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## CRYPTOCURRENCY MARKET AS A NEW SEGMENT OF THE RUSSIAN FINANCIAL MARKET ON THE WORLD ARENA

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**Annotation.** This study considers the problem of the formation of the cryptocurrency market as an element of the financial market in Russia. Our study aims at solving the problem of trust in cryptocurrency and finding new ways to use it in the Russian economy. During the study, the main trends in the development of the cryptocurrency market both in Russia and abroad were identified, the main comparative characteristics of the cryptocurrency market with other elements of the financial market were identified, and the stages of the formation of the cryptocurrency industry were explored. The purpose of the study is to identify problems in the development and implementation of the cryptocurrency market in the Russian economy against the background of an increase in the number of sanctions restrictions and currency barriers to prevent a severe economic crisis and stagnation of the country's leading industries. The main events and statements of regulatory bodies that lead to an increase in the demand for cryptocurrencies among the Russian population are considered.

Blockchain adoption can create a new digital infrastructure in organizations that can spur innovation in business models (Chong et al., 2019; Hinnings, Gegenhuber & Greenwood, 2018; Morkunas et al., 2019; Ticini et al., 2020) [1]. The transformation of business models enabled by digital and/or innovative technologies such as blockchain leads to the creation of different value configurations, which can be grouped into value stores, value chains and value chains (Chong et al., 2019; Fjeldstad & Snow, 2018) [2; 3].

**CCS CONCEPTS** •

CCS Applied computing → Electronic commerce → E-commerce infrastructure

**Key words:** Blockchain; Finance, Financial sector, Cryptocurrency.

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## Introduction

The relevance of the study is due the fact that against the backdrop of frequent financial crises and loss of confidence in traditional economic institutions, interest in cryptocurrencies is growing. The virtual currency began to perform not only the functions of a measure of value, but also the functions of investment, storage, and reservation. However, due to the lack of a unified definition of the legal nature of cryptocurrency in the world economic community, high speed and anonymity of calculations, this tool is also used in the shadow sector of the economy. The contradiction between the growing popularity of cryptocurrencies and their lack of knowledge was the reason for choosing the topic of this study.

To date, the number of varieties of this virtual currency is extremely large. The total capitalization of the global cryptocurrency market, according to the world's largest independent cryptocurrency data aggregator - coingecko, as of November 8, 2021, exceeded \$3 trillion for the first time in history. At the same time, however, digital money is not supported by anything and, as a result, has a high volatility, which leads to a misunderstanding of the turnover process, unreasonable excitement, and a ban on their use. Despite this fact, not only private Internet users paid attention to cryptocurrencies, but also large organizations and investors, as well as government agencies. In the field of monetary circulation, they are in demand, but at the same time they are the least studied tool.

It should be noted that new features of cryptocurrency are constantly being identified, the scope of their application is expanding, but this is also associated with new risks. That is why regular observations, experiments, analysis of new information and development of new recommendations of practical importance are required.

## Literature review

Davidson (2013) defines cryptocurrencies (aka cryptotokens or tokens) as “innovative digital currencies supported by cryptography to enable and regulate transactions and supply of digital coins in circulation” [4; 5]. Cryptocurrencies are protected from central authority and government manipulation. They are based on blockchain technology, described as distributed according to Yansity and Lakhani, 2017; Tufaili, Zalan and Daou, 2021 Registry Technology (DLT) is underpinned by vital principles: decentralization; peer-to-peer transmission; transparency with preservation of the alias; irreversibility of records; computational logic; resistance to withdrawal and censorship [6; 7]. Based on the work of Folkinshteyn, D., & Lennon, M., it must be assumed that cryptocurrencies have been stigmatized due to money laundering, illegal trading and tax evasion, as well as volatility due to their attractiveness index for investors, market forces (i.e. supply and demand) (Volkinstein & Lennon, 2016), attacks on wallets and crypto exchanges (Marella et al., 2020) and the impact of macro -financial events (e.g., Bouoiyour & Selmi, 2006) [8; 5; 9].

The Bank for International Settlements (BIS) equates the concept of "virtual currency", "digital currency" and "cryptocurrency" and defines "digital currency" through the following key characteristics [10; 11]:

- issued only electronically;
- not issued in national currencies and not associated with them;
- is not an obligation of anyone (unlike traditional money);
- has zero intrinsic value, i.e., not generates a stream of payments;
- used for “peer-to-peer” exchange, i.e., direct exchange between system participants using distributed ledger technology; and
- is an asset that has some characteristics of money (in particular, it is a means of payment).



The European Central Bank (ECB, ECB) calls cryptocurrencies decentralized bilateral schemes for the use of virtual currencies [12].

In accordance with Art. 2 of the draft Federal law dated January 25, 2018 “On Digital Financial Assets” of the Ministry of Finance of the Russian Federation “cryptocurrency is a type of digital financial asset created and accounted for in a distributed registry of digital transactions by participants in this registry in accordance with the rules for maintaining a registry of digital transactions” [13].

