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Prospects for Using Cryptocurrency in the Economy of Kazakhstan and the Attitude of the National Bank

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Abstract:

The modern stage of the evolution of money is associated with the development of virtual economy as part of the global economic system based on interactive business on the ground of information technologies.

The development of new forms of money is due to the activation and deepening of the information sphere and information society. Due to such conditions and the impact of technological innovation, economic science acquires a new meaning; significant changes take place in all spheres of economic activity, including the financial sector.

The manifestation of such changes is the transfer of transactions into the electronic format, the emergence of new means of payment, the latest payment instruments and systems.

The paper considers the main features of cryptocurrencies, with attention to the most popular and widespread of them – Bitcoin. Based on the expert survey and literature, the attitude of the central banks of foreign countries and the National Bank of Kazakhstan regarding the recognition and regulation of cryptocurrency have been analyzed, and conclusions about the prospects for using cryptocurrency in Kazakhstan have been made.

Keywords*: Cryptocurrency, electronic money, bitcoin, blockchain, central bank.*

JEL Classification: *E50, E58, E59.*

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1. Introduction

Currently, in the sphere of payment systems, the most rapid introduction of innovations has recently occurred, and many of them are debatable from the point of view of regulatory control and practical use. Central banks and international financial institutions pay close attention to such financial innovation as cryptocurrency and electronic payments of the newest payment systems, which basically use cryptographic protection of information (Albekov *et al.,* 2017; Vovchenko *et al.,* 2017a; 2017b).

One of the first payment systems, which basically used cryptography to protect payment confidentiality, was the Bitcoin peering system. This system was developed in 2009 by a group of programmers under the pseudonym of Satoshi Nakamoto. The main purpose of creating the cryptocurrency was the decentralization of payments, that is, the lack of currency control by financial institutions and the avoidance of unnecessary commissions. The initial value of the cryptocurrency was the cost of electricity spent, and the secondary – the demand for cryptocurrency (Nakamoto, n.d.).

Cryptocurrency is a new kind of electronic money or financial obligations, mutual exchange of which is done by information technology systems, and the confidentiality of their operations is protected by complex mathematical calculations of encryption algorithms based on cryptography. The main difference between cryptocurrency and electronic money is the lack of control, limited release of circulation and the principle of complete anonymity. The inflation protection of the cryptocurrency is ensured by the emission process, which is programmed to reduce the number of virtual currencies in circulation, a limited number of Bitcoins themselves, the impossibility of returning or spending the same Bitcoin for the second time, as well as the transparency and anonymity of the system, reliable protection of electronic purses (Vatolina and Danilov 2015; Allegret *et al.,* 2016).

The first purchase of a real product for the Bitcoin cryptocurrency was carried out in 2010 by a US resident. When buying two pizzas for $50, he paid 10,000 Bitcoins (Popper, 2016). Currently, there are about thousand cryptocurrencies in the world, but Bitcoin is the most popular one. Its capitalization occupies almost 50% of the entire market of cryptocurrencies and is equal to $136.7 billion as of April 13, 2018. The second place in terms of capitalization is held by the Ethereum cryptocurrency $50.4 billion. The Ripple cryptocurrency has the third place; it has a capitalization level of $25.14 billion. The cost and capitalization of the Top 20 cryptocurrencies are shown in Table 1. In the US, the Commodity Futures Trading Commission (CFTC) authorized CME Group and CBOE Global Markets exchanges to launch Bitcoin trade after they convinced the regulator that the new instrument corresponds to all necessary standards (CFTC Issues New Guidance Relating to Virtual Currency Regulations, 2018; Global Legal Research Centre, 2014). The graph of the cost dynamics of Bitcoin is shown in Figure 1.

