

“Current aspects of the cryptocurrency recognition in Ukraine”

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CURRENT ASPECTS OF THE CRYPTOCURRENCY RECOGNITION IN UKRAINE

Abstract

Various mechanisms for implementation, and at the same time contradictory approaches to the essence, evaluation, reflection, and regulation, led to the need to consider and improve approaches to the recognition of cryptocurrency.

Based on the critical analysis of the legal provisions in Ukraine and the approaches of scientific experts, practitioners and international experience, the economic essence of cryptocurrency is substantiated. The legal, economic and accounting aspects of cryptocurrency recognition in developed and transformational economies are revealed. In order to meet the information needs of users, the peculiarities of the application of methods for estimating cryptocurrency commodities and the influence of the chosen method on the reflection of such an asset in the financial statements have been identified. The necessity to clarify and harmonize existing national accounting standards for recognizing and reporting on cryptocurrency transactions has been identified.

The proposed approach to the identification and recognition of cryptocurrency goods will improve the relations between the owners of cryptocurrency and the state, legalize cryptocurrency transactions and form an effective system for managing such transactions in Ukraine.

Keywords

cryptocurrency, money, banking system, financial assets, intangible assets, accounting

JEL Classification O33, M41

INTRODUCTION

The emergence of cryptocurrency is another step in the development of the digital economy. As the current practice shows, investment in system development and distribution of cryptocurrency goods in the world are more active every day; more and more enterprises carry out operations with cryptocurrency, e.g. Wikipedia, the leader of the online payment market, PayPal, Microsoft, KFC Canada, MasterCard Gyft payment system, 4Chan, Amazon, various travel services, etc. The Fund is developed for the use of cryptocurrency, increasing the number of trading platforms based on blockchain and online cryptocurrency and token payments.

Ukrainian enterprises are also increasingly using cryptocurrency (currently, 50 large enterprises). One of the impetus for this was the appearance of the first Ukrainian cryptocurrency – Karbowanec (Ukrainian Karbowanec or KRB) in 2016. As noted by the Ukrainian Internet source: “The Karbowanec is cryptographically protected (encrypted) information, and karbowanecs are units of exchange, i.e. units of information”. As of September 1, 2018 the cost of 1 KRB was 4.49 UAH.

Therefore, it is an indisputable fact that cryptocurrency conquers the domestic market. However, there are many unresolved issues regarding the legal framework for the functioning and definition of cryptocurrency, and the valuation of such operations for accounting purposes.

1. LITERATURE REVIEW

Although little research has been done on the phenomenon of cryptocurrency the following scientists study this problem: Blume (2014), Krugman (2018), Greenspan (2018), Venter (2016), Silver (2017), Rose (2015), Protsenko and Spenkelnik (2014), Skrypnyk (2018), and others.

Investigating the issue of the emergence of cryptocurrency, it should be noticed that it is often identified with the concept of “money”, means of “payment”, “security”, “electronic money”. Ukrainian scientists Petruk and Novak (2017) note in their studies that the cryptocurrency cannot be called “money”, it does not fully correspond to the modern monetary theory. This type of asset can neither be attributed to any commodity money, nor to paper. Cryptocurrency offers a combination of the characteristics of modern technology and money, thereby creating new questions in the economy (Dourado & Brito, 2014; Blume, 2014).

At the same time, Greenspan (2018), eToro’s senior analyst and the firm’s in-house crypto expert, implies that cryptocurrency cannot be classified as a security as well. It is worth noting that cryptocurrencies also cannot be classified as e-money, as it is remarked in the works of Jacyk (2017) and Protsenko (2016), because the issuance of electronic money may only be carried out by the Bank and be completely liquid. Fern’andez-Villaverde and Sanches (2016) model cryptocurrencies as privately issued fiat currencies.

Skrypnyk (2018) rightly points out that the views of representatives of state authorities and management of different countries regarding the legal status of cryptocurrency differ radically. At the same time, the defining feature of cryptocurrency and, accordingly, its investment attractiveness is in its organic nature, because it has a theoretical immunity for government intervention since it does not appear to be a central bank (Silver, 2017).

Recent research has also demonstrated that the deployed versions of cryptocurrencies have various properties that diminish the level of anonymity they achieve in practice (Moser, 2018). It is worth paying attention to the fact that in scientific communities, both positive and negative aspects of use and circulation of cryptocurrency are distinguished. Accordingly the advantages include: accelerating the implementation of operations (Houben & Snyers, 2018; Lee, 2018); improving the modern payment systems (Narayanan, 2016); compatibility with modern mobile payment systems (Meiklejohn, 2016); cryptocurrency does not cause erosion of purchasing power with inflation (Houben & Snyers, 2018; Yereli & Orkunoğluşahin, 2018; Renterghem & Meerleer, 2017). Critical interest rates are the negative aspects that include constant changes in value (Descôteaux, 2014), riskiness (Rose, 2015), and use of cyber criminals (Spenkelnik, 2014). According to Kostiantchenko (2017), certain shortcomings of cybercurrency in different conditions may seem advantages and vice versa.

