meetings/2016/december/asaf/digital-currency/asaf-05-aasb-digitalcurrency.pdf)> (2018, November 07).

<sup>2</sup> Accounting Standards Board of Japan (ASBJ) (2018). *The Practical Solution on the Accounting for Virtual Currencies under the Payment Services Act, March 2018*. <[https://www.asb.or.jp/en/wp-content/uploads/2018-0315\\_2\\_e.pdf](https://www.asb.or.jp/en/wp-content/uploads/2018-0315_2_e.pdf)> (2018, November 07).

<sup>3</sup> Coin Dance (2018). *Cryptocurrencies by Market Cap Summary* <<https://coin.dance/stats/marketcaptoday>> (2018, November 07).

<sup>4</sup> The Accounting Standards Advisory Forum (ASAF) (2016). *Digital currency – A case for standard setting activity*. <[www.ifrs.org/-/media/feature/meetings/2016/december/asaf/digital-currency/asaf-05-aasb-digitalcurrency.pdf](http://www.ifrs.org/-/media/feature/meetings/2016/december/asaf/digital-currency/asaf-05-aasb-digitalcurrency.pdf)> (2018, November 07).

According to the AASB, cryptocurrencies meet characteristics below:

–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.

–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.

–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.

–could be scoped into IAS 2 as inventory<sup>1</sup>, however, it is not clear how to interpret the measurement exception for commodity broker-traders in the context of digital currencies.

–highlights a broader issue in IFRSs with regard to intangible assets and commodities held for investment purposes.

Furthermore, 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) doesn't provide relevant or useful information to users of financial statements in the context of digital currencies.

IAS 7 "Statement of Cash Flows" defines cash as cash on hand and demand deposits<sup>2</sup>. No further definition of "cash" or "demand deposits" is provided. IAS 32 "Financial instruments: Presentation" includes "cash" in the definition of a financial instrument, according to the IAS 32<sup>3</sup>, 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 recognized 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.

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 recognized 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. However, this position might change as digital currencies gain acceptance in future.

Digital currency prices, as traded on exchanges, are always represented in some other currency (for example, US Dollar, Euros etc). 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.

Most accounting literature find that digital currency meets the definition of intangible assets, as defined in IAS 38 "Intangible Assets"<sup>4</sup>, thus elements of the definition of an intangible asset are (refer to the table 1):

<sup>1</sup> Ifrs.Org (2018). *IAS 2 Inventories* <<https://www.ifrs.org/issued-standards/list-of-standards/ias-2-inventories/>> (2018, November 07).

<sup>2</sup> Ifrs.Org (2018). *IAS 7 Statement of Cash Flow* <<https://www.ifrs.org/issued-standards/list-of-standards/ias-7-statement-of-cash-flows/>> (2018, November 07).

<sup>3</sup> Ifrs.Org (2018). *IAS 32 Financial instruments: Presentation* <<https://www.ifrs.org/issued-standards/list-of-standards/ias-32-financial-instruments-presentation/>> (2018, November 07).

<sup>4</sup> Ifrs.Org (2018). *IAS 38 Intangible Assets* <<https://www.ifrs.org/issued-standards/list-of-standards/ias-38-intangible-assets/>> (2018, November 07).

**Elements of the definition of an intangible asset in terms  
of digital currency**

Elements of the definition (IAS 38)	Description
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] 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] 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]. 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	If digital currencies are not considered as “cash” yet (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.

*Source: developed by the author with<sup>1</sup>*

In addition, a digital currency is not a financial instrument, as defined in IAS 32, due to the lack of contractual relationship that results in a financial asset for one party and a financial liability for another<sup>2</sup>.

Based on current IFRS literature, digital currencies would meet the definition of an intangible asset. However, the accounting treatment under IAS 38 would not provide relevant and useful financial information.

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 “Inventories”. In order to determine how to account for an asset it is necessary to establish how the asset is used in the business:

- entities that trade with digital currencies, would be considered to hold such digital currencies for sale in the ordinary course of business;
- entities that hold digital currencies for investment purposes (i.e. capital appreciation);
- entities that accept digital currency as means of payment for their goods or services.

<sup>1</sup> The Accounting Standards Advisory Forum (ASAF) (2016). *Digital currency – A case for standard setting activity*. <[www.ifrs.org/-/media/feature/meetings/2016/december/asaf/digital-currency/asaf-05-aasb-digitalcurrency.pdf](http://www.ifrs.org/-/media/feature/meetings/2016/december/asaf/digital-currency/asaf-05-aasb-digitalcurrency.pdf)> (2018, November 07).

