

DOI: <https://doi.org/10.17816/RJLS397536>

Scientific Article



# Scenario Approach to the Study of the Directions of Regulation of the Sphere of Cryptocurrencies in the Russian Federation

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## ABSTRACT

The paper is devoted to the study of state regulation in the sphere of cryptocurrencies in the Russian Federation (RF). In the course of the study a scenario-cognitive model of the subject area is developed, as well as scenarios of possible options for the implementation of the management of socio-economic systems are obtained. The purpose of modeling is to assess the impact of cryptocurrency on social stability. A number of modifications of the model took into account the proposals of the regulatory authorities of the Russian Federation and the possible directions of legal regulation.

**Keywords:** cryptocurrency; state regulation; legal regulation; digital ruble; social stability; cognitive model; scenario analysis; simulation modeling; socio-economic systems; fast law.

## To cite this article:

Tymoshenko AA, Feyzov VR, Chernov IV. Scenario approach to the study of the directions of regulation of the sphere of cryptocurrencies in the Russian Federation. *Russian journal of legal studies*. 2023;10(2):21–30. DOI: <https://doi.org/10.17816/RJLS397536>

Received: 10.04.2023

Accepted: 24.05.2023

Published: 29.06.2023

УДК 340

DOI: <https://doi.org/10.17816/RJLS397536>

Научная статья

# Сценарный подход к исследованию направлений регулирования сферы криптовалют в Российской Федерации

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## Аннотация

Работа посвящена исследованию государственного регулирования в сфере криптовалют на территории Российской Федерации (РФ). В ходе проведения исследования разработана сценарно-когнитивная модель предметной области, а также получены сценарии возможных вариантов реализации управления социально-экономическими системами. Целью моделирования является оценка влияния криптовалюты на социальную стабильность. В ряде модификаций модели учитывались предложения регулирующих органов РФ и возможные направления правового регулирования.

**Ключевые слова:** криптовалюта; государственное регулирование; правовое регулирование; цифровой рубль; социальная стабильность; когнитивная модель; сценарный анализ; имитационное моделирование; социально-экономические системы; быстрое право.

## Как цитировать:

Тимошенко А.А., Фейзов В.Р., Чернов И.В. Сценарный подход к исследованию направлений регулирования сферы криптовалют в Российской Федерации // Российский журнал правовых исследований. 2023. Т. 10. № 2. С. 21–30. DOI: <https://doi.org/10.17816/RJLS397536>

A significant liquidity infusion in the global financial system during the COVID years stimulated an increase in asset values with an attendant increase in risk, cryptocurrency being one of the representatives of this class of assets. Such significant price changes never remain unnoticed by the public, especially given the lockdown which prompted citizens to absorb more information from the media and social networks. The popularity of cryptocurrency is cyclical, and each such cycle extends to an increasing number of countries and their citizens. This is evidenced by the activity of central banks in the world in their desire to regulate already existing digital currencies and create central bank digital currencies (CBDC)<sup>1</sup>. Cryptocurrency is a special virtual currency, based on blockchain technology, with decentralization being the main distinguishing characteristic of digital currency.

As of June 2022, there were about 20,000 different cryptocurrencies and more than 500 cryptocurrency exchanges. The total cryptocurrency market capitalization was approximately 1 trillion US dollars. By November of that year, market capitalization amounted to 840 billion US dollars, and the number of publicly available cryptocurrencies had increased to 21,760, which indicates significant volatility in the crypto market and the activities of its participants and developers. Even though, according to Bloomberg, the daily trading volume by the end of 2022 had returned to the level of 2020, having decreased to 10 billion US dollars, many institutional participants in the crypto market, corporations, and brands continue to introduce cryptocurrency and its derivatives into their systems. The high volatility of the assets increases risk and reduces the chances of protecting the funds of citizens who have invested in digital currencies. Working with cryptocurrency is fraught with high risk not only for the investor but also for the business itself in this area.

The bankruptcy of Alameda Research LLC, one of the largest funds, and FTX, the second largest cryptocurrency exchange in the world, which had more than one million creditors, launched a cascade of bankruptcies of other funds and digital currency exchanges, which revealed the weakness of regulation of this area worldwide<sup>2</sup>. A series of bankruptcies of large funds and exchanges have demonstrated that the regulation of the digital currency trading business requires a multi-parameter and thorough analysis, including the creation of working groups that represent the interests of the regulator, business, and investors.