There is no doubt that cryptocurrency constitutes significant innovation to the stagnated landscape of banking and finance. However, Krugman (2018) an American economist, is quite skeptical about bitcoin. He states that “Cryptocurrencies value depends entirely on self-fulfilling expectation, which means that total collapse is a real possibility. If speculators were to have a collective moment of doubt, suddenly fearing that Bitcoins were worthless, well, Bitcoins would become worthless”.

An analysis of recent studies and publications has shown that on the scientific level, cryptocurrency is gaining in popularity, but it is necessary to systematize research approaches, as the development of cryptocurrency encounters objective barriers that arise from the legal unrelatedness of the issue. However, some authors study the economic essence of cryptocurrency, and characterize the technology of its occurrence at the level of the system description.

Existing studies on cryptocurrency accounting are often more descriptive. However, scientific evidence of Petruk (2017), Kostyuchenko (2017), Dubensky (2015), Jacyk (2017), Procházka (2018), Yarovaya (2017) should be mentioned. So, Petruk and Novak (2017) argue why cryptocurrency should be considered as a financial instrument for accounting purposes. According to Procházka (2018), the volatility of prices for cryptocurrency goods, which were purchased for the purpose of investment, suggests that its valuation should be carried out at fair value. This will be the most relevant source of useful information for users of financial reports. Jacyk (2017) makes attempts to develop theoretical and methodological foundations of financial accounting of cryptocurrency.

At the same time, there is no definite answer to the topical question of a practical nature of cryptocurrency in the accounting, its assessment, and reflection in the financial statements.

2. THE STUDY PURPOSE

The purpose of the study is to substantiate the modern aspects of legal regulation and economic identification of cryptocurrency transactions in developed and transformational economies in order to carry out their reliable accounting assessment.

3. STUDY METHODS USED

For the study, the following methods of recognition and evaluation of cryptocurrencies were used: generalization and comparative methods (to identify differences and contradictions in the recognition of cryptocurrencies in different countries and regions, inconsistency between IAS (and naturally NP(S)A of Ukraine) concerning evaluation of cryptocurrency and its reflection in reporting), computational, analytical and graphical methods (for tabulating and drawing pictures, performing calculations and reporting the results of the study), analysis and synthesis methods. Also, methods of forecasting to demonstrate the development of cryptocurrency in the near future are used. Forecasts on the development of cryptocurrency market are built using a regression analysis.

4. RESULTS

4.1. The current state of the cryptocurrency market

Cryptocurrency is a relatively new phenomenon. However, there are many opportunities for its use as a means of payment when buying real goods or services today. There are currently several types of cryptocurrency (Table 1) and more than 1,000 tokens. The estimated value of the cryptocurrency economy is USD 223,4 billion.

Such a rapid development of the cryptocurrency is influenced by various factors, namely, the lack of personification of the parties to the transaction, information security, free international circulation and decentralized payment system.

Characteristics of the course dynamics in the world market are important, since Bitcoin is the most popular cryptocurrency. Therefore, it enables set of events on the cryptocurrency market. In Table 2, the dynamics of change of Bitcoin rate during 2018 year is presented.

Table 2 demonstrates that the greatest decline of this cryptocurrency exchange rate was observed in January, 2019. In general, there is a rather clear tendency to recession, that can be explained by a decrease in demand due to the increase in supply of Bitcoin on the international market, foreclosure restrictions and cryptocurrencies from South Korea, China, the United States of America, Germany and Japan, domestic “games” for major stock market players (the most famous crypto-fund, Pantera Capital, lost 70% of the value of its net assets in the period under review; Bitmain, the giant mining company, lost USD 750 million in Q3 of 2018. Every day trading volumes fell from the peaks of USD 70 billion to an average of USD 15 billion, etc.) (Compiled based on <https://medium.com> data, 2019).

In order to predict the dynamics of the Bitcoin rate in the first quarter of 2019 year, five trending models have been built: linear, exponential, power, logarithmic and polynomial model of the third degree (Table 3). To assess their adequacy, the coefficient of determination (R^2) can be used, which is calculated automatically in Microsoft Excel.

Table 1. Top 10 cryptocurrencies by market capitalization (September 23, 2018)

Source: Compiled based on RBC-UKRAINE data (2018).