Table 1. *Cost and capitalization of cryptocurrencies (Top 20) as of April 13, 2018 (Top 100 Cryptocurrencies by Market Capitalization, n.d).*

No.	Name	Market capitalization	Cost	Traded value for 24 hours	Quantity in turnover
1	Bitcoin	$136,726,137,857	$8 054.66	$9,501,840,000	16,974,787 BTC
2	Ethereum	$50,403,452,227	$510.21	$2,716,320,000	98,789,233 ETH
3	Ripple	$25,141,129,625	$0.642621	$1,416,540,000	39,122,794,968 XRP*
4	Bitcoin Cash	$12,887,467,922	$754.95	$437,130,000	17,070,738 BCH
5	Litecoin	$7,304,587,766	$130.30	$640,637,000	56,059,338 LTC
6	EOS	$7,234,809,131	$9.15	$1,312,070,000	790,689,523 EOS*
7	Cardano	$5,605,017,817	$0.216184	$370,961,000	25,927,070,538 ADA*
8	Stellar	$4,507,018,283	$0.242841	$90,295,200	18,559,544,243 XLM*
9	NEO	$4,332,373,500	$66.65	$243,161,000	65,000,000 NEO*
10	IOTA	$3,957,606,398	$1.42	$98,198,400	2,779,530,283 MIOTA*
11	Monero	$3,102,731,317	$194.84	$67,921,600	15,924,182 XMR
12	Dash	$2,887,701,273	$360.64	$88,893,500	8,007,202 DASH
13	TRON	$2,596,268,007	$0.039488	$419,802,000	65,748,111,645 TRX*
14	Tether	$2,556,594,000	$0.284066	$49,235,700	8,999,999,999 XEM*
15	NEM	$2,280,949,523	$0.997293	$3,846,750,000	2,287,140,814USDT*
16	VeChain	$1,773,692,821	$3.38	$81,267,800	524,770,505 VEN*
17	Ethereum Classic	$1,637,901,917	$16.20	$238,199,000	101,135,647 ETC
18	Binance Coin	$1,529,107,496	$13.15	$137,054,000	116,261,604 BNB*
19	Qtum	$1,479,246,557	$16.71	$260,596,000	88,519,332 QTUM*
20	Verge	$1,373,127,304	$0.092345	$188,132,000	14,869,471,619 XVG

Note: ** not mineable.*

Figure 1. *Trend of Bitcoin cost*

On January 1, 2017, the price of one Bitcoin in the stock exchange was $997. In 2017, Bitcoin increased in value by 20 times. As of December 17, 2017, during electronic trading at the world's largest commodity exchange CME Group, the rate of the cryptocurrency Bitcoin was $20,042. On December 29, 2017, with a total market capitalization of $335.7 billion, the Bitcoin rate fell to $15.1 thousand, and the capitalization of the virtual currency decreased to $253 billion. Currently (on April 13, 2018), the cost of one Bitcoin is $8,054.66. The figure shows that the greatest increase in the cost of Bitcoin was at the end of 2017. The sharp fluctuations in the digital currency market are mostly speculative. The capitalization of cryptocurrency sharply increases due to the high artificially created demand and interest of players in the digital currency market.

The purpose of the study is to study the prospects for using cryptocurrency in the economy of Kazakhstan in terms of the position of the central banks of foreign countries and the National Bank of Kazakhstan regarding its recognition and regulation. We formulate the research hypothesis as follows: the use of cryptocurrency in the economy of Kazakhstan is possible only in case of monopolistic emission by central bank only, monitoring the development of virtual currencies, their circulation, statutory and legal regulation, development of national payment systems under the aegis and control of the regulator.

2. Methods

To achieve this goal and confirm the hypothesis, an expert survey was conducted, in which experts in the field of cryptocurrencies and the latest payment systems participated: employees of the National Bank of Kazakhstan, employees of the public fund Financial Freedom, Center for Strategic Initiatives (19 people).

The main method of research was the analysis of qualitative and quantitative data concerning the position of the central banks of foreign countries and the National Bank of Kazakhstan on recognition and regulation of the cryptocurrency, research literature from the problem field of the study, content analysis, and a survey of experts in this field of research.

