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**N. V. Stukalo, N. O. Krasnikova, O. O. Balash**

### **CRYPTOCURRENCY FUNCTIONING IN THE GLOBAL ECONOMY**

The article reveals a conceptual basis of the cryptocurrency functioning. The main types of cryptocurrencies are featured and analyzed as well as their general strengths and weaknesses. Based on the price dynamics correlation analysis of some cryptocurrency types, a general low level of dependence between digital assets is established. The main functions of the cryptocurrency are formulated in the form of transformed money functions. Also, additional functions of cryptocurrencies are defined on the basis of their innovative nature, as well as the role in the modern financial system and world economic relations.

**Keywords:** *cryptocurrency, global economy, cryptocurrency functions, money, financial market, innovations.*

**Н. В. Стукало, Н. О. Краснікова, О. О. Балаш**

### **ФУНКЦІОНУВАННЯ КРИПТОВАЛЮТ В ГЛОБАЛЬНІЙ ЕКОНОМІЦІ**

У статті розглянуті концептуальні основи функціонування криптовалют. Проаналізовані особливості основних видів криптовалют, а також загальні їх сильні та слабкі сторони. На підставі кореляційного аналізу динаміки цін на деякі види криптовалют встановлено загальний низький рівень залежності між цифровими активами. Сформульовані основні функції криптовалют у вигляді трансформованих функцій грошей. Також визначені додаткові функції криптовалют на основі їх інноваційного характеру, а також ролі в сучасній фінансовій системі та світогосподарських зв'язках.

**Ключові слова:** *криптовалюта, глобальна економіка, функції криптовалют, гроші, фінансовий ринок, інновації.*

**Н. В. Стукало, Н. А. Красникова, Е. А. Балаш**

### **ФУНКЦИОНИРОВАНИЕ КРИПТОВАЛЮТ В ГЛОБАЛЬНОЙ ЭКОНОМИКЕ**

В статье рассмотрены концептуальные основы функционирования криптовалют. Проанализированы особенности основных видов криптовалют, а также общие их сильные и слабые стороны. На основе корреляционного анализа динамики цен на некоторые виды криптовалют установлен общий низкий уровень зависимости между цифровыми активами. Сформулированы основные функции криптовалют в виде трансформированных функций денег. Также определены дополнительные функции криптовалют на основе их инновационного характера, а также роли в современной финансовой системе и мирохозяйственных связях.

**Ключевые слова:** *криптовалюта, глобальная экономика, функции криптовалют, деньги, финансовый рынок, инновации.*

#### **Introduction**

The emergence of cryptocurrencies has been a logical development of the electronic money network with the main paradigm of decentralization, high anonymity and issue low cost.

The term «cryptocurrency» began to be used after the emergence of Bitcoin payment system, which was developed in 2009 by a person or group of people under the pseudonym Satoshi Nakamoto (Nakamoto, 2008). Despite the rapid rise in popularity,

\* Дніпровський національний університет імені Олеся Гончара, м. Дніпро, Україна;

E-mail: nstukalo@ukr.net, nat.kras11@gmail.com, elenbalash@gmail.com

today there is no single internationally recognized definition of cryptocurrency, which would clearly reveal its essence and economic nature. The development of the conceptualization of the cryptocurrencies phenomenon became relevant only in recent years that happened due to the emergence of hundreds of new cryptocurrencies, blockchain platforms and strengthening their role in the modern financial system. To some extent, this is explained due to this instrument novelty and the technical solutions diversity implemented in the electronic payment systems.

**Analysis  
of recent  
researches and  
publications**

Scientists like D.Weber, D. Seldin, D. Dwyer, O. Dzhusov, G. Karlstrom etc. investigated prospects for the use of cryptocurrency as part of the new world monetary and financial system and its potential benefits and risks. Such scientists as A.Herve, M. Wilson, A. Yelowitz and others began development in the framework of this subject, focusing only on the legal and theoretical aspects of the cryptocurrency disclosure as an economic category without affecting the questions of its practical use as an investment tool. The portfolio theory works of H. Markowitz, J. Tobin, J. Fama, K. French, W.Sharpe and others became the theoretical basis of the cryptocurrency inclusion in investment portfolio.

However, despite the existing achievements in this field, cryptocurrency conceptual foundations in the global economy with a clear definition of the cryptocurrency roles in world processes require further disclosure and more detailed studies.

**The statement  
of purpose**

The aim of this work is the definition of the cryptocurrency functioning conceptual basis in the global economy. The methodological basis of the research was formed by the works of scientists, the statistics of the origin, development and dynamics of the cryptocurrency functioning. The study was conducted on the basis of dialectical, analytical, systematic methods and scientific abstraction. For comparison of the price dynamics for different types of cryptocurrency mathematical method of correlation analysis was applied.