Name	Year of establishment	Market cap, USD billion	Cryptocurrency market share, %	Change (24h)
Bitcoin	2009	116.5	52.23	+0.28%
Ethereum	2015	25.0	10.31	+1.33%
XRP	2012	22.7	0.91	+0.66%
Bitcoin Cash	2017	8.6	4.24	+1.65%
EOS	2017	5,5	0.3	+1.23%
Litecoin	2011	3,6	1.57	+2.42%
Stellar	2014	4,5	0.38	+20.22%
Tether	2017	2,8	0.53	-0.01%
Cardano	2014	2,3	0.61	+7.58%
Monero	2017	2.0	0.88	+1.73%
Total	-	193.5	-	-

Table 2. Bitcoin rate (April 2018 – April 2019)

Source: Compiled based on minfin.com.ua data (2018).

Month	Indicator, USD	Absolute deviation, USD	Growth rate, %
April	9,325.36	2,370.94	134.0926
May	7,563.96	-1,761.40	81.11172
June	6,361.50	-1,202.46	84.10277
July	7,728.23	1,366.73	121.4844
August	7,046.40	-681.83	91.17741
September	6,577.90	-468,50	93.35121
October	6,326.59	-251,31	96.17948
November	3,965.07	-2,361,52	62.6731
December	3,732.18	-232,89	94.12646
January	3,468.58	-263,6	92.93710
February	3,856.56	+387,98	111.18556
March	4,100.80	244,24	106.33311

It is concluded from Table 3 that the best observation is consistent with the third degree polynomial model. The model confidently predicts the cost reduction of Bitcoin in the forecasted period (Figure 1).

It should also be noted that the crippling curve is a rather volatile phenomenon. The variation coefficient for Bitcoin in the period from April 2018 to March 2019 (Compiled based on minfin.com.ua data, 2018–2019) was calculated. The calculation was made automatically in Microsoft Excel. The coefficient of variation for Bitcoin was 31.95%,

confirming the assertion about the instability of this phenomenon.

Thus, the cryptocurrency at this stage of development of the economy and information systems is trying to occupy a stable position. But the temporary rapid increase in capacities has no resistance and can lead to collapse. However, if the price stability of cryptocurrency is reached, it can be used in international transactions, not only for speculative benefits. However, this issue will have already been directly connected

Table 3. Coefficients for determining the trending models

Model	Equation	R ²
Polynomial model of the third degree	$y = -13,998x^3 + 261,29x^2 - 1845,3x + 12136$	0.8255
Linear	$y = 520,37x + 10579$	0.7763
Exponential	$y = 11424e^{0.078x}$	0.7561
Power	$y = 12050^{0.336}$	0.6183
Logarithmic	$y = 2357\ln(x) + 11123$	0.7001

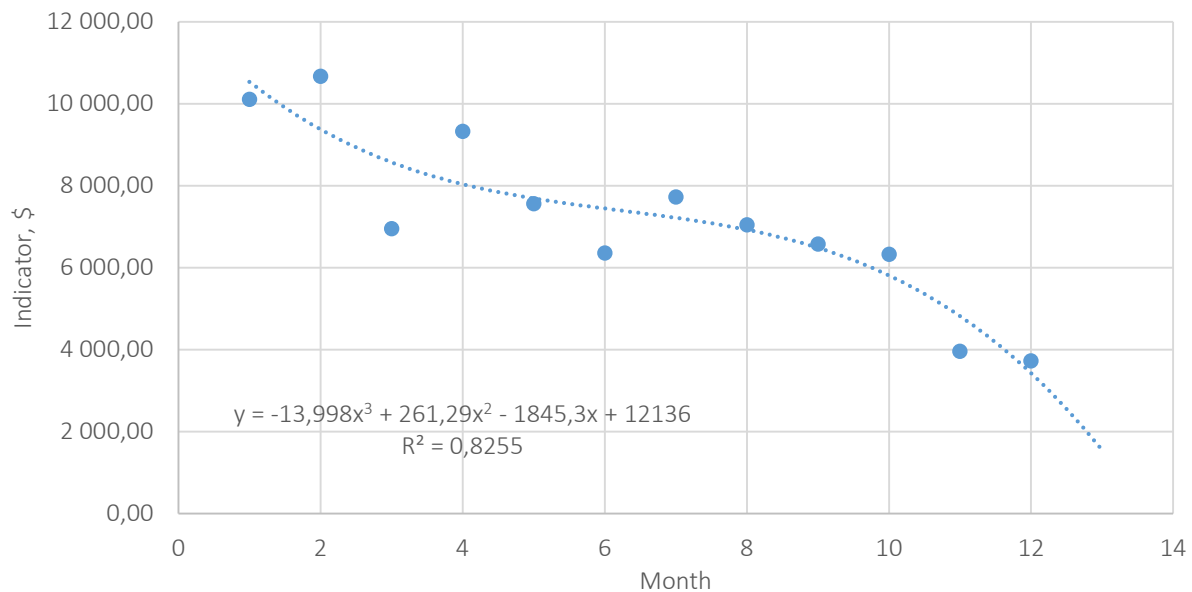


Figure 1. Forecasting of the Bitcoin rate to the USD for the first quarter of 2019

with the legalization of the new currency and its recognition by central banks.