<sup>2</sup> IFRS.Org (2018). *IAS 32 Financial instruments: Presentation* <<https://www.ifrs.org/issued-standards/list-of-standards/ias-32-financial-instruments-presentation/>> (2018, November 07).

Furthermore, IAS 2 does not apply to the measurement of inventories held by commodity broker-traders who measure their inventories as fair value less cost to sell and recognize changes in fair value less cost to sell in profit or loss in the period of the change. Due to the lack of accounting treatment different companies have different accounting policies (table 2).

Table 2

**Accounting policies of publically available financial reports**

Company	Country	IFRS	Accounting Policy
Bitcoin Group Ltd	Australia	IAS 38 (revaluation model)	Bitcoins are indefinite life intangible assets initially recognized 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 recognized against the revaluation surplus in equity; all other decreases are recognized in profit and loss. On disposal of Bitcoins, the cumulative revaluation surplus associated with those Bitcoins is transferred directly to retained earnings.
Digital CC Ltd	Australia	IAS 2 (fair value)	Bitcoin inventory Management considers that the Group's bitcoins are a commodity. As IFRS do not define the term 'commodity,' management has considered the guidance in AASB 108 Accounting Policies, Changes in Accounting Estimates and Errors. Based on US GAAP definition of commodity 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 include trading Bitcoins, primarily the buying and selling of Bitcoins, therefore, subsequent to initial recognition, Bitcoin inventory 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. Changes in the amount of Bitcoin inventories based on fair value are included in profit or loss for the period. Bitcoin inventory is derecognized 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.

Source: developed by the author with<sup>1</sup>.

<sup>1</sup> The Accounting Standards Advisory Forum (ASAF) (2016). *Digital currency – A case for standard setting activity*. <[www.ifrs.org/-/media/feature/meetings/2016/december/asaf/digital-currency/asaf-05-aasb-digitalcurrency.pdf](http://www.ifrs.org/-/media/feature/meetings/2016/december/asaf/digital-currency/asaf-05-aasb-digitalcurrency.pdf)> (2018, November 07).

On March 14, 2018, the Accounting Standards Board of Japan (ASBJ) issued the “Practical Solution on the Accounting for Virtual Currencies under the Payment Services Act” (hereinafter ‘the Standard’) as part of Japanese GAAP. The Standard is effective from the beginning of the fiscal year that begins on or after April 1, 2018. After considering the potential categories of assets, the ASBJ concluded that there is no category of assets that would be appropriate for virtual currencies. Accordingly, the ASBJ decided to prescribe that virtual currencies were an independent category of assets.

In addition, the Payment Services Act defines virtual currencies as proprietary value that can be transferred using an electronic data processing system and that can be either: used against unspecified parties as a means of payment and can be traded with unspecified parties or can be exchanged with other virtually currencies.

Table 3

### Accounting for Virtual Currencies Held by an Entity on Its Own Behalf

Measurement at the Balance Sheet Date	
If an active market exists:	If an active market does not exist:
Such virtual currency should be measured using the market price at the balance sheet date, the difference between the carrying amount should be recognized as a gain or loss.	Such virtual currency should be measured at its cost. However, if the estimated disposal value is lower than cost, the virtual currency should be measured using the estimated disposal value, the difference between the carrying amount should be recognized as a loss. This loss should not be reversed in subsequent periods.

Table 4

### Accounting for Virtual Currencies Held by a Dealer on Behalf of Its Customers

Recognition of Assets and Liabilities	
The dealer should recognize an asset when a virtual currency is deposited by the customer based on the agreement between the dealer and the customer. Such virtual currency should be measured using the market price at the date the virtual currency was deposited.	The dealer should recognize the obligation to return the virtual currency to the customer as a liability. The liability should be measured at the same amount of the corresponding asset.
Measurement at the Balance Sheet Date	
The dealer should measure the virtual currency held on behalf of its customers at the balance sheet date, based on whether an active market exists for that virtual currency.	The dealer should measure the liability recognized in relation to the virtual currency held on behalf of its customers at the balance sheet at the same amount of the corresponding asset. No gain or loss should arise from virtual currencies held by a virtual currency dealer on behalf of its customers.
Presentation	
When an entity sells its virtual currencies, it should present the net amount (calculated as the selling proceeds less the cost of the virtual currencies sold) in the income statement.	