The literature discusses blockchain as a system without trust (e.g., Werbach, 2018) or a system of trust (e.g., De Filippi, 2019), as well as the benefits of trustless networks (e.g., Smits & Hulstijn, 2020) [14; fifteen; 16]. Most of the existing research shows that trust is mainly based on the ability of blockchain networks to enforce rules and contractual agreements without an intermediary body. The literature conceptualizes trust mainly at technological levels (Hawlitschek, Notheisen, & Teubner, 2018; Zhou, Zhang, Zhao, Zheng, & Song, 2021) and within blockchain engineering, through the technical idea of a trustless network that does not pave the way and make sure that entities outside the closed blockchain ecosystem can be trusted [17; 18]. This “no trust” technical level does not guarantee consumer trust in blockchain-based applications. According to Tonnissen et al. (2020), trust mechanisms are needed, which are effective methods to help dispel consumer skepticism about the use of blockchain networks and their applications with crypto tokens [19]. Many of the promises of the blockchain economy are based on the technology's ability to reduce the cost of coordinating economic activities and remove trust in centralized authorities (Beck et al., 2018) [20]. However, the sociotechnical issues associated with blockchain, and crypto tokens still exist.

The evolution of blockchain research similarly includes a governance structure in the blockchain economy, a new type of economic system (Beck et al., 2018) [20]. The blockchain economy goes beyond the digital economy in the sense that transaction agreements are executed autonomously according to the rules defined in smart contracts. The new organizational Decentralized Autonomous Organization - DAO - is supported by the blockchain economy, where smart contracts can execute transactions autonomously, without the intervention of agents or the need for approval from third parties. Beck et al. (2018) reviewed the governance structure of the DAO in relation to decision rights, accountability, and incentives, illustrating a case study of the DAO - the case of Swarm City [20].

They emphasize that the advent of the blockchain economy requires a rethinking of governance. Decision-making rights in the blockchain economy will be more decentralized than in the digital economy. Incentives play a crucial role in the blockchain economy. Incentives are a vital factor in getting the desired behavior from those who develop, maintain and use decentralized applications, they are also critical to ensure the proper functioning of the underlying blockchain infrastructure (Beck et al., 2018) [20]. Incentives are needed to achieve consensus, which forms the basis of the blockchain economy (Murck, 2017) [21].

### **Materials and methods**

Determining the role and place of the cryptocurrency market in Russia, global trends in the development of in a number of European countries, the United States, as well as in emerging markets were considered. Of particular interest was the percentage distribution of cryptocurrencies used and the degree of their impact on the economy.

The study drew on works related to crypto tokens , focusing mainly on the concept of volatility and cryptocurrency price exchange rates (authors such as Bolt & van Oordt, 2016; Cong, Li , & Wang, 2018; Folkinshteyn, D., & Lennon, M.) [22; 23; 8]; on valuation and investment mechanisms in cryptoassets, compared with fiat currencies and commodities (Kim, Sarin, & Virdi) [24]; about the popularity of cryptocurrency and the reasons for its implemen-



tation in emerging markets (Carlson) [25]; about the functions of cryptocurrency that increase or hinder its adoption (Ciaian, Raichaniova, & Kanchs, 2016; Folkinshteyn, D., & Lennon, M.) [26; 8]; security and privacy measures in implementing cryptography (Fabian, Ermakova, Krah, Lando, & Ahrary, 2018) [27]; and reasons for adoption by retailers (e.g. Jonker, 2018) [28] and consumers (e.g., Albayati, Suk, Young, & Rho, 2020) [29].

The study collected aggregated data used to assess the volume of cryptocurrency market capitalization from 2013 to 2021.

The reliability of the obtained research results was ensured by processing the database using general scientific methods of analysis (abstract-logical, analytical, economic-statistical), technologies of economic-mathematical modeling of complex systems, as well as the methodology of their in-depth analysis.

To calculate the value of a particular cryptocurrency, many indicators are used, one of which is the NVT coefficient. It takes into account the relationship between market capitalization and remittance volumes. This indicator is similar to the PE (price/earnings) ratio used in the stock markets. NVT is calculated using the following formula:

$$NVT = \frac{\text{market capitalization}}{\text{transaction volume}}, \text{ (one)}$$

The value of an asset is judged by the coefficient: the higher it is, the greater the likelihood of a bubble or revaluation. The limit is a value in the range 90-100. A decrease in the coefficient indicates that interest in the coin is growing, however, a very low level of the indicator means that the value of the network does not match the increase in its use, which may indicate non-valuation.

## Results

Over the past decade, the audience coverage of the cryptocurrency market has been growing rapidly.

To assess the trend of its development, it was necessary to analyze the dynamics of market capitalization. The capitalization of all cryptocurrencies is the total market value of the circulating supply of the crypto currency. However, this is not an accurate indicator, since the number of all generated coins is taken into account, and not the real turnover on the exchanges, for example, as in the case of bitcoin, a significant part of the total supply of which, namely 3.7 million coins, is irretrievably lost.