4.2. Legal aspects of the cryptocurrency recognition

Having analyzed the current economic literature on the recognition of cryptocurrency in the international arena, it can be argued that there is no single approach. Accordingly, certain countries consider cryptocurrency as a commodity. For example, enterprises in the USA that use cryptocurrency in their activities must obtain a license to keep records of all transactions with cryptocurrency. In June 2018, the Supreme Court of the United States determined that the cryptocurrency is supported by the American state. Other countries, such as the UK, consider cryptocurrencies as personal funds and, accordingly, charge taxes only on exchange for other currencies or when purchasing goods or services. At the same time, the Bank of England does not notice any threat to the economy on the part of cryptocurrency, but the government controls the implementation of cryptocurrency operations. Germany has recognized Bitcoin as a payment unit and a form of private money.

On the official Bitcoin website (2018), cryptocurrency is designated as an innovative payment network and a new kind of money that uses P2P tech-

nology and operates without a central supervisory authority.

In Polish legislation, it is noted that cryptocurrency is a private property and at the same time a measure of value, but not money. In Japan, cryptocurrency has been identified as a tool with the same payment functions as the national currency. At the same time, in Japan in March 2014, it was decided to regulate the circulation of cryptocurrency and taxation of such operations (Payment Services Act, 2018). Subsequently, on March 14, 2018, the Accounting Standards Board of Japan (ASBJ) has made a decision on the practical management of cryptocurrency accounting and, accordingly, has adopted the relevant law (standard) as part of the Japanese GAAP. The action of the above-mentioned law starts from the beginning of the fiscal year, but no later than April 1, 2018.

In short, the Payment Services Act (Japan's Accounting Standards Board, 2018), adopted in Japan, establishes the status of criminals as property rights at the legislative level, transferring property rights through an electronic data system for such functions:

- a) a payment facility, means of trade with indeterminate persons;
- b) an exchange facility for other currencies for the purpose of (a).

The Payment Services Act clearly states what it cannot be considered as a cryptocurrency.

- Japanese fiat currency;
- foreign fiat currency;
- assets denominated in fiat currencies;
- “prepaid cards” issued in exchange for the prepayment of goods or services;
- “points” under point services (services where points are issued according to a certain percentage of the sales amount of the goods or services or are issued for each visit to the store or use of service) (Japan’s Accounting Standards Board, 2018).

On June 29, 2018, the Practical Guidelines for Financial Statements Audit of Virtual Currency Exchange Service Providers was introduced in Japan, which set out clear principles and methods for carrying out audit activities at enterprises using cryptocurrency (Japan’s Accounting Standards Board, 2018).

The cryptocurrency was not recognized legally in Switzerland. As stated in the Swiss Banking Act (2017), all cryptocurrency transactions are applied as payment facilities and in any case not as commodity transactions. But the cryptocurrency is exempted from VAT. It is also worth noting that the Swiss franc can be freely exchanged for cryptocurrency.

The cryptocurrency classification is important from the point of view of the economy and accounting. According to the ICO standards in Switzerland, it is expedient to divide all cryptocurrencies into three large groups:

- payment tokens, which can also be called simply a cryptocurrency, which performs functions and no other, whose purpose is to be a means of payment;
- utility tokens that perform the function of the digital access key to the services;
- asset counters represent assets such as participations in a real physical underlying, companies, or

earnings streams, or an entitlement to dividends or Interest payments. In terms of their economic function, the tokens are analogous to QUOTAS, bonds or derivatives (Finma, 2018).

Cryptocurrency is not recognized legally in China as well. In 2013, the People’s Bank of China issued a “Notice on measures to prevent the risks associated with the use of Bitcoin”, which defines Bitcoin as a “special virtual commodity” and establishes that any operations with banks with Bitcoin are prohibited. Since from 2014, on the legislative level, the use of cryptocurrency was forbidden in Bolivia. Information on legalization of cryptocurrency in other countries with a developed and transformational economy can be found on the The Library of Congress (2018) portal.

Considering the issue of cryptocurrency in European countries, it is worth noting that within the regulatory framework of Ukraine, the issue of recognition, accounting and regulating transactions with cryptocurrency remains unpublished. More detailed information on existing legislative acts and draft regulatory documents on the recognition of cryptocurrency commodities in Ukraine, the possibility of lawful implementation of transactions with cryptocurrency and their taxation can be found in Avhustova and Zakrevska (2018).