**Research results  
and discussions**

There are 3 main definitions of the «cryptocurrency» concept in scientific circles as:

1. a form of digital currency, whose emission and accounting are based on asymmetric encryption and the use of different cryptographic protection methods (Angel, 2015);
2. innovative payment network and a new form of money that uses the P2P (people-to-people) technology, that operates without a central controlling authority or the bank, transaction processing and emissions are produced collectively by the efforts of the network (Gervais, 2014);
3. a special kind of electronic money that is based on a decentralized mechanism of issue and circulation and has a complex system of information and technological procedures that are built on cryptographic methods of protection, governing the identification of owners and fixation of their changes facts (Ober, 2013).

A key feature of cryptocurrencies is the lack of any internal or external administrator. Therefore, banks, tax, judicial and other public or private bodies may not affect the transactions of all participants in the payment system (Kobrin, 1997). Such a situation facilitates the anonymous use of the cryptocurrency and provides the irreversibility of the deals, so no one can cancel, block, challenge or be forced to make a transaction without access to the private key of the owner.

Generally, cryptocurrency developers are setting a first upper limit for the total emissions. However, some cryptocurrencies have no fixed upper limit of emissions with possible reverse process of demission (by annihilating a small fixed amount in each transaction).

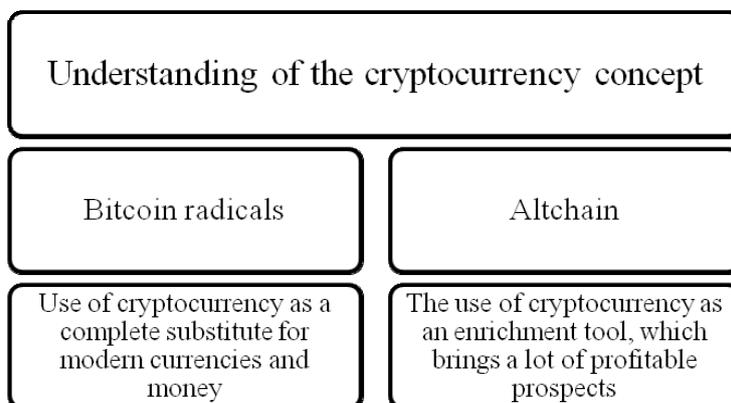
The emergence of cryptocurrencies has led to the emergence of a new phenomenon, that is difficult to be classified in the financial and industrial activities. For instance, mining – is the process of obtaining compensation in the form of a certain number of cryptocurrency for the use of their computing power to verify each next block of payments.

The cryptocurrencies also has some disadvantages. The main one is the high price volatility, which affects the incentives for the accumulation of such currency and increases the cost of hedging (volatility of gold averages around 1.2%, while other major currencies average between 0,5 % to 1,0 %). Other crucial drawback of cryptocurrencies is the low

awareness and the difficulty in understanding by potential consumers. This limits the range of users of such currency and make currency only «for the elite» network members.

The governments of the world have different views on the cryptocurrency: 1. Global supporters of the pioneer countries, whose governments have already taken steps to promote cryptocurrency and management parity for the virtual currency (Japan, Sweden, Switzerland, Denmark, Norway, Belarus, Estonia, USA, Spain, UK, South Korea, Australia, Chile, Canada); 2. Neutral countries – governments that do not do any steps and do not provide any legal or regulatory protection for users of cryptocurrency (this group includes most countries of the world); 3. Opponents – the countries that have taken measures to decrease the use of virtual currency or prevent cryptocurrency usage on its territory (China, Turkey, Brazil, Bolivia, Ecuador, Lebanon, Bangladesh). Venezuela until recently was an extreme opponent of the cryptocurrencies usage, however, in 2018 it announced the introduction of the national cryptocurrency, which aims to improve the economic situation of the country.

Cryptocurrency as the financial trend of a new generation attracts the attention not only of scientists, IT-experts and corporate sector, but also creates «schools» that represent their vision of the concept of cryptocurrencies, and its use in the future. Concerning the use of cryptocurrency Bitcoin, there are two main way of seeing the applicability of this currency (Figure 1).



**Fig. 1. Classification of the cryptocurrency vision concepts**

The first group consists of the so-called «bitcoin radicals» who believe that the cryptocurrency will be used as a complete substitute for modern currency and money in the traditional sense, but their purpose has rather ideological arguments rather than real solutions to the modern monetary problems (Greenspan, 2016).

The second group – representatives of the «altchain» – see cryptocurrency as more than just a sharing tool. Cryptocurrency is a new tool of enrichment, which brings a lot of prospects (Penney, 2017). This group consists of investors, in the classic sense – corporations and individual investors wishing to increase their capital, that are informally called «private boys».

At the beginning of 2017 the total value of all cryptocurrencies was \$17.7 bln. In a year (at the beginning of 2018), their total market capitalization already amounted to \$800 bln. Now Bitcoin builds up 47% of this amount.