3. Results and discussion

All experts noted that the popularity of virtual currencies was growing. Currently, some large banks, funds, companies begin to use this financial innovation more and more often, aiming to gain leadership positions in this new segment of the financial transactions market, integrating the virtual currency system into their own trading services.

For example, the Czech Republic has issued a new cryptocurrency Czech Crown Coin (CZC), the main task of which is the development of internet business in the country. This national virtual currency is a counterpart of Bitcoin. The UK has also released its own virtual currency, Britcoin, into electronic circulation, emphasizing that this currency has a greater level of security and a fair level of coin distribution. German bank Fidor finishes its preparations for the transition to the Ripple system for international payments. In Australia, the first ATM for operations with Bitcoin has been installed, where one can buy virtual currency for Australian dollars, execute a reverse operation, and send Bitcoins to the accounts of other users within the country and abroad. In Argentina, in order to make Bitcoin more accessible to the public, a new service for buying virtual currency in supermarkets has appeared. In Kenya, mobile money prevails; Kenyans use mobile phones to receive, send and transfer money. This P2P service has already 17 million users in Kenya and 5 million in Tanzania. Therefore, the leadership of these countries considers virtual currency as a significant potential for launching BitPesa money transfer start-up using Bitcoin.

All these can be considered an important sign for the transition of electronic services to this virtual currency, its adoption, and distribution in the world. The first country that officially accepted the virtual currency Bitcoin was Germany, where this virtual currency was referred to as "a financial instrument", and clear rules and regulations for working with it were defined. Moreover, Bitcoin as a financial instrument was accepted by the government of Poland (Kuznetsov and Yakubov 2016; Malyshko 2016; Vlasov, 2017).

However, some experts point out that the attitude to virtual currencies in the world is very ambiguous. Most participants in the financial market see them as threats rather than opportunities. In particular, the European Central Bank warns against the use of virtual currencies. Experts note that the regulation of financial innovation on a global scale is not outstripping. Central banks often choose a standby position and soft regulation through a system of restrictions that are currently used relative

to virtual currencies. For example, the careful use of Bitcoin is encouraged by users in many countries of North America, the European Union, Asia and China.

In Iceland, according to the requirements of the central bank, legal entities cannot buy Bitcoins from foreign counterparties, because this is regarded as the transfer of money abroad, but their sale is permitted. The management of the Central Bank of Ireland has officially stated that the influence of the virtual currency is so significant that it can violate the sovereignty of the state (Fomin 2017; Khrestina *et al.*, 2017).

In China, the largest BTC exchange (BTC China) operates, the turnover of which was twice as much as it was in the Tokyo bitcoin exchange Mt. Gox and accounted for 60% of the total volume of operations with BTC in Forex. Such a scale jeopardized China's traditional monetary system, so the country's official authority in 2013 banned the financial institutions from selling Bitcoin, but this is not applied to individuals, because the virtual currency is considered safe for the population and the market continues to function (Notice to the People's Bank of China on the Prevention of Risks of Bitcoin No. 289, 2013). In this message, the key purpose of which is proclaimed to be the protection of property rights, the official status of the national currency, the yuan of the PRC, financial stability, and the prevention of the risk of money laundering, first of all, characteristics are provided and the economic essence of Bitcoin is identified as a virtual commodity that does not have the status of a legitimate payment means, equivalent to the legal status of the national currency, that cannot and should not be spread as a currency in the market. For financial and payment institutions, there are bans on the direct or indirect development of Bitcoin business.

Specialized sites that provide Bitcoin services must register with telecommunications regulatory authorities, and illegal ones will be closed in accordance with the law. Also, for financial and payment institutions and specialized sites, the requirements for the implementation of legislation on combating the legalization (laundering) of proceeds from crime and financing of terrorism are toughened. Along with this, attention is focused on the need to deepen the financial literacy of the population with respect to currency, virtual goods, rational investments, management of investment risk and protection of their own financial security.

In India, the central bank also appealed to citizens with reservations regarding the use of virtual currency. One of the arguments of the central bank's standpoint is the impossibility of protecting consumer rights due to the unsettled transactions with virtual currency. After this announcement, the online exchange Buysellbitco.in, one of the largest exchanges in the country for the sale of virtual currency, suspended its work.