It should be noted that an important step for Ukraine towards legalization of cryptocurrency transactions is the presentation of the “concept of state regulation of cryptocurrency transactions in Ukraine. The proposed approach determines the legal status of cryptocurrency and tokens as types of financial instruments. The document also defines the role and functions of other state bodies (NBU, Ministry of Finance) in regulating such instruments (Avhustova & Zakrevska, 2018; RBC-UKRAINE, 2018). There is another important statement by one of the authorities in Ukraine: “The state will only regulate the exchange rate of cryptocurrency in Fiat order to prevent money laundering” (Avhustova & Zakrevska, 2018; RBC-UKRAINE, 2018).

Consequently, in Ukraine, as in most countries with the developed and transformed economy, cryptocurrency is not legal. However, there is a step towards the creation of a regulatory framework for control cryptocurrency operations.

4.3. Accounting aspects of the cryptocurrency recognition

As already mentioned in the article, there are more than 1,500 types of cryptocurrency in the world. Each of them has some special features, methods of education, distribution, which, as a consequence, affects their assessment and accounting. Therefore, first of all, it is needed to clearly understand what is “cryptocurrency” or “digital currency”. Therefore, the term itself (cryptocurrency) claims that the content of the phenomenon it describes most likely refers to the concept of money, since the second part of the term contains “currency”. However, the judgments and conclusions of scientists are mainly formed based on the interpretation of the first part of this phenomenon name, “crypto”, that is, the vast majority of economists focus on the form of this phenomenon, not on its content. This leads to the fact (Petruk & Novak, 2017) that cryptocurrency is considered in the context of the use of electronic money as its kind. Such a one-sided approach to this phenomenon from the standpoint of describing the technical model of the latter’s functioning does not allow properly disclosing of the method of accounting to reflect the cryptocurrency as a kind of asset.

Besides Petruk and Novak (2017) note that according to the modern monetary theory, there are three approaches to the interpretation of money, namely functional, equivalental and portfolio. But the study showed that firstly, calculations with cryptocurrencies have not acquired a mass distribution either in Ukraine or in other countries of the world. However, this currency is quite attractive to investors, since the Bitcoin exchange rate is not influenced by political conditions or the activity of the Central banks of the countries, and suggests the profits from speculative transactions. Secondly, cryptocurrency is partially used in the service of commodity circulation in Ukraine and abroad. Thirdly, according to the portfolio approach, the cryptocurrency should have the ability to be easily exchanged for any other product, that is, to be a common equivalent, although not implemented in practice.

Considering the essence of cryptocurrency as a methodological prerequisite for its accounting re-

flection, it is advisable to turn to the conceptual basis of financial reporting. Accordingly, the use of cryptocurrency by business entities as an asset corresponds to three out of four criteria: to come to the business entity through exchange for other assets, to be used for repaying the debt, and distribution between the owners of the business entity.

Today, there are different approaches to accounting recognition of cryptocurrency in the activity of enterprises. This is due to the lack of a separate Financial Reporting Standard. Existing standards prescribe the treatment of cryptocurrency as cash (IAS 7 Statement of Cash Flows, 1994), as inventories (IAS 2 Inventory, 1991), as financial instruments (IFRS 9 Financial Instruments, 2018) or as intangible assets (IAS 38 Intangible Assets, 2004).

Having by analyzed the IAS, some conclusions can be made on cryptocurrency:

- cryptocurrency cannot be attributed to cash in accordance with IAS 7 (1994), since the standards clearly state that money should be issued by the central bank, be liquid and perform the function of the means of payment (mass);
- cryptocurrency cannot be attributed to financial instruments in accordance with IFRS 9 (2018), because the contractual relations between those who buy a cryptocurrency and those who sell it cannot be traced;
- cryptocurrency cannot be attributed to investment in real estate in accordance with IAS 40 (2005), since this standard prescribes investment property as that held for lease or increase in equity. According to this standard, investment property should not be classified as land, buildings, cars, etc.

It should be noted that there are companies that increase their own capital at the expense of cryptocurrency, but the first condition (property right) is still not met. It can be, therefore, argued that cryptocurrency is not a good example to be classified as investment property:

- cryptocurrency cannot be fully attribute to intangible assets in accordance with IAS 38

(2004), since this standard determines that this type of asset does not have a material form corresponding to cryptocurrency, but it is necessarily a non-monetary asset;

- it would be possible to attribute the cryptocurrency to inventories, in accordance with IAS 2 (1991), but it remains an open question for the commodity broker-traders in the context of digital currencies.

Given the considered issues and the substantive findings of the IFRS Interpretations Committee (2019), it will be most expedient and more objective to attribute the cryptocurrency to intangible assets, because:

- as noted earlier, cryptocurrency has no material form in IAS 38 (2004);
- this type of asset can be realized or given (IAS 38, 2004);
- to realize of cryptocurrency, an owner is not entitled to receive a fixed number of currency units (IAS 21, 2005).

According to the authors cryptocurrency should be recognized as an intangible asset.

Also, the IFRS Interpretations Committee (2019) specified that if the sale of cryptocurrency is the usual activity for an enterprise, it is expedient to use IAS 2 (1991) for its accounting.