The dynamics of the market capitalization of the cryptocurrency market from 2013 to 2021 shown in Figure 1.

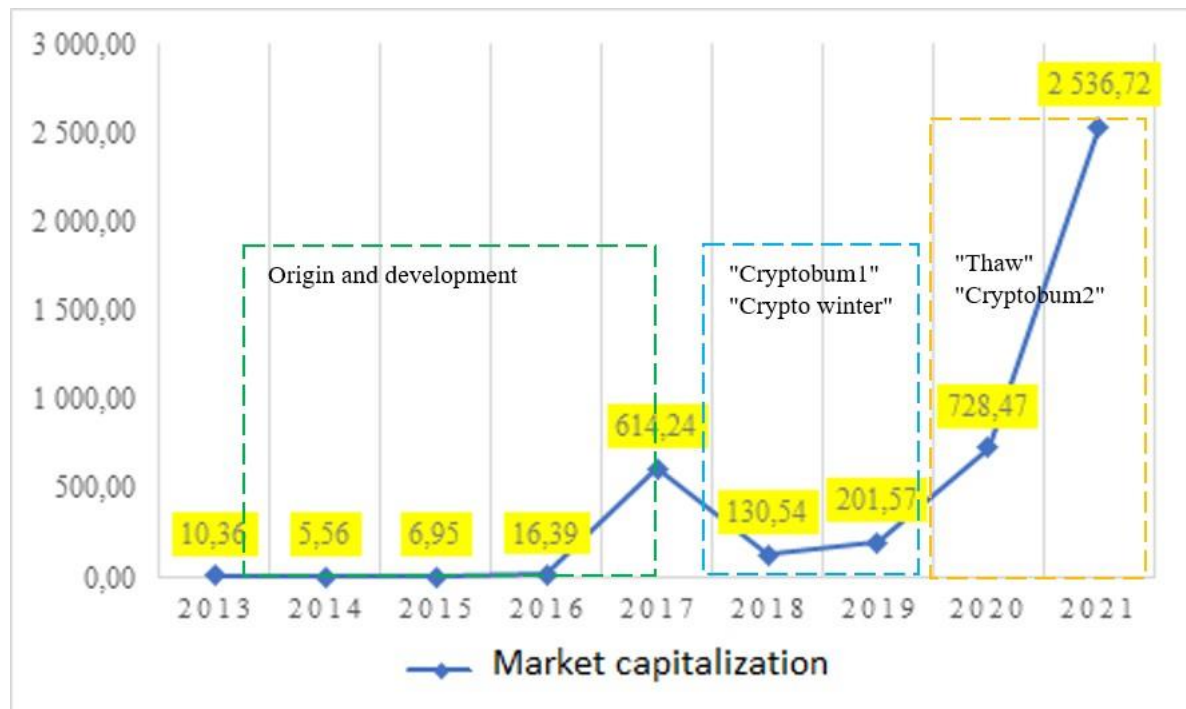
As a result of the analyzed dynamics of the total market capitalization of cryptocurrencies from 2013 to 2021, this period was divided by the author into 5 time zones:

### 1. "ORIGIN AND DEVELOPMENT" - FROM 2013 TO 2016

At the stage of the emergence and development of the crypto industry, the market capitalization of the entire industry did not exceed \$20 billion: at the end of the year, compared to 2013, in 2014 capitalization decreased by 46.39%; at the end of 2015 increased by 25.04%; at the end of 2016 - by 135.87%.

### 2. "CRYPTOBOOM NO. 1" - 2017

In 2017, there was an increase in the price of the main representative of the crypto industry - bitcoin by more than 500%, and other altcoins also strengthened their positions. These events caused a general stir and increased interest in cryptocurrencies, which contributed to the influx of new participants in the crypto -currency market. Therefore, there was a significant change in market capitalization from \$16.39 billion (at the end of 2016) to \$614.24 billion (at the end of 2017).



**Figure 1** - Dynamics of the market capitalization of the cryptocurrency market from 2013 to 2021, billion dollars

### 3. "CRYPTOZIMA" - 2018

A sharp growth is followed by a correction and a decline, which is observed in 2018. The decline in the price of the main representatives of cryptocurrencies affected the negative change in market capitalization, namely by 78.75% to the value of \$130.54 billion.

### 4. "THAW" - FROM 2019 TO 2020.

The growth in the reach of the cryptocurrency market did not end in 2017. Until the next "Crypto boom" in 2021, there is a gradual "thaw" from the correction of 2018, i.e., an increase in market capitalization at the end of 2019 by 54.41% to a value of 201.57 billion dollars and at the end of 2020 by 261.40 % to a value of 728.47 billion dollars.