Disclosures	
– The balance sheet amount of virtual currencies held by the entity on its own behalf or of virtual currencies held by the virtual currency dealer held on behalf of its customers.	Disclosures may be omitted if the balance sheet amount of virtual currencies (in the case of a virtual currency dealer, the total of virtual currencies held on its own behalf and virtual
– For virtual currencies held by the entity on its own behalf, showing separately those with an active market and those without an active market, the quantity and amount of each type of virtual currency. Virtual currencies with immaterial balance sheet amounts can be aggregated.	currencies held on behalf of its customers) is immaterial compared to the total assets of the entity.

Source: developed by the author with<sup>1</sup>.

**Conclusions.** Even though in some cases digital currencies meet the criteria of intangible assets or inventories, there is a lack of accounting guidance around intangible assets and commodities held for investment purposes. The AASB's paper proposes that cryptocurrencies be accounted for at fair value with changes in fair value recognized in profit or loss. After considering the potential categories of assets, there is no category of assets that would be appropriate for virtual currencies, thus it is an independent category of assets.

So, there is currently a lack of guidance on cryptocurrencies and the measurement guidance under IAS 2 and IAS 38 does not provide relevant and useful information to users of financial statements. Thus, standard setting activity is needed, and the ways in which the IASB could address the problems identified are: 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. It is also needed to provide clear guidance on the treatment of digital currencies and resolve diversity in practice that currently exists.

#### References:

1. Accounting Standards Board of Japan (ASBJ) (2018). *The Practical Solution on the Accounting for Virtual Currencies under the Payment Services Act, March 2018*. <[https://www.asb.or.jp/en/wp-content/uploads/2018-0315\\_2\\_e.pdf](https://www.asb.or.jp/en/wp-content/uploads/2018-0315_2_e.pdf)> (2018, November 07). [in English].
2. Coin Dance (2018). *Cryptocurrencies by Market Cap Summary* <<https://coin.dance/stats/marketcaptoday>> (2018, November 07). [in English].
3. IFRS.Org (2018). *IAS 2 Inventories* <<https://www.ifrs.org/issued-standards/list-of-standards/ias-2-inventories/>> (2018, November 07). [in English].
4. IFRS.Org (2018). *IAS 32 Financial instruments: Presentation* <<https://www.ifrs.org/issued-standards/list-of-standards/ias-32-financial-instruments-presentation/>> (2018, November 07). [in English].
5. IFRS.Org (2018). *IAS 38 Intangible Assets* <<https://www.ifrs.org/issued-standards/list-of-standards/ias-38-intangible-assets/>> (2018, November 07). [in English].
6. IFRS.Org (2018). *IAS 7 Statement of Cash Flow* <<https://www.ifrs.org/issued-standards/list-of-standards/ias-7-statement-of-cash-flows/>> (2018, November 07). [in English].

<sup>1</sup> Accounting Standards Board of Japan (ASBJ) (2018). *The Practical Solution on the Accounting for Virtual Currencies under the Payment Services Act, March 2018* <[https://www.asb.or.jp/en/wp-content/uploads/2018-0315\\_2\\_e.pdf](https://www.asb.or.jp/en/wp-content/uploads/2018-0315_2_e.pdf)> (2018, November 07).

7. PwC (2018). *Making sense of bitcoin, cryptocurrency, and Blockchain* <[www.pwc.com/us/en/industries/financial-services/fintech/bitcoin-blockchain-cryptocurrency.html](http://www.pwc.com/us/en/industries/financial-services/fintech/bitcoin-blockchain-cryptocurrency.html)> (2018, November 06). [in English].
8. Russo, C. (2017). Nearly a Third of Millennials Say They'd Rather Own Bitcoin Than Stocks. *Bloomberg* <<https://www.bloomberg.com/news/articles/2017-11-08/millennials-ready-to-ditch-stocks-to-keep-bitcoin-rally-alive>> (2018, November 07). [in English].
9. The Accounting Standards Advisory Forum (ASAF) (2016). *Digital currency – A case for standard setting activity*. <[www.ifrs.org/-/media/feature/meetings/2016/december/asaf/digital-currency/asaf-05-aasb-digitalcurrency.pdf](http://www.ifrs.org/-/media/feature/meetings/2016/december/asaf/digital-currency/asaf-05-aasb-digitalcurrency.pdf)> (2018, November 07). [in English].