As for Kazakhstan, to date, the National Bank of the Republic of Kazakhstan has decided that the only legal currency in the territory of the republic is tenge, and therefore, the country's cryptocurrencies cannot be used as a means of payment. According to the Head of the Department of Payment Systems of the National Bank of Kazakhstan, A. Imangazina, "despite the absence of direct regulation, the use of cryptocurrency in the financial sector for its own or client operations, and as a unit of calculation is contrary to the law" (The National Bank of Kazakhstan Rendered a Sentence to the Cryptocurrency, 2018).

The reason for such restrictions in the context of the absence of a system of rules and, consequently, the impossibility of regulating the virtual currency market, are threats and risks that regulators seek to minimize, in particular:

- ✓ use of virtual currencies for illegal transactions, traffic in drugs, weapons and other prohibited goods;
- ✓ expansion of foreign financial institutions to the domestic market due to increased competition and loss of market positions by national financial institutions;
- ✓ loss of state monopoly on the issue of money;
- ✓ reduction of the seigniorage of central banks;
- ✓ reduction in demand for the national currency, which causes its depreciation (or even a refusal in favor of a foreign currency) and a change in the speed of circulation, which in turn complicates the process of determining the speed of circulation of money and the conduct of monetary regulation;
- ✓ the impossibility of conducting an effective monetary policy, since a large share of the money supply will be outside the control of the monetary regulator;
- ✓ reduction of the level of influence or elimination of financial intermediaries and so on.

The opinion of the experts is supported by the Head of the National Bank of the Republic of Kazakhstan, D. Akishev, who believes that the pricing of cryptocurrencies is completely unpredictable; they do not have a responsible issuer that could guarantee a return of money to investors, including the population. In addition, according to Akishev, "because of the opacity of transactions with cryptocurrencies, the likelihood of their use for money laundering and financing of unlawful actions is high" (The National Bank of Kazakhstan, 2018, April 11).

This is what the President of the Republic of Kazakhstan said at the Astana Economic Forum last June, speaking with the idea of creating a single international cryptocurrency as a payment unit, which, according to N. Nazarbayev, *"should have a simple transparent emission mechanism that is subject to its consumers. ... It is important that it is based not on abstract confidence, but on providing specific*

assets" (Speech of the Head of State at the Plenary Session of X Astana Economic Forum "New Energy – New Economy", 2017).

All this is a weighty reason for making decisions about monopoly emission of cryptocurrency exclusively by central banks, monitoring the development of virtual currencies, their circulation, regulation, the development of national payment systems under the auspices and control of the regulator, which confirms the previously stated hypothesis.

4. Conclusion

Summing up, it should be noted that, from the point of view of most experts, the rate of Bitcoin and most cryptocurrencies is greatly exaggerated, and their cost is intensified only by the demand and interest of the miners themselves. Any negative information regarding the system of cryptocurrency, Bitcoin, as well as other electronic currencies, will instantly affect their value. Official authorities in most countries of the world regard the Bitcoin network as a favorable environment for illegal operations and the organization of tax evasion, and therefore avoid the use of Bitcoin and other digital currencies, which causes the difficulty of their exchange with other traditional currencies.

Meanwhile, the positive aspects of the Bitcoin system and other cryptocurrencies are the high speed of e-currency transfer, high transaction security with the help of great complexity of calculations of the Bitcoin network, the emission process programmed to reduce the amount of virtual currency in circulation, the inability to bypass unallocated Bitcoins, a limited number of Bitcoins themselves, the absence of a commission in the payment system, the impossibility of returning or spending the same Bitcoin for the second time, transparency and anonymity systems, and reliable protection of electronic wallets.

In sum, the use of cryptocurrency, in our opinion, is possible only in case of preventing the emergence of cryptocurrency pyramid investment schemes, increasing the level of digital and financial literacy of the population, and tightening the legislation in this area.

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