Consequently, based on the analysis, one must argue the appropriateness of recognizing cryptocurrency as an intangible asset or inventory and, accordingly, for accounting purposes, to use IAS 38 (2004) and IAS 2 (1991). However, again, the question arises as to which method of valuation is better to use for cryptocurrency. So, IAS 38 (2004) offers a cost model or a revaluation model. IAS 2 (1991): a lower cost or “net realizable 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” (IAS 2, 1991).

Let’s consider in more detail each of these methods and the possibility of their use for cryptocurrency:

1. The possibility of using the revaluation method involves one important condition – the presence of an active market. According to IFRS 13 (2013), an active market is a market in which transactions on the asset or liability take place with sufficient frequency and volume to provide pricing information on an ongoing basis. Accordingly, on the basis of the research (paragraph 4.1 of this article), there is an active market for cryptocurrency, and therefore one has the right to use this method and reflect the cryptocurrency in the statement of financial position of the entity at fair value (IAS 38, 2004).
2. The complexity of the above method is that, with the increasing cost of cryptocurrency, changes occur in the composition of other aggregate income, but when its value is reduced – in profit or loss.
3. The lower-cost method is simpler in practical terms, since it only determines the need to reassess value change (IAS 36, 1999). Change of cost is the cost, that forms the fair value of the cryptocurrency.

At the end of 2018, in Japan, there were public debates on the above-mentioned Payment Services Act:

4. The cryptocurrency at the balance sheet date should be carried out at fair value, provided that it has an active market and is held for sale (except for the activity of dealers who hold cryptocurrency for their clients). The difference between the fair value and the carrying amount will be in profit or loss for the entity. Assuming that there is no active market for cryptocurrency, its estimate will be at the lower cost or at estimated disposal value. In such conditions, the damage that arises is not subject to return.
5. Let’s consider the exception specified in (1). Dealers who hold the cryptocurrency for their clients at the time of their initial recognition estimate it at a high price and at the time of deposit for fair. At the same time, as the custodian custody is deposited with the client, it is necessary to recognize the obligation to him. The liability is meas-

ured at the same amount as the corresponding asset.

Consequently, based on the Payment Services Act (2018) analysis, the following conclusions can be made regarding the reporting of cryptocurrency data:

- if the cryptocurrency is the property of the entity, it is expedient to determine its carrying amount. Separately, it is necessary to show the cryptocurrency, for which there is an active market and for which such a market does not exist. Virtual currencies with immaterial balance sheet amounts can be joined;

- if the dealer keeps the cryptocurrency for his clients, it is necessary to display the number of bills by type of cryptocurrency.

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 currencies held on behalf of its customers) is immaterial compared to the total assets of the entity.

So, having analyzed IAS, there is no certainty that the accounting treatment under IAS 38, IAS 2 would provide relevant and useful financial information. It is expedient to develop the necessary accounting guidance.

CONCLUSION

In order to develop a transparent cryptocurrency market, which will ensure the use of cryptocurrency against money laundering or terrorism, above all, at the macro level, it is necessary to create legal environment. In Ukraine, the first steps were taken to legalize and develop the cryptocurrency market, preliminary revisions were also made to place cryptocurrency on the Ukrainian stock exchanges. However, at the moment, cryptocurrency remains not a legal asset in Ukraine.

According to research results, the following conclusions have been made:

1. Depending on the method of issuing this asset, it is expedient to smooth the cryptocurrency curriculum as an intangible asset or inventory.
2. On the volatile active market (and according to the study results, the authors have proved this noun for cryptocurrency), it is expedient to measure this asset at fair value at the balance sheet date. Besides, the difference arising from the change in the value of the cryptocurrency will be determined by the enterprise for profit or loss.
3. Participants to cryptocurrency transactions should reflect this asset in the balance sheet at each reporting date (except when their value, as compared to the overall assets of the entity, is insignificant).
4. If the acquisition (receipt) of cryptocurrency is carried out with the help of dealers, an initial estimate will also be made at the fair value determined by the active market at the date of such a transaction. However, the important point is the emergence of a dealer obligation to the client, the amount of which should correspond to the amount of the asset.

The analysis of normative documents provides an opportunity to argue that no IAS discloses the essence of the cryptocurrency and does not provide for its accounting. These results create new preconditions for the expansion of the IAS and, consequently, the construction of the NPSA.