In 2017, the ether cryptocurrency has grown up to 4407 % and the capitalization of this cryptocurrency amounted at \$83.6 bln (table 1). One of the important reasons for the popularity of the ether this year was the creation of Ethereum Enterprise Alliance – corporate enterprises who aim to use cryptocurrency for business.

Ripple was the third currency by market capitalization with the 14406 % growth on the year beginning. Competitive advantage of Ripple comes from its blockchain, which is focused on the financial services sector, that allows investors to process international remittances. The main function of the Ripple is the use as exchange currency (currency bridge) for cross-border transfers when you need to convert one currency into another.

By the end of 2017, the Ripple has become the most profitable coin for 2017, showing a yield of 34,000 %. On January 1<sup>st</sup>, 2017, the cryptocurrency was worth about 0,0065 USD and a year later – 853 USD.

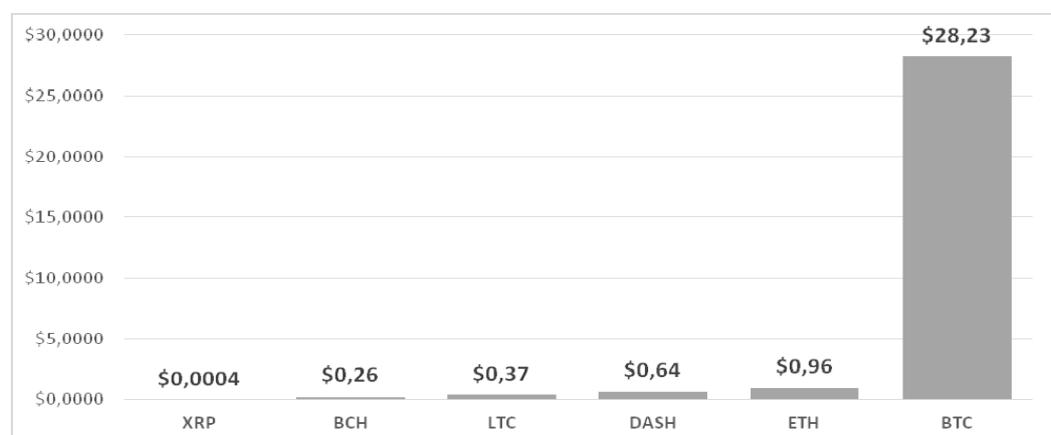
**Table 1. Top-20 cryptocurrencies by capitalization, 2018\***

| №  | Currency name          | Market capitalization, bln USD (as of 1.03.2018) | Price, USD (average monthly for March 2018) | Currency offer, coins (as of 1.03.2018) | Accessibility to mining | Average daily volume of transactions, mln USD (March 2018) | The growth rate of the currency for the period 2017 |
|----|------------------------|--|---|---|-------------------------|--|---|
| 1  | Bitcoin (BTC)          | 188,66   | 11163,40                                    | 16 899 700 BTC                          | yes                     | 5872,85  | 903%  |
| 2  | Ethereum (ETH)         | 83,59  | 853,12                                      | 97 979 719 ETH                          | yes                     | 1619,80  | 4407%   |
| 3  | Ripple (XRP)           | 36,04  | 0,92  | 39 091 956 706 XRP                      | no                      | 284,30   | 14406%  |
| 4  | Bitcoin Cash (BCH)     | 21,17  | 1245,05                                     | 16 999 350 BCH                          | yes                     | 377,20   | 224%  |
| 5  | Litecoin (LTC)         | 11,57  | 208,54                                      | 55 476 670 LTC                          | yes                     | 558,95   | 4850%   |
| 6  | NEO (NEO)              | 7,99   | 122,89                                      | 65 000 000 NEO                          | no                      | 140,77   | 104144%   |
| 7  | Cardano (ADA)          | 7,59   | 0,29  | 25 927 070 538 ADA                      | no                      | 80,11  | 1046%   |
| 8  | Stellar (XLM)          | 6,50   | 0,35  | 18 468 115 939 XLM                      | no                      | 98,24  | 19566%  |
| 9  | Monero (XMR)           | 5,50   | 348,61                                      | 15 787 323 XMR                          | yes                     | 116,54   | 2598%   |
| 10 | IOTA (MIOTA)           | 5,22   | 1,88  | 2 779 530 283 MIOTA                     | no                      | 26,11  | 295%  |
| 11 | Dash (DASH)            | 4,77   | 601,37                                      | 7 925 990 DASH                          | yes                     | 106,68   | 1303%   |
| 12 | NEM (XEM)              | 3,20   | 0,36  | 8 999 999 999 XEM                       | no                      | 43,25  | 39490%  |
| 13 | Ethereum Classic (ETC) | 2,96   | 29,52                                       | 100 275 971 ETC                         | yes                     | 615,52   | 2109%   |
| 14 | Nano (NANO)            | 2,10   | 15,72                                       | 133 248 289 NANO                        | no                      | 60,09  | 172747%   |
| 15 | Qtum (QTUM)            | 1,89   | 25,52                                       | 73 924 340 QTUM                         | no                      | 95,66  | 412%  |
| 16 | Lisk (LSK)             | 1,88   | 18,36                                       | 102 464 355 LSK                         | no                      | 23,98  | 16176%  |
| 17 | Bitcoin Gold (BTG)     | 1,85   | 109,58                                      | 16 859 836 BTG                          | yes                     | 16,42  | 99%   |
| 18 | Zcash (ZEC)            | 1,34   | 392,06                                      | 3 406 631 ZEC                           | yes                     | 70,03  | 998%  |
| 19 | Steem (STEEM)          | 0,87   | 3,48  | 250 993 568 STEEM                       | no                      | 8,97   | 3867%   |
| 20 | Verge (XVG)            | 0,81   | 0,05  | 14 667 548 048 XVG                      | yes                     | 13,67  | 219780%   |