### 5. "CRYPTOBOOM NO. 2" - 2021.

2021 is the year of new records among cryptocurrency exchange rates and, as a result, a stunning increase in market capitalization by 248.23%. On November 8, 2021, for the first time in history, the value exceeded the \$3 trillion mark, but at the end of the year, due to corrections, it amounted to \$2,536.72 billion. The global crisis, as a result of countering and eliminating the consequences of the coronavirus infection, could not negatively affect the course of the cryptocurrency market, but on the contrary, contributed to its development: more and more large players began to enter the industry, up to entire states.

Today, the financial market in Russia includes four segments: the credit market, the foreign exchange market, the securities market, and the insurance market. However, the fact that the use of cryptocurrencies is integral in the daily life of citizens of the Russian Federation means the formation of the fifth segment of the country's financial market, the characteristics of the constituent elements of which are presented in tables 1 and 2. As a result of the study, a comparative characteristic of the Russian financial market segments was carried out, presented in Table 1 below.



**Table 1** - Comparative characteristics of the Russian financial market segments

Criterion	Credit market	Currency market	Market valuable papers	Insurance market	Cryptocurrency market
Subject purchase - sale	National money	Foreign money	Valuable paper	Insurance service	Unsecured Cryptocurrency stablecoins Tokens
Availability special legislation	✓	✓	✓	✓	✓ Not enough
Financial institutions	Banks	Banks Currency exchanges	Banks Stock exchanges Brokerage and investment companies Investment funds	Insurance companies	Cryptocurrency exchanges Crypto exchangers

Cryptocurrency is the object of sale and purchase of the new segment, but not in its generalized sense. Bitcoin, altcoins, stablecoins and tokens will only be tradable as a property asset and not as a currency, as they do not qualify under this term. Financial institutions will be cryptocurrency exchanges and exchangers, whose professional activities in this segment of the financial market will be licensed and regulated by updated legislation.

Based on the results of the study, the characteristic features of the cryptocurrency market were identified, which are also inherent in other segments of the Russian financial market (Table 2).

**Table 2** - Signs of the similarity of the cryptocurrency market with other segments of the Russian financial market

Segment	Similarities
Credit market	The similarity of staking with the principles of deposit operations.
Currency market	Proximity of stablecoins with the object of purchase and sale of the foreign exchange market.
Market valuable papers	Tokens, like securities, can act as a means of attracting investments and securing certain rights for their owner. Cryptocurrencies are also speculative.

Segments of the financial market are not isolated from each other but interact according to the principle of communicating vessels. In the concept of the updated Russian financial market, the digital ruble platform will provide free transfer of cash flows, and the cryptocurrency market will act as a completely new, hybrid element.

As part of the study, the following events, activities and statements were identified that stimulate the growth of the popularity of cryptocurrency in Russia:

1. IN SEPTEMBER 2022, RUSSIA ANNOUNCED THAT IT WOULD ALLOW CRYPTO MINING IN REGIONS WITH HYDROELECTRIC POWER PLANTS AND NUCLEAR POWER [30].

Russia recently agreed on legislation that will help facilitate cryptocurrency mining in approved areas within its country. The idea of mining in regions with a sustainable surplus of



electricity and power generation is nothing new. Ultimately, the idea here is to channel the surplus electricity and energy into something productive.

2. IN SEPTEMBER 2022, THE CENTRAL BANK OF RUSSIA APPROVED BITCOIN, ETHEREUM AND OTHER CRYPTOCURRENCIES FOR CROSS-BORDER PAYMENTS [31].

The Central Bank of Russia has taken a huge step towards legalizing cryptocurrencies as it moves towards legalizing cryptocurrencies for cross-border transactions. This is the result of the Russian government becoming more open about its laws and regulations regarding cryptocurrencies over the past few months. Allowing crypto payments for cross-border use also allows its citizens to have access to their wallets with digital assets inside or outside of Russia.

3. SINCE APRIL 2021, THERE HAS BEEN AN INCREASE IN THE NUMBER OF RUSSIANS WHO DISCLOSE THEIR INCOME FROM CRYPTOCURRENCIES [32].

Consulting firms such as PwC Russia, said that Russians are increasingly reporting their earnings from cryptocurrencies. There has been an increase in the number of disclosures about the ownership of cryptocurrencies in Russia over the past few months, according to a new report. Russian news agency Izvestia reports on Thursday that Russians are increasingly disclosing their earnings from crypto trading for tax purposes. The report provides data from consulting and law firms such as KPMG, PricewaterhouseCoopers, FTL Advisors, and the Moscow-based public policy think tank Center for Strategic Studies.

Offers for development of regulation of cryptoeconomics in Russia [33]:

1. With regard to the circulation of cryptocurrencies and the procedure for conducting an ICO, it is necessary to accept the explanations of the tax authorities on order of payment of direct and indirect taxes (VAT, tax on profit, tax personal income) depending on situations in which crypto assets are used (according to analogy with clarification in Israel).

2. With regard to the risks of money laundering and terrorist financing, amendments to the Federal Law “On combating the legalization (laundering) of proceeds from crime, and financing of terrorism” in terms of establishing a requirement for identification of clients of crypto wallets and clients during ICO.

3. Rosfinmonitoring should develop guidelines for assessing AML/CFT risks when conducting transactions related to cryptocurrencies.

4. It is necessary to stimulate the development of voluntary certification systems for ICO projects, and also the use of escrow services when raising funds (this will reduce the risk of fraud on ICO).

Thus, the adoption of legislation on digital financial assets governing the ICO process should be linked to international harmonization of regulation. AT Otherwise, the adoption of the bill is not will contribute to the development of cryptoeconomics.

### **Discussion**

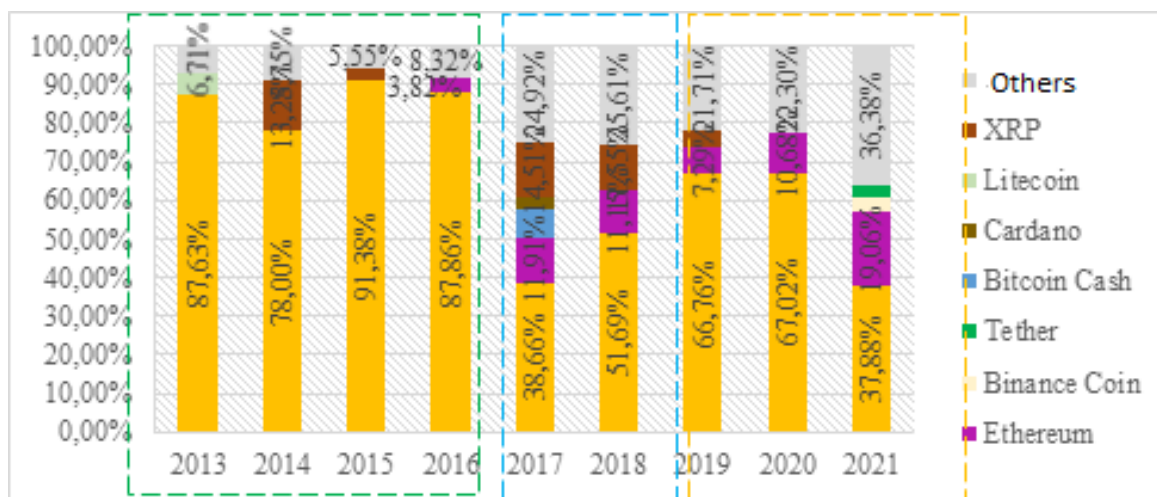
Despite the problems associated with cryptocurrencies, the increased popularity and use of crypto tokens means that the community of users, institutions and technology enthusiasts is ready to trust innovation. Proponents of crypto tokens emphasize the essential importance of non-intermediation and utility as reasons. According to Tonnissen, Beinke, and Teuteberg (2020), cryptotokens can offer several useful features [19]:

- BLOCKCHAIN-BASED ECOSYSTEM;
- BLOCKCHAIN-DRIVEN SERVICE;
- THEY CAN SERVE TO FUND BLOCKCHAIN-BASED STARTUPS; AND
- THEY ENABLE THE ECOSYSTEM COMMUNITY TO ACHIEVE NETWORK EFFECTS.



However, it is still not fully understood what are the driving forces that lead to people's trust in crypto tokens and hence their adoption. Despite their usefulness, crypto tokens seem to face a major issue with trust as a critical factor for adoption, whether it be payment instruments, speculative investments, or long-term holding assets.

For further analysis, it is necessary to consider in more detail the structure of the global cryptocurrency market, which is shown in Figure 2.