REFERENCES

1. Accounting Standards Board of Japan (2018). *Accounting for Virtual Currencies*. Retrieved from https://www.asb.or.jp/en/wp-content/uploads/20180315-01_e.pdf
2. Avhustova, O., & Zakrevska, O. (2018). Cryptocurrency in the world economy and its account in Ukraine. In *Scientific development and achievements, 1*, 56-65. London: Wenlock Road N1 7GU.
3. Blume, S. (2014). Cryptocurrency. *The New Palgrave Dictionary of Economics*.
4. Chuen, D., Guo, L., & Wang, Y. (2018). Cryptocurrency: A New Investment Opportunity? *The Journal of Alternative Investments Winter*, 20(3), 16-40. <https://doi.org/10.3905/jai.2018.20.3.016>
5. CIS Legislation. (1999). *Law of Ukraine of May 20, 1999. About the National Bank of Ukraine*. Retrieved from <http://cis-legislation.com/document.fwx?rgn=9526>
6. CoinMarketCap. (2018). *Cryptocurrency Market Capitalizations*. Retrieved from <https://coinmarketcap.com/historical>
7. Descôteaux, D. (2014). *Bitcoin: More Than a Currency, Potential for Innovation*. January Regulation Series. Retrieved from http://www.exchangemagazine.com/morningpost/2014/week2/Wednesday/note0114_en.pdf
8. Dourado, E., & Brito, J. (2014). *Cryptocurrency*. http://doi:10.1057/978-1-349-95121-5_2895-1
9. Dubensky, V. (2015). *Еволюція Bitcoin, або Як скасувати монополію на владу [Evolutsiia Bitcoin, abo yak skasuvaty monopoliiu na vladu]*. Retrieved from <http://www.epravda.com.ua/publications/2015/11/10/566589>
10. EUR-Lex (2018). *Directive (EU) 2018/843 of the European Parliament and of the Council of 30 May 2018*. Retrieved from <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32018L0843>
11. Fernández-Villaverde, J., & Sanches, D. (2016). *Can currency competition work* (NBER Working Paper 22157). National Bureau of Economic Research.
12. Finma (2018). *Finma publishes ICO guidelines*. Retrieved from <https://www.finextra.com/pressarticle/72666/finma-publishes-ico-guidelines>
13. Houben, R., & Snyers, A., (2018). Cryptocurrencies and blockchain. Retrieved from <http://www.europarl.europa.eu/cmsdata/150761/TAX3%20Study%20on%20cryptocurrencies%20and%20blockchain.pdf>
14. IFRS Foundation. (1989). *Conceptual Framework for Financial Reporting*. Retrieved from <https://www.iasplus.com/en/standards/other/framework>
15. IFRS Foundation. (1991). *IAS 2 – Inventories*. Retrieved from <https://www.iasplus.com/en/standards/ias/ias2>
16. IFRS Foundation. (1994). *IAS 7 Statement of Cash Flows*. Retrieved from: <https://www.iasplus.com/en/standards/ias/ias7>
17. IFRS Foundation. (2004). *IAS 38 Intangible Assets*. Retrieved from: <https://www.iasplus.com/en/standards/ias/ias38>
18. IFRS Foundation. (2013). *IFRS 13 – Fair Value Measurement*. Retrieved from <https://www.iasplus.com/en/standards/ifrs/ifrs13>
19. IFRS Foundation. (2014). *IAS 40 Investment Property*. Retrieved from <https://www.iasplus.com/en/standards/ias/ias40>
20. IFRS Foundation. (2014). *IAS 9 financial Instruments*. Retrieved from <https://www.iasplus.com/en/standards/ifrs/ifrs9>
21. Ясук, Т. В. (2017). Методика фінансового обліку криптовалюти як особливого виду електронних грошей [Metodyka finansovoho obliku kryptovaliuty yak osoblyvoho vydu elektronnykh hroshei]. *Molodyi vchenyi*, 2(42), 349-354. Retrieved from http://www.irbis-nbuv.gov.ua/cgi-bin/irbis_nbuv/cgiirbis_64.exe?I21DBN=LINK&P21DBN=UJRN&Z21ID=&S21REF=10&S21CNR=20&S21STN=1&S21FMT=ASP_meta&C21COM=S&_S21P03=FILA=&_S21STR=molv_2017_2_83
22. Japan's Accounting Standards Board. (2018). *About the Practical Solution on the Accounting for Virtual Currencies under the Payment Services Act*. Retrieved from https://www.asb.or.jp/en/wp-content/uploads/2018-0315_2_e.pdf
23. Kostiuchenko, V. M., Malinovska, A. M., & Mamonova, A. V. (2017). Передумови запровадження обліку та оподаткування операцій із криптовалютами в Україні [Peredumovy zaprovadzhennia obliku ta opodatkuvannya operatsii iz kryptovaliutamy v Ukraini]. *Suchasna ekonomika*, 6(82), 94-102.
24. Krugman, P. (2018). *Transaction Costs and Tethers: Why I'm a Crypto Skeptic*. Retrieved from <https://www.nytimes.com/2018/07/31/opinion/transaction-costs-and-tethers-why-im-a-crypto-skeptic.html>
25. Lee, D., & ChuEn, K., Guo, L., & Wang, Y. (2018). Cryptocurrency: A New Investment Opportunity? *The Journal of Alternative Investments*, 20(3), 16-40. <https://doi.org/10.3905/jai.2018.20.3.016>
26. LigaZakon. (2017). *Закон України Про обіг криптовалюти в Україні [Pro obih kryptovaliuty v Ukraini]*. Retrieved from http://search.ligazakon.ua/l_doc2.nsf/link1/JH5JJ00A.html
27. Meiklejohn, S., Pomarole, M., Jordan, G., Levchenko, K., McCoy, D., Voelker, G. M., & Savage, S. (2016). A Fistful of Bitcoins: Characterizing Payments Among Men with No Names. *Communications of the ACM*, 59(4), 86-93. <http://doi.org/10.1145/2504730.2504747>
28. Moser, M., Soska, K., Heilman, E., Lee, K., Heffan, H., Srivastava, S., Hogan, K., Hennessey, J., Miller, A., Narayanan, A., &