\*Coin Market Cap: Cryptocurrency Market Capitalizations 2018 <https://coinmarketcap.com/>

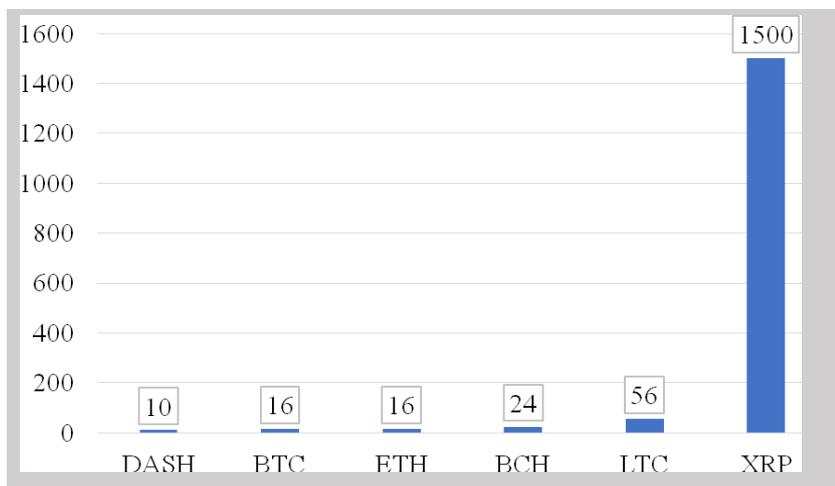
Ripple was created and is being controlled by the same company in San Francisco. Unlike ordinary cryptocurrencies, Ripple is not mined. Firstly, it was immediately released 100 bln XRP coins, each of them is divided into a million small pieces, which are called «drops» –20 % drop of issued coins of the creators left, and the remaining 80% is intended for use on the Ripple network. There are about 39 bln coins in circulation today.

The average cost of the transaction in the Ripple network is hundredths of a cent. On the background of this amount of fee in the Bitcoin network look much higher (Figure 2).



**Fig. 2. The cost of conducting one transaction in different cryptocurrencies**

At the same time the Ripple network processed more than 1500 transactions per one second. And one transaction is processed in 4 seconds, which is faster than any other cryptocurrency in the top-10 by market capitalization (Figure 3).



**Fig. 3. The number of transactions carried out in different cryptocurrencies per 1 second**

Cryptocurrency XEM, the twelfth by market capitalization, demonstrated high growth pace in 2017, rising in price by 39490 %. This cryptocurrency also have a special type of blockchain with possibility of safe and effective money transfers. XEM is a regional cryptocurrency where the users are mainly concentrated in South-East Asia.

A Verge network has shown the largest increase (219780 %), which occupies the 20<sup>th</sup> place in chart of market capitalization. This little-known virtual currency started the year with a cost of \$0,000007 for the coin XVG and grew to about 0,05\$.