The business model of centralized crypto exchanges is similar to a conventional banking model. By replenishing their wallets on such exchanges, clients transfer their funds to third-party accounts, and the exchange has the right to dispose of these assets, and client funds are not protected by any regulations. Banks mainly earn from lending (interest and commission income), but cryptocurrency exchanges earn

from the listing of new tokens, trading commissions, and lending (margin trading). It is this last item of income that poses the greatest risk for both the crypto exchanges and clients. It is worth noting that if a client invests in exchange tokens, then such a process is similar to investing in securities; while exchanges attract additional funding through such funds, this business model has many disadvantages. Moreover, if the clients of any bank or exchange start requesting their funds or deposits simultaneously, then such banks and exchanges will have a liquidity crisis, and in the absence of adequate reserves or additional financing, the consequences could be catastrophic. At the moment, the federal laws of the country do not provide for mandatory disclosure of information about the reserves of digital currency exchanges, or about liabilities, and their creditors, which is a significant preemption and can lead to an increase in the number of unscrupulous players and even greater risks for investors' funds and business. Because, in general, the tokens of large centralized crypto exchanges are freely traded, like shares of publicly-held companies, they should be subject to similar requirements, including mandatory reserve audits, commitment accounting, and accounting reports. Most crypto exchanges, having integrated know-your-customer (KYC) systems<sup>3</sup>, already comply with the requirements of anti-money-laundering legislation, but all of the above is only the first step toward global regulation of the digital currency sphere.

However, here, it is first worth mentioning that these actions are largely voluntary, so to say advertising, and display activities which enable exchanges, if necessary, to manipulate the cryptocurrency flows of their clients. It is no secret that there is no effective procedure for appealing one's own actions on almost any crypto exchange. Mass write-offs of financial assets from customer accounts are allowed, and the trading platform administration can impose sanctions unilaterally against traders.

There is another very real hazard for the holders of cryptocurrencies who have entrusted them to the exchange and ignored the opportunity to keep them in the so-called cryptocurrency wallets. It consists of the probability of their untimely loss due to hacking of the exchange's software capacities. Thus, the total amount of damage done as a result of the hacking of the Mt. Gox exchange has topped 17 billion US dollars to date<sup>4</sup>.

However, cryptocurrency as a phenomenon has brought many technical innovations such as distributed ledger technology, smart contracts, tokenized assets, and decentralized finance. All of the above are being developed and used in many technologically advanced fields. It is noteworthy that all the global digital currencies of

<sup>1</sup> CBDC — Central bank digital currency.

<sup>2</sup> Powell F., Curry B. FTX Ex-CEO sam bankman-fried is arrested. URL: <https://www.forbes.com/advisor/investing/cryptocurrency/what-happened-to-ftx/> (reference date: 06.05.2023).

<sup>3</sup> KYC (Know you customer) — identification and verification of the identity of each client through accompanying documents.

<sup>4</sup> Kuzmicheva A. Apocalypse Yesterday. The Mt. gox exchange still influences the Crypto market. URL: <https://www.rbc.ru/crypto/news/5baca4049a79477e282de2fd> (reference date: 06.05.2023).

central banks are based on distributed ledger technology. In 2022, China became the first country to implement CBDC in a large economy<sup>5</sup>, and in Russia in October 2017, the government drafted a project for the technological implementation of the cryptoruble. The cryptoruble is similar to cryptocurrencies, since it is implemented based on blockchain technology, but at the same time, it is not a cryptocurrency, but a third type of money that combines the properties of both cash and non-cash rubles. Control and implementation of the project, as well as emission, are implemented by the Central Bank of the Russian Federation. As of January 2022, 12 Russian banks have been allowed to test the cryptoruble<sup>6</sup>.

Digital currencies have existed for a long time. The first cryptocurrency was bitcoin, created in 2009, and it retains the lead in this field and, despite its shortcomings, remains a kind of standard. Cryptocurrency has its benefits and drawbacks related to security and anonymity, and such problems with digital currencies and their derivatives are noted in both the national security strategies of the USA and the Russian Federation. The US strategy emphasizes that a given adversary uses cyberspace to attack critical infrastructure, extorting ransoms in the form of cryptocurrency. The role of cryptocurrencies as a means of obtaining a ransom demonstrates the concern of states in this area. At the same time, it is emphasized that "society and the critical infrastructure that supports it, from electricity to pipelines, are becoming increasingly digital, and vulnerable to destruction through cyberattacks." The strategy also mentions the unconditional interest of the USA in strengthening norms that mitigate cyber threats and improve stability in cyberspace<sup>7</sup>.

A particularly significant argument for conducting the study is the fact that the Decree of the President of the Russian Federation dated July 2, 2021, No. 400 "On the National Security Strategy of the Russian Federation" specifically emphasizes those threats associated with digital currencies:

"Prevention and suppression of offenses and crimes committed with the use of information and communication technologies, including money laundering, the financing of terrorism, the organization of the illegal distribution of narcotic drugs and psychotropic substances, as well as the use of digital currencies for illegal purposes." The strategy focuses not only on cryptocurrencies but also on their characteristics, such as the anonymity that criminals can use:

<sup>5</sup> Areddy J. China creates its own digital currency, a first for major economy. URL: <https://www.wsj.com/articles/china-creates-its-own-digital-currency-a-first-for-major-economy-11617634118> (reference date: 06.05.2023).

<sup>6</sup> Kurasheva A., Zarutskaya N. "Banks announced their readiness to test the digital ruble on clients." URL: <https://www.vedomosti.ru/finance/articles/2023/03/03/965073-banki-zayavili-o-gotovnosti-testirovat-tsifrovoi-rubl> (reference date: 06.05.2023).

<sup>7</sup> National Security Strategy. 2022, USA. URL: <https://www.whitehouse.gov/wp-content/uploads/2022/10/Biden-Harris-Administrations-National-Security-Strategy-10.2022.pdf> (reference date: 06.05.2023).

"Anonymity, which is provided through the use of information and communication technologies, facilitates the commission of crimes, expands opportunities for money laundering and financing of terrorism, distribution of narcotic drugs, and psychotropic substances. All of the above highlights the need for effective regulation.

Only in 2020 did Russian legislation define the legal status of a digital currency as a certain set of electronic data (a special code or designation) that is contained in a specialized information system and that can act as a means of payment and/or investment (Art. 1 of Federal Law No. 259-FZ of July 31, 2020 "On digital financial assets, digital currency, and on amendments to certain legislative acts of the Russian Federation"<sup>8</sup> (hereinafter referred to as the Law on Digital Financial Assets)).

The above law also regulates special rules (restrictions) for the circulation of digital currency (Articles 1, 14):

- its issue is regulated rather than curtailed by limiting the use of exclusively national domain resources and technical means located on the territory of the Russian Federation;
- digital currency (regardless of the territory of its origin) cannot be used as a means of payment for persons located in the Russian jurisdiction, or individuals residing in Russia for a long time;
- property rights to digital currency are subject to judicial protection only if it has been declared for tax purposes;
- the promotion of the use of cryptocurrency as a means of payment in the framework of the commodity exchange is prohibited.

It is obvious that the legal regime of digital currency has been seriously curtailed, and it cannot, therefore, function as a full-fledged monetary asset.

There is no mention of it in the Federal Law of June 27, 2011 No. 161-FZ "On the National Payment System"<sup>9</sup>, and such currency does not belong to the category of electronic money.

In our opinion, it can still be considered a kind of quasi-money, and the results of the calculations in it may have legal significance, given the utilitarian approach to cryptocurrency valuation evidenced by the actions of the state.

First of all, we note that digital currencies are recognized as property by the Law on Digital Financial Assets and it is in this vein that they are all considered in those special legislative acts regulating the issues of combating money laundering (legalization), combating corruption<sup>10</sup>, enforcement proceedings, and insolvency (bankruptcy).

In addition, for tax purposes, incoming receivables in digital currency should be treated as income as a general rule. This circumstance is specially declared in the explanatory

<sup>8</sup> Legal reference system Consultant Plus.

<sup>9</sup> Legal reference system Consultant Plus.

<sup>10</sup> Income certificates must include information about the presence of digital currency in the possession of a civil servant or an applicant for the relevant position.

letter of the Ministry of Finance of the Russian Federation dated August 24, 2020 No. 03-03-06/1/73953<sup>11</sup>.

In February 2022, the Government of the Russian Federation published the Concept of Legislative Regulation of the Mechanisms for Organizing the Circulation of Digital Currencies (hereinafter referred to as the Concept)<sup>12</sup>, which recognized cryptocurrencies as high-risk financial instruments.

At the same time, cryptocurrency is of particular importance for assessing its use in the commission of crimes.

In general, the system of application of the criminal procedure law in the Russian Federation is associated with some a priori refusal to follow the letter of the law formally. At the same time, priority is given to ensuring the rights and freedoms of citizens following the numerous decisions of the Constitutional Court of the Russian Federation. Hence, there is a freer application of civil and financial legislation by law enforcement agencies and courts hearing criminal proceedings. It was in connection with this that the judicial and law enforcement system initiated the first seizures of cryptocurrency assets even before they were recognized as a financial instrument and an integral element of the status of property ownership.

The transformation of the law enforcement system is closely related to the factors of criminal policy implemented in Russia in several key areas. The first direction concerns the serious liberalization of criminal law. If we associate this direction with the use of cryptocurrency, then first of all it is directed to combating corruption by creating serious obstacles to the use of property obtained illegally by corrupt officials. Along with legislation aimed at combating bribery, the legislator criminalizes such forms of criminal behavior as the promise of mediation in bribery. In addition, serious preventive measures are being taken against extremist activities and their most dangerous manifestation, terrorism, while cryptocurrency can be used to finance it.

When analyzing the impact of cryptocurrency on both the economy and social stability in society, it is necessary to take into account the factors of the environment where law enforcement agencies have to act, namely, those factors that determine criminal activities. To date, scientists have agreed that it is impossible to defeat crime completely; since it has social origins, it can only, de facto, be controlled.

The situation is aggravated by the fact that the official governments of some countries demonstrate a clear disregard for the need to take measures to address cryptocurrencies, considering their release a risky offer to ownership. For example, in the USA, the release of cryptocurrencies (Initial coin offering) is prohibited.

The USA regulators' approach has had quite predictable consequences, in that it has led to 95% of all trading operations in the field of cryptocurrencies being transferred

to offshore territories, which, in turn, resulted in most of the market capitalization of blockchain protocols accounting for projects which are registered outside the USA.

Assessment of the impact of such a young and dynamically developing sphere of socioeconomic systems is no trivial task. Considering the number of threats and the technological specifics of the field, perhaps the scenario approach is the most effective in addressing the problem. The scenario approach to the problems of modeling the dynamics of functioning of complex systems, which include a set of elements and factors that determine the development of the corresponding segments of socioeconomic systems, can be implemented in the language of signed directed graphs, whose apparatus enables the formal construction of scenarios for the behavior of the modeled system under various conditions. This apparatus enables us to combine formal and expert methods of analysis of complex systems. The resulting development scenarios, describing the process of changing the parameters of the modeling object, record the moments, fundamental from the point of view of the researcher or the decision-maker, of the transition of the prognosis object to a new qualitative state, thereby highlighting expertly only those significant events from the trajectory of its development. The scenario approach has a significant advantage in the study of dynamic systems; the cognitive models created take into account many scenarios, which enables the registration of implicit relationships and dependencies. The scenario for changing the state of an object is a system of models that describe the process of changing its parameters and operating conditions and registering discretely the moments of the transition of the object to a new qualitative state, which are of fundamental importance from the researcher's point of view [1].

In the course of the study, a model for the development of the cryptocurrency sphere in the Russian Federation was constructed to assess the impact of cryptocurrency on social stability, taking into account various scenarios of state regulation, with legal regulation being the most important. Several modifications of the model took into account the main threats associated with the uncontrolled use of cryptocurrency, including being used for illegal activities. In addition, the proposals of the Russian regulators were taken into account, as were the threats, and opportunities associated with the creation and integration of the digital ruble.

Figure 1 presents a scenario simulation model for the development of the cryptocurrency sphere in the Russian Federation.

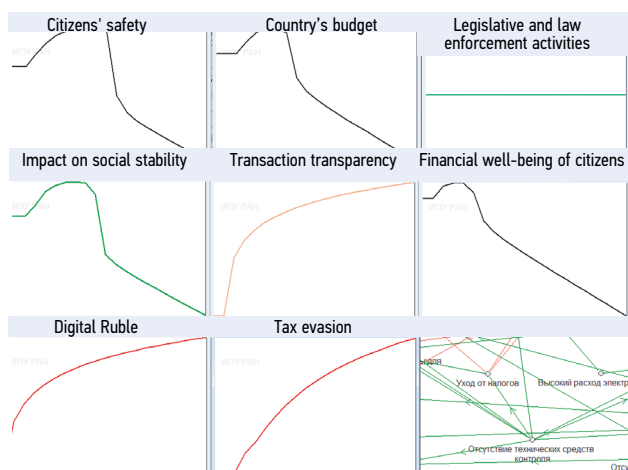
The main factors of the model are classified into the following groups:

1. Threats and risks associated with the field of cryptocurrencies, including the financing of undesirable organizations, the financing of prohibited organizations, weapons and ammunition trafficking, trafficking in

<sup>11</sup> Legal reference system Consultant Plus.

<sup>12</sup> Legal reference system Consultant Plus.





**Fig. 2.** The first scenario, the absence of state regulation

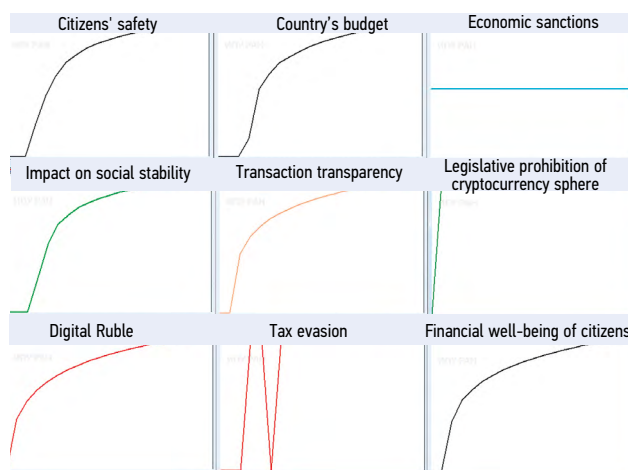
a flexible system regulating the sphere of digital currencies, emphasizing the prospects for the use of cryptocurrencies, including in the context of technological progress. The simulation revealed that if the cryptocurrency maintains the status quo on the territory of the Russian Federation, then this will not lead to any beneficial consequences, which is demonstrated in scenario 1 (Fig. 2).

The absence of state regulation, in particular, legal regulation of the digital currency sphere, will only increase the general risks, since in addition to the existing threats associated with illegal activities, factors such as the informal economy and tax evasion will affect the country's budget and citizens' security and financial well-being directly, thereby having a clear negative effect on social stability.

However, the scenario of a complete ban on the circulation of cryptocurrency and related activities (Fig. 3) in the context of ensuring the safety of citizens and the impact on social stability and the country's budget is effective in the short term. It is noteworthy that in this case, not everything is clear.

Social stability is the sum of the stability of social structures, processes, and relations that, with all their changes, preserves their qualitative certainty, and integrity. It consists of three levels, namely, the internal stability of systems, the stability of their interrelationships and interactions, and societal stability (of the whole society). In other words, when operating in closed systems, the prohibition strategy will certainly help to maintain the stability of structures and interactions in a controlled system, but one thing can be noted about the development possibilities of such systems, if development does exist, it will have weak dynamics and turn out to be ineffective. In addition, it is worth noting that the effect of the cryptocurrency ban will alienate institutional market participants, as well as IT companies and those possible future projects that contribute to maintaining technological progress in the Russian Federation. Scenario 3 (Fig. 4) corresponds to the previous control option.

However, the model takes into account the impact of sanctions on the financial well-being of citizens. An analysis



**Fig. 3.** The second scenario, a complete ban on cryptocurrencies without sanctions

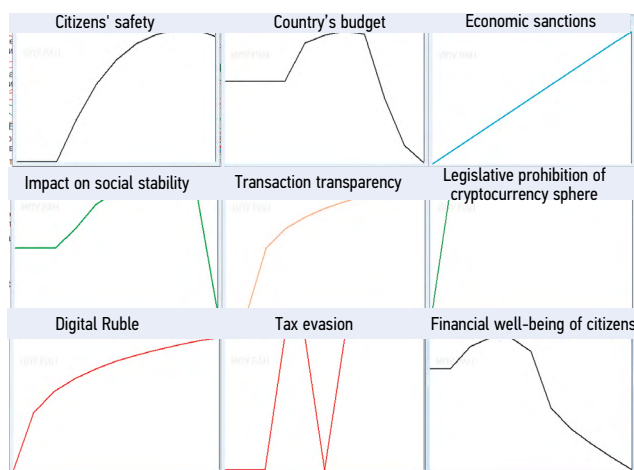
of the simulation results enables us to conclude that with a slight sanctions pressure even on closed systems, due to the resultant decrease in the financial well-being of citizens and the impact on the country's budget, the impact on social stability is negative.

It is worth noting that the legislative ban on cryptocurrency will require the creation of an infrastructure to track offenders, and the burden on law enforcement agencies will also increase, which naturally will affect the country's budget negatively, which is demonstrated in the scenarios in Fig. 3 and Fig. 4.

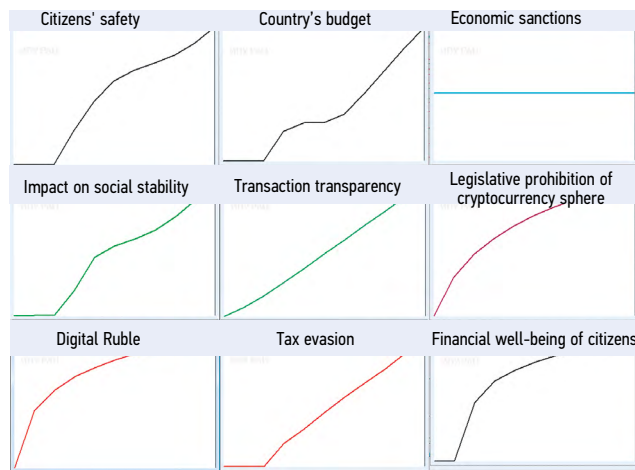
An absolute ban on the use of cryptocurrencies will not help to eliminate the threats associated with it, but budget losses from arranging correct process management and the absence of an additional increase from taxes can lead to non-critical negative consequences. The appropriate arrangement of processes requires not only statutory regulation but also a generally integrated approach by the regulator, unlike the previous scenarios where, if the use of cryptocurrency is fully allowed in the country, then there are other consequences. The results of such modeling are presented in Fig. 5.

This scenario is quite promising from the point of view of its impact on social stability, but it is worth considering that the uncontrolled use of cryptocurrencies leads to very negative consequences that can emerge over such a long period that the model presented does not allow them to be taken into account. If we consider the simulation model in more detail, then the legislative recognition of cryptocurrency with the factors of the absence of a regulatory framework and technical controls will lead to an increase in cybercrime and avoidance of the national currency, and just such risks were warned of by the Central Bank of the Russian Federation in its report on cryptocurrency.

Such trends will impact the regulation of the country's financial system negatively, as well as the planning and implementation of a single monetary policy by the state. Taking into account the increased sanctions pressure in 2022,



**Fig. 4.** The third scenario, a complete ban of cryptocurrencies with sanctions



**Fig. 5.** The fourth scenario is the adoption of cryptocurrencies with ineffective regulation, without taking into account sanctions

a scenario that takes into account such an external impact looks less promising.

Figure 6 presents the dynamics of changes in significant factors of scenario 5 for the development of a situation which takes into account the impact of legislative recognition of the cryptocurrency sphere, in the context of the impact of sanctions.

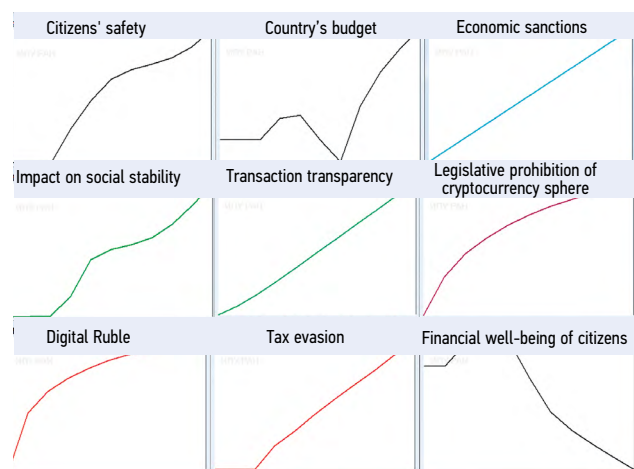
Scenario 5 demonstrates the situation that may arise in the absence of an integrated approach to regulating the sphere of cryptocurrencies under the impact of sanctions. The first thing that requires consideration is the decline in the financial well-being of citizens. The impact of sanctions will encourage citizens to keep their savings in the national currency, and people potentially wishing to keep their funds in cryptocurrency will face the threat of loss due to high volatility, as well as the lack of regulation of the activities of organizations that may create de facto Ponzi schemes based on digital currency. The factor of tax evasion, together with the lack of technical means of control, will still impact the country's budget negatively. It is also important to note

that there are no KYC requirements for exchanges operating in the Russian Federation, which can increase the hazards associated with the financing of illegal activities significantly.

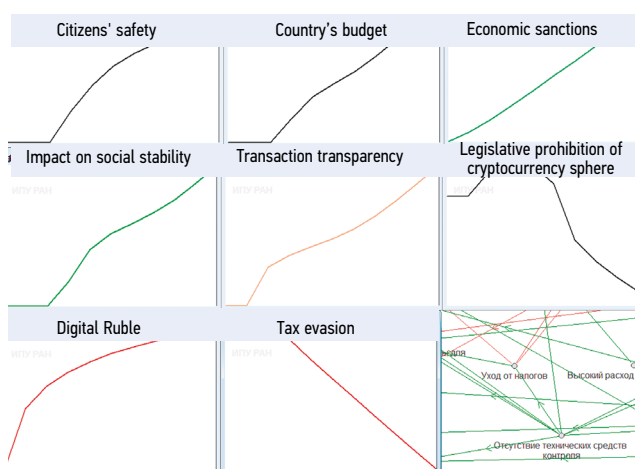
Because the above scenarios do not deliver proper efficiency in countering the threats associated with cryptocurrencies, together with the use of the benefits of digital currencies, scenario 6 is proposed (Fig. 7).

Scenario 6 uses proposals from the regulatory authorities of the Russian Federation, which, in their opinion, can help relocate crypto assets (as well as related activities) out of the gray zone and turn them into an advantage for the country. Potential regulators in the Russian Federation can be the following (the authorized body is determined by the Government of the Russian Federation):

- the Federal Tax Service of Russia;
- the Federal Service for Financial Monitoring;
- the Russian Federal Security Service;
- the Ministry of Internal Affairs of Russia;
- the General Prosecutor's Office;
- the Investigative Committee.



**Fig. 6.** The fifth scenario, the adoption of cryptocurrencies with ineffective regulation, taking into account sanctions



**Fig. 7.** The sixth scenario, comprehensive and effective regulation of the digital currency sphere, taking into account sanctions



The authorized body is determined by the Government of the Russian Federation to regulate the activities of crypto exchanges and cryptocurrency exchange offices. The authorized body has the right to issue and revoke licenses of cryptocurrency exchange offices and crypto exchanges.

In the case of the field considered, this operational regulation, will be considered an element of quick law [2].

The use of this term emphasizes the need to transform the legal instruments of influence on the cryptocurrency market, where it is not limited to simple law enforcement. It is required to determine quickly, within a few days, the characteristics of digital currencies prohibited in the Russian Federation for circulation, which were first issued in other countries, as well as to establish rules for the circulation of certain types of goods purchased with cryptocurrencies, to ensure timely empowerment of law enforcement agencies to access information about the use of cryptocurrencies, their exchange for traditional means of payment, and to resolve other issues.

In this scenario, legislative, and law enforcement controls are introduced to influence the key elements of the model. Due to such basic management influences as obligations under declaration, recognition of mining as a commercial activity, and recognition of crypto assets as property, it will be possible to reduce the negative impact of corruption and tax evasion factors on the country's budget.

Testing for knowledge of the tool and the obligation to inform citizens about the risks of working with cryptocurrency, together with the mandatory KYC procedure, will generally affect the use of cryptocurrency negatively, mainly by reducing the number of unscrupulous users, but will enable institutional market participants to conduct transactions legally in digital currencies and issue digital financial instruments and digital currencies, if considered necessary.

It is worth noting that the creation, integration, and support of the digital ruble will not replace cryptocurrency for citizens, but will improve the transparency of transactions and control over the currency issue. The digital ruble will contribute to the safety and security of funds, as well as an improvement in customer service and the availability of citizens' funds. It is worth noting separately that the transparency of transactions will improve significantly the ability to combat the illegal turnover of assets.

The complex application of all available regulatory tools, taking into account the mistakes of international states will reduce tax evasion and take into account the benefits of cryptocurrency not only within the country but also in external economic relations.

## CONCLUSION

In conclusion, it is worth mentioning some promising trends in the development of digital assets and CBDC, as well

as the existing advantages of using cryptocurrencies, which, in