**Figure 2** - The structure of the global cryptocurrency market from 2013 to 2021

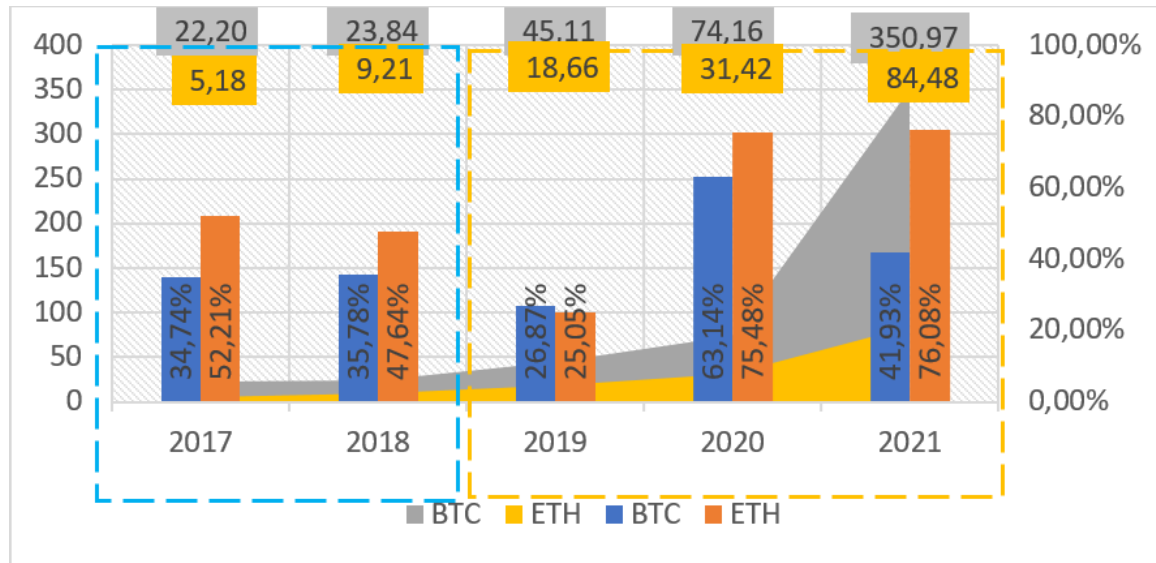
At the moment of “birth and development” (from 2013 to 2016), the main share (over 75%) of the crypto market is logically occupied by its founder: bitcoin. At the crisis stage of "Cryptozima" and during the "Thaw", its share exceeded 50%: in 2018 - 51.69%, in 2019 - 66.76%, in 2020 - 67.02%, which means the main trend of the market is still determined by the discoverer, especially in difficult times for the crypto industry. However, during the moments of “crypto booms” (2017 and 2021), when increased interest and excitement in the entire industry are characteristic, there is a change in the share of bitcoin below the bar of 50%: in 2017 - 38.66% and in 2021 - 37.88%. During these periods, the strengthening of the positions of altcoins is especially noticeable, which began from the moment of the first "crypto boom" in 2017.

In 2015, when the ethereum platform was just launched, its share was already 0.93%, and from 2016 to the present day, this cryptocurrency has been among the top three leaders in terms of total market capitalization.

In the cryptocurrency market, coins with high liquidity can be easily exchanged for fiat money or other crypto assets. For this category, there is always a high demand from buyers and sellers, and a relatively low spread between the purchase and sale prices. A low level means high coin volatility and unstable demand from market participants. Volatility is the strength of fluctuations in the exchange rate of a crypto asset in a given period of time.

One of the factors affecting the liquidity of a crypto asset is the trading volume and volatility of the coin, which in the course of the subsequent analysis will be discussed in more detail with bitcoin and ethereum, as the main representatives of the industry (Figure 3).

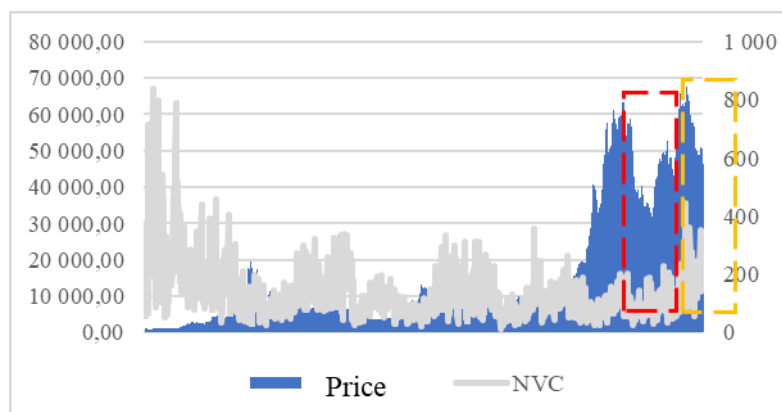




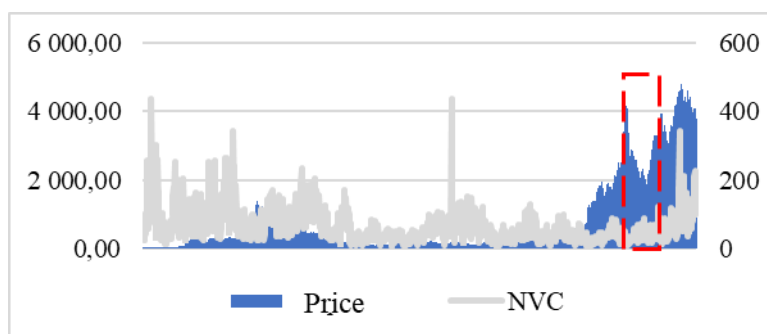
**Figure 3** - Dynamics of the daily maximum trading volumes and the level of volatility of bitcoin and ethereum for 2017–2021

Bitcoin and ethereum are the most popular representatives of the cryptocurrency industry, but even they are not stable assets in the price segment. The exchange rate change in one day could reach values above 60%, which is observed in 2020. The maximum daily trading volume of both coins gradually increased throughout the analyzed period from values in 2017 of \$22.2 billion for bitcoin and \$5.18 billion for ethereum to values in 2021 of 350.97 and 84.48 billion dollars, respectively. The coverage of bitcoin in terms of trading volume is higher than that of ethereum, and the level of volatility is lower during almost the entire analyzed period. However, these indicators are not the main factors affecting the value of the coin, first of all, these are the manipulations of the largest holders of the asset and increased demand caused by a significant event both in the crypto industry, and within an individual state, or even around the world. And only in the second place, these are indicators of market capitalization, trading volume and the number of exchanges where you can sell a specific crypto asset.

The initial data and calculation results of the NVT indicator are presented in Figures 4 and 5.



**Figure 4** - Comparative dynamics of the daily bitcoin price level and the NVT indicator for 2017–2021.



**Figure 5** - Comparative dynamics of the daily price level of ethereum and the NVT indicator for 2017-2021

After analyzing the dynamics of these indicators, patterns are noticeable in the red and yellow zones for both bitcoin and ethereum. In the first case, when a new local maximum was reached in the price of both coins, and when it corrected and declined, the level of the NVT coefficient was either within the norm, as in the case of bitcoin, or even below this range, as in the case of ethereum. However, already in the yellow zone, the NVT indicator showed that the achievement of a new local high of the price occurred following a bubble or revaluation, which is why a further correction is observed.

This indicator must be used in conjunction with several, since there are many factors that affect the price of a crypto asset.

The positive side of the volatility of crypto assets is attracting more and more new participants to the market. Technological progress does not stand still, and in order to keep up with its trends, in order to protect entities from the negative consequences of the volatility of cryptocurrencies, as well as to counter ML/TF/PF, the participation of the state in this segment is necessary, examples of which will be considered in the course of the subsequent analysis.

In Russia, cryptocurrency continues to see steady growth as the Russian government continues to evaluate its regulations and legislation regarding the booming digital asset. However, Russia has taken positive steps towards cryptocurrencies as the government recently approved the use of cryptocurrencies for cross-border transactions [34]. In September 2022, the Bank of Russia and the Ministry of Finance of the country announced that they had come to an agreement that allows cross-border payments in cryptocurrencies [34]. In addition, Russian government officials also revealed in a Reuters article that they “sooner or later will legalize cryptocurrencies as a means of payment” [35]. Such a policy seems to be in place already, as two major financial institutions in Russia have also reportedly agreed to endorse the use of crypto payments in international trade [35]. Among the 14.6 million Russians who own cryptocurrencies, ethereum is the most popular digital asset, with 32% of Russian crypto owners owning this currency [36]. Surprisingly, bitcoin is only in second place with 30.8%. The thriving altcoin scene in Russia is reflected in their ownership data, as almost one in five cryptocurrency holders in Russia most likely own ripple, dogecoin, or solana. It is not surprising that Russia, as a country in which there are significantly more women than men, is one of the few countries where more women than men master cryptography [36]. A study conducted by Finder at the end of 2021 also showed that the majority of cryptocurrency holders in Russia are approximately 18-34 years old (59.1%) [36].

### Conclusion

Russia is one of the key players in the global cryptocurrency market. This fact is confirmed both by traffic from Russian users on the main crypto exchanges, and by a study by



chain analysis. In September 2020, in the ranking of 154 countries on the Global Cryptocurrency Adoption Index (global crypto adoption index) Russia took 2nd place. This means that the country has a high level of cryptocurrency use across all components of the index.

The volume of transactions with cryptocurrency in Russia in 2019-2020 in relation to the population and the vastness of the economic system was significantly high, but in absolute numbers it is much less than the similar indicators in the US and China.

From October 2020 to June 2021, Russia, along with several other emerging markets and developing countries, was among the leaders in the number of visits to crypto exchange sites such as binance (2<sup>nd</sup> place), huobi (5<sup>th</sup> place), bithumb (2<sup>nd</sup> place), bitfinex (1<sup>st</sup> place).

The growing interest of Russian citizens, a significant amount of investments and high risks, various operations with cryptocurrencies create potential systemic threats. According to the central bank of the Russian Federation, the status of the Russian ruble, which is not a reserve currency, does not allow for a soft approach in the country and ignoring the increase in risks.

The start of Russia's military operation in Ukraine led to a surge in crypto activity in both countries. After sanctions hit the country, Russians exchanged their ruble for the stablecoin Tether (USDT).

The RUB/USDT trading pair has grown significantly, reaching \$29.4 at the end of February 2022. This is seen as an attempt to protect themselves from the degradation of their currency and stay away from the volatility associated with bitcoin [36].

Such reports suggest that stablecoins could lead to market dominance in 2022 if the conflict drags on. Crypto activity in the country continues to grow as people try to protect their money.

Major crypto exchanges have refused to impose a ban on Russians, while P2P markets appear to have stepped up their incentives for would-be crypto holders.

When and if the law establishes cryptocurrencies as a means of payment similar to fiat currencies, Russians can expect more crypto-related products. Business opportunities are likely to enter the market, including financial derivatives.

However, today, amid internal conflict over the status of cryptocurrencies in the country, Russian President Vladimir Putin has signed a new bill "prohibiting the use of digital assets such as cryptocurrencies and NFTs to pay for goods and services." The new law also requires crypto exchanges and providers to refuse transactions in which digital payments could be construed as a substitute for monetary exchanges. However, in the final paragraph of the law there is a wording that makes exceptions for certain payments [37].

Thus, cryptocurrencies in Russia are already a controversial topic, with many factions in the government debating whether to regulate or ban cryptocurrencies. The protocol, as early as January 2022, reported government disagreements over what to do with cryptocurrencies. The Central Bank of Russia has called for a ban on cryptocurrencies. However, the Ministry of Finance has opposed this position, stating instead that the current regulation is sufficient and necessary for the development of crypto technologies.

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## КРИПТОВАЛЮТАЛЫҚ НАРЫҚ РЕСЕЙ ҚАРЖЫ НАРЫҒЫНЫҢ ӘЛЕМДІК АРНАДАҒЫ ЖАҢА СЕГМЕНТІ РЕТІНДЕ

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**Аңдатпа.** Мақалада Ресейдегі қаржы нарығының элементі ретінде криптовалюта нарығының қалыптасу мәселесі қарастырылады. Зерттеудің өзектілігі криптовалютаға сенім мәселесін шешу және оны Ресей экономикасында қолданудың жаңа жолдарын табу қажеттілігімен түсіндіріледі. Зерттеу барысында криптовалюта нарығының Ресейде де, шетелде де дамуының негізгі тенденциялары анықталды және ұсынылды, криптовалюта нарығының қаржы нарығының басқа элементтерімен негізгі салыстырмалы сипаттамалары анықталды, сондай-ақ криптовалюта нарығының қалыптасу кезеңдері анықталды. криптовалюта саласы анықталды.

Зерттеудің мақсаты - ауыр экономикалық дағдарыс пен тоқыраудың тоқырауын болдырмау үшін санкциялық шектеулер мен валюталық кедергілер санының артуы аясында Ресей экономикасында криптовалюта нарығын дамыту және енгізу проблемаларын анықтау. елдің жетекші салаларының бірі. Ресей тұрғындары арасында криптовалюталарға сұраныстың артуына әкелетін реттеуші органдардың негізгі оқиғалары мен мәлімдемелері қарастырылады.

Блокчейнді қабылдау бизнес модельдеріндегі инновацияларды қозғай алатын ұйымдарда жаңа цифрлық инфрақұрылым жасай алады (Чонг және т.б., 2019; Hinnings, Gegenhuber, and Greenwood, 2018; Morkunas et al., 2019; Ticini et al., 2020) [1]. Блокчейн сияқты цифрлық және/немесе инновациялық технологиялар арқылы іске асырылатын бизнес-модельдерді түрлендіру әртүрлі мән конфигурацияларын жасауға әкеледі, құнды дүкендерге, құн тізбегіне және құн тізбегіне топтастыруға болады (Chong et al., 2019; Fjeldstad & Snow, 2018) [2; 3].

CCS CONCEPTS •

CCS Applied computing → Electronic commerce → E-commerce infrastructure

**Түйін сөздер:** блокчейн, қаржы, қаржы секторы, валюта, криптовалюта.

## КРИПТОВАЛЮТНЫЙ РЫНОК КАК НОВЫЙ СЕГМЕНТ ФИНАНСОВОГО РЫНКА РОССИИ НА МИРОВОЙ АРЕНЕ

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### **Аннотация.**

В статье рассмотрена проблема становления криптовалютного рынка как элемента финансового рынка в России. Актуальность исследования обусловлена необходимостью решения проблемы доверия к криптовалюте и поиску новых путей ее применения в российской экономике. В ходе изучения были выявлены и представлены основные тенденции развития криптовалютного рынка как в России, так и за рубежом, определены основные сравнительные характеристики криптовалютного рынка с иными элементами финансового рынка и выделены этапы становления криптовалютной индустрии. Цель исследования заключается в определении проблем в освоении и внедрении криптовалютного рынка в экономику России на фоне роста числа санкционных ограничений и валютных барьеров с целью предотвращения тяжелого экономического кризиса и стагнации стагнации ведущих отраслей страны. Рассмотрены основные собития и заявления регулирующих органов, которые ведут к увеличению спроса криптовалют у российского населения.

Внедрение блокчейна может создать новую цифровую инфраструктуру в организациях, которая может стимулировать инновации в бизнес-моделях (Chong et al., 2019; Хиннингс, Гегенхубер и Гринвуд, 2018; Моркунас и др., 2019; Тичини и др., 2020) [1]. Трансформация бизнес-моделей, обеспечиваемая цифровыми и/или инновационными технологиями, такими как блокчейн, приводит к созданию различных вариантов конфигураций стоимости, которые могут быть сгруппированы в магазины ценности, цепочки создания стоимости и сети создания ценности (Chong et al., 2019; Fjeldstad & Snow, 2018) [2; 3].

### **CCS CONCEPTS •**

*CCS Applied computing → Electronic commerce → E-commerce infrastructure*

**Ключевые слова:** блокчейн, финансы, финансовый сектор, валюта, криптовалюта.

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