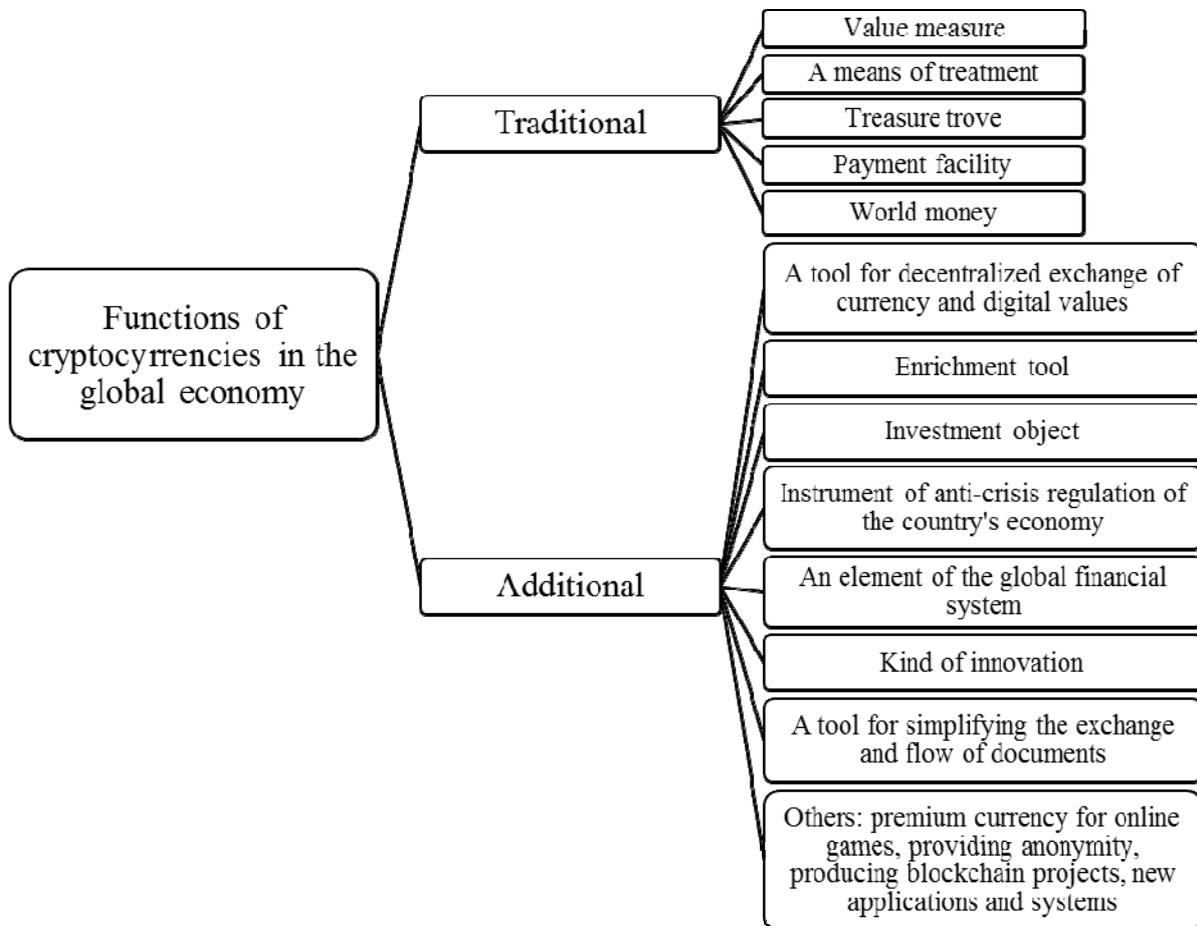
The value of the cryptocurrency, that is formed by the specific market of supply and demand is growing, however, between different currencies, there is a high dynamic ratio of prices. Sometimes changes in the price of currencies have the same direction, sometimes opposite, occasionally their correlation is very low. In certain cases, markets develop commonly and clear but in short-term trends, when the value of most altcoins is changing in the same direction.

Correlation analysis of price dynamics on some types of cryptocurrencies over the past two years has revealed a general low level of correlation between digital assets, except for a Bitcoin-Litecoin couple (table 2). This happens due to the fact that Litecoin to a certain extent is a «branch» of bitcoin and uses similar technology and principles, but even the ratio of their prices sometimes diverge.

**Table 2. The pair correlation of price dynamics in some types of cryptocurrencies**

|     | BTC    | LTC    | XRP    | ETH    | ETC    | XMR    |
|-----|--------|--------|--------|--------|--------|--------|
| BTC | 1      | 0,8125 | 0,1927 | 0,5246 | 0,3834 | 0,2123 |
| LTC | 0,8125 | 1      | 0,2322 | 0,6005 | 0,2445 | 0,1786 |
| XRP | 0,1927 | 0,2322 | 1      | 0,4545 | 0,1352 | 0,2117 |
| ETH | 0,5246 | 0,6005 | 0,4545 | 1      | 0,4012 | 0,0991 |
| ETC | 0,3834 | 0,2445 | 0,1352 | 0,4012 | 1      | 0,3515 |
| XMR | 0,2123 | 0,1786 | 0,2117 | 0,0991 | 0,3515 | 1      |

As the international legal status of cryptocurrencies currently is not defined, it is impossible to attribute this kind of tool to any of the financial categories. However, cryptocurrencies have become an element of world economic processes and took over a large number of economic and financial functions (Figure 4).



**Fig. 4. Functions of cryptocurrencies**

Cryptocurrency functions are not measured only by the functions of money; moreover, they enhance the understanding of them, transforming and globalizing, that is becoming an output to a new level. The intrinsic value of cryptocurrency can be considered conditionally zero because, although it is not supported by the value of the produced economy of goods and services, but the demands of the economic factors for production costs are not zero. Therefore, the function of value measure of the classical money cryptocurrencies perform in the process of exchange and payments.

As a medium of exchange, cryptocurrencies is in direct turnover, though limited by Internet market. At the same time, the cryptocurrency is devoid of the limitations on the capabilities of transaction – each of the owners can pay to anyone, anywhere and anything. Transaction is impossible to control or prevent, so that you can make transfers anywhere in the world. That is, again, comparing cash with traditional money, you can see that they are the world money, or even global in nature.

Cryptocurrency are not issuing loans, it is not used in the repayment of debt. But in case that the cryptocurrency will become legal tender at the level of states and the global economy, the potential use of cryptocurrency as a tool of circulation and payment will increase significantly. Accordingly, functionally there is a clear link between the increase in payment opportunities of cryptocurrencies and their circulation.

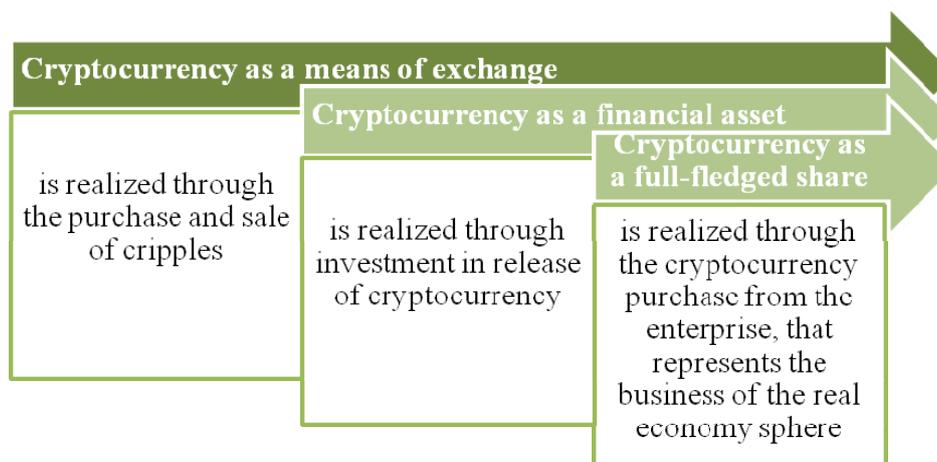
An overwhelming number of cryptocurrency owners are the owners more than active users and view the cryptocurrency as a tool of enrichment, which is a wider concept than a function of storage in conventional money, since it focuses on the ability of the speculative aspect of using cryptocurrency. In general, cryptocurrencies perform function as short-term storage worse because of excessive instability, but could be effective in medium – and long-term storage tools (Ali, 2017).

As the object of investment, cryptocurrency fulfills the function of the investor reserve funds while acquiring a high risk and unpredictability. Cryptocurrency can bring rapid and unexpected income caused by external factors, trends and scientific and technological progress.

One of the criteria for the selection of investment object among cryptoassets is the direct acquaintance with technical characteristics and features of networks. Platform and the blockchain system can be created onbitcoin-based technology (Bitcoin Blockchain), to be independent (Non-Bitcoin Blockchain) or is a separate system not tied to blockchain-system (Non-Blockchain) (Garcia et al., 2015). Understanding of network characteristics gives potential investors an insights to the possible problems, features and advantages, thatwill have a direct relationship to the market value in the future.

Cryptocurrency allows companies not only to produce its own currency, whose rate will depend on the success of the company, but also allows you to start the whole life cycle of capital, including its production, storage and trading.

Schematically the relationship between the main types cryptoassets can be seen in figure 5. Cryptocurrency in the classical sense has evolved into a full-fledged financial instrument through the mechanism of initial offering and has a tendency to turn into a real financial instrument in the future that will reflect the increase in values in the real sector of the economy, and not only limited to electronic space and cryptographic rewards.



**Fig. 5. The evolution of the cryptocurrency into the cryptoasset**

The Initial Coin Offering (ICO), or Initial Public Coin Offering (IPCO) is a decentralised means by which funds are being raised for the new cryptocurrencyprojects (NCC, 2016). ICO is used by start-ups to bypass the strict and regulated process of raising capital that is required of venture capital investors or banks. ICO campaigns include some percent of cryptocurrency that will be released for sale for early fans and enthusiasts of the project in exchange for legal tender or other cryptocurrencies, but usually bitcoins.

Coins of new cryptocurrency are called tokens and can be compared with the shares at their initial offering on the classic exchanges. If the collected amount of money does not meet the minimum specified level of project the funds are returned to sponsors and ICO is considered a failure (Allison-McCloskey Escrow Company, 2016).

When cryptocurrency start-up firm wants to raise funds for the initial placement of the coins, it is usually consists a plan that includes the following items (NCC, 2016):

1. the concept of the project;
2. what goals the project will accomplish by its end;
3. how much money is needed to support the campaign;
4. how many virtual tokens the «discoverers» of the project will keep;
5. what are the types of currency accepted for exchange;
6. how long the ICO campaign will last.

Early investors are usually motivated to buy cryptocurrency in the hope that the plan will be successful after its launch that will result in the rising cost of cryptocurrency.

An example of one of the most successful projects, which became profitable for early investors, was a platform for smart contracts – Ethereum, which issued the currency «ether» as a token of their project (Ethereumdecentralizedplatform, 2018). In 2014, the Ethereum project was announced and posted at the primary collected funds for \$18 mln in bitcoins at a cost of \$0,40 for 1 ether. The project continued in 2015 and 2016 and the cost of ether increased to \$14 (or 30 times), and the capitalization of the project has reached more than \$1 bln.

The ICO have many features in common with the IPO (Initial Public Offering). By analogy with the IPO, in the ICO share of the start-up company is sold to raise funds to further activities of the enterprise project (Ethereum decentralized platform, 2018). However, while IPO deals with investors, there are proponents and enthusiasts in ICO who want to invest in a new project, so the process is similar to crowdfunding.

ICO also has common characteristics with venture capital financing and crowdfunding, but alongside it occupies a separate niche in the investment market. The common with crowdfunding is the use of small size attachments of individuals for the project financing. As for ICO and crowdfunding – they both do not need the specialized banks or institutions for investment, raising funds are operated through online platforms and social networks, any person can be in the role of the investor (NCC, 2016).

And the main difference between ICO and crowdfunding is that the supporters of the initial placement of the coins are motivated by potential profit, however crowdfunding occurs in the form of donations and lack of prospects in receiving financial benefits from the project.

In turn, venture financing aimed at projects with the prospect of mid-growth and becomes an alternative way for innovative start-up companies without access to capital markets.

The high rate of growth, risk and assessment requirements to business monitoring of projects are the common features of venture financing and ICO, in contrast to crowdfunding.

Cryptocurrencies use different algorithms, the method of extraction and trade takes place in different ways. In order to select the optimal currency for an investment portfolio, you need to consider 3 main groups of characteristics (Cryptocurrency Data Monitor BFX, 2018):

1. market capitalization, daily trading volume and the dynamics of the currency value (quantitative indicators);
2. method of verification;
3. popularity and currency usage.

The main criteria for evaluation for the future cryptocurrency investor should be the prospect of the currency, based on the unique feature and the latest technology. This will ensure a steady growth of its value and popularity among users. In the study of cryptocurrencies, we have identified key indicators and features that may become significant about the inclusion of currency in the investment portfolio. Such a criteria may be technological, energetic, financial, scientific or other value that cryptocurrency can offer:

1. the exceptional anonymity of the transaction (Dash);
2. less energy consumption and performance of the transaction (BlackCoin, Dash, Litecoin, Peercoin);
3. a high level of security (Dogecoin);
4. the possibility of creating a decentralized system of domain names (Namecoin).
5. startup promotion and creation of platforms for crowdfunding by implementing a full-fledged fiscal system online (Nxt).
6. using computational power of its users to conduct mathematical research and solving highly complex problems that will serve for a science (Primecoin).
7. the creation of a decentralized exchange (Ripple).

Digital currency can have a profitable role in the country's financial system, because they can be used to create a banking system that is mainly based on the cryptocurrency. But now there are significant barriers to any digital currency to become the dominant form of money in the economy. Theoretical study of John. Barreira and M. Cumhorts identified what the consequences would be if the Central Bank will issue digital currency in the amount of 30 % of GDP based on a dynamic general equilibrium model according to the pre-crisis United States. The authors argue that, although the lack of historical precedent reduces the accuracy of their prediction, the adoption of cryptocurrency by the Central banks will have positive effects (Barrdear, 2016).

The Venezuelan government, in turn, decided to prove in practice the effectiveness of alternative digital banking system and was the first to introduce a national cryptocurrency in February of 2018 as a public tool for anti-inflationary crisis regulation. Venezuela believes that it is possible with the help of national cryptocurrency to overcome financial blockade by the US and hyperinflation in the country.

The concept of cryptocurrency and its infrastructure in the form of a distributed network based on decentralized blockchain technology create an alternative way of the world financial system functioning of with the possibility of «programming» money. Although the current global financial system is unchanged, but the cryptocurrency is becoming an indispensable element.

Prospects for the cryptocurrency usage as a part of the global financial system, according to experts, will affect all areas of our lives. The areas associated with the stock market, the search for new financial tools to raise funds and the extension of private capital will gain popularity (Dzhusov, 2017).

Digital currencies and a distributed blockchain network will make it easy to individuals to credit and microfinance in the field of P2P (people-to-people or person-to-person) on the basis of mutual consent and consensus, minimizing transaction costs and the intervention of 3rd parties.

Cryptoinvestments has opened a new channel of capital increase in a volatile financial system. A striking example is shown by the countries of Latin America. In 2015, a published report estimated an increase of 510 % in the number cryptocurrency transactions in Latin America, and the conduct of cryptocurrency business is promising (Cryptocurrency and Bitcoin Related Spread Sheet for ICO Investing & Reference, 2017). This is promising mainly due to the adverse economic situation in many countries in the region, the corruption of all parts of the financial system, high inflation, instability of the investment climate that hinders the development of small and medium business, unfavorable bank rates and the lack of depositors' guarantees.

Venezuela is a vivid example of this: in January 2016, the IMF published a report according to which in 2016 the inflation rate in the country has exceeded 700 %. In 2017, according to IMF estimates, the inflation rate should have been 1600 % (Dwyer, 2015). But along with the inflation growth, Venezuela increased and the number of transactions in Bitcoin: in the first week of August, the amount of BTC transactions through the platform LocalBitcoins reached a record \$14,2 mln. The number of Bitcoin users in 2015 doubled compared to 2014 (Bitcoinaverage.com, 2016).

The immediate prospect for cryptoassets is the integration of virtual platforms with the actual business. This communication will become in-depth and comprehensive, that will be shown not only at the level of individual companies but will create a full blockchain infrastructure of the business environment.

In the example plan of the Waves – most famous cryptoplatform, the next stage of the system development will be to attract real business to issue their securities in the blockchain network (Waves Platform, 2018). High attention will be paid to compatibility issues of technology with the law. The goal of this project is the creation of an ecosystem that is fully consistent with the legislation in the field of securities and remittances.

A significant factor in the further cryptocurrency popularization and development will be the support of classic banking sector, and not the complete isolation of the

blockchain from the state. This communication will occur on the principles of symbiosis and mutual benefit by providing potential investors and cryptocurrency users the right of choice and ease of transaction.

A vivid example of this perspective was the opening of the first BitcoinBank in Vienna in Austria (2017). The local blockchain startup Bit Trust owns the Bitcoin Bank (Dwyer, 2015). The Bank has special ATMs that allow you to have BTC exchanged for euro and vice versa.

Cryptocurrency has traditionally been considered as a modern type of financial innovation (Panteljejeva, 2015), but the true innovation stems from the work of «production» the cryptocurrency due to the technology on which they are based (Bank of England, 2014). No country has declared or classified the cryptocurrency mining as economic activity, although it happensence it is a profitable activity that needs to be served from both a highly intelligent human resources and high-performing equipment and technologies involving energy resources. The spread of the cryptocurrency popularity creates additional demand related with crypto- and unusual for money market: increasing demand for electronic equipment, the demand for electricity (in some cases, the concentration of cryptocurrency production occurs in places with cheap electricity tariffs). This derivative development of adjacent markets also has innovative orientation.

Cryptocurrencies can benefit especially to small businesses. The cost of installing the system is much cheaper than paper payments. Cryptocurrency in prospect of creating the ability to handle microtransactions is more effective, fast and inexpensive way of conducting international transfers. In order to provide payments that do not need an account, the company even do not have to possess additional hardware such as payment terminals. By eliminating third parties there will be no storage costs. Overall, the blockchain technology can improve any system that deals with the contracts, transactions and distribution of private information.

## Conclusions

It is obvious that the modern globalized world is impossible to be fitted into the traditional system of economic and financial instruments. As the time requires, a new form of digital money has rapidly entered into the world economy system. Science cannot ignore the emergence and existence of the cryptocurrency phenomenon, furthermore, the role of cryptocurrency is far beyond the role of the universal equivalent in commodity exchange. A modern phenomenon, when currencies and wealth acquired can be purely virtual, create a real boost for the world economy development.

Conceptual bases of the cryptocurrency functioning is based on their increasing role in the world economy. Firstly, they are already quite effective in doing all the basic money functions that are transforming due to the basic cryptocurrency features. Secondly, unlike traditional money, cryptocurrencies are able to perform a number of additional features, that is extremely important for the modern economics development: a tool for decentralized exchange of digital currencies and values; the tool of enrichment; an investment; a tool of crisis management; the element of the global financial system; a type of innovation; a tool to simplify document management and sharing, and others. In addition, cryptocurrencies constantly generate new functionality niches in world processes.

Like any new phenomenon, the use of cryptocurrencies is still a full of questions, most of them require state regulation. But the current changes in the financial field are occurring so rapidly that today it is clear that the process of state regulation will be in time only in case it would be no less innovative.

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