- Christin, N. (2018). An empirical analysis of linkability in the Monero blockchain. *Proceedings on Privacy Enhancing Technologies*, 143-163. Retrieved from https://www.researchgate.net/publication/316163255_An_Empirical_Analysis_of_Linkability_in_the_Monero_Blockchain
29. Narayanan, A., Bonneau, J., Felten, E., Miller, A., & Goldfeder, S. (2016). *Bitcoin and Cryptocurrency Technologies: A Comprehensive Introduction*. Princeton University Press.
30. Petruk, O., & Novak, O. (2017). Сутність криптовалюти як методологічна передумова її облікового відображення [Sutnist kryptovalyuty yak metodolohichna peredumova yii oblikovoho vidobrazhennia]. *Visnyk Zhytomyrskoho tekhnolohichnoho universytetu, Seriia: Ekonomika*, 4(82), 48-55.
31. Procházka, D. (2018). Accounting for Bitcoin and Other Cryptocurrencies under IFRS: A Comparison and Assessment of Competing Models. *The International Journal of Digital Accounting Research*, 18, 161-188. http://doi.org/10.4192/1577-8517-v18_7
32. Protsenko, A. (2016). The legal status of virtual currencies: world experience and Ukrainian realities. *Law and Society*, 2, 130-134.
33. RBC-Ukraine. (2018). NS&SMC presented the concept of state regulation of operations with cryptocurrencies. Retrieved from <https://styler.rbc.ua/rus/zhizn/bitcoin-seti-nazvali-samye-populyarnye-kriptovalyuty-1517849648.html>
34. Renterghem, J. V., & Meerleer, W. D. (2017). *From Bits to Coins: Price Formation of Bitcoin*. Retrieved from https://www.researchgate.net/publication/318755558_from_bits_to_coins_price_formation_of_bitcoin
35. Rose, C. (2015). The Evolution of Digital Currencies: Bitcoin, A Cryptocurrency Causing a Monetary Revolution. *International Business & Economics Research Journal*, 14(4), 617-622. Retrieved from <https://clutejournals.com/index.php/IBER/article/view/9353/9406>
36. Silver, C. (2017). *Cryptocurrency*. Retrieved from <https://www.investopedia.com>
37. Skrypnyk, V. (2018). Місце криптовалюти в системі об'єктів цивільних прав [Mistse kryptovalyuty v systemi tsyvilnykh prav]. Retrieved from <http://www.pgp-journal.kiev.ua/archive/2018/8/9.pdf>
38. Spengelink, H. (2014). *The adoption process of cryptocurrencies*. Retrieved from <https://pdfs.semanticscholar.org/5c0d/bbf5c9aa38766d61eac90a0258b4d7d97f6f.pdf>
39. The Startup. (n. d.). *What to Expect from Crypto Market in 2019?* Retrieved from <https://medium.com/swlh/crypto-market-forecast-2019-33ce2d1a24f3>
40. The Verkhovna Rada of Ukraine. (2006). *Закон України Про цінні папери та фондовий ринок [Zakon Ukrainy Pro tsinni papery ta fondovyi rynek]*. Law of Ukraine. Retrieved from <http://zakon.rada.gov.ua/laws/show/3480-15>
41. Venter, H. (2016). *Digital currency – A case for standard setting*. Retrieved from http://www.aasb.gov.au/admin/file/content102/c3/AASB_ASAF_DigitalCurrency.pdf
42. Yarovaia, K. A. (2017). Криптовалюта: визначення правового статусу в Україні [Kryptovaliuta: vyznachennia pravovoho statusu v Ukraini]. *Molodyi vchenyi*, 10(50), 1117-1120.
43. Yereli, A., & Orkunoğlu-şahin, I. (2018). *Cryptocurrencies and Taxation*. Retrieved from <http://doi.org/10.2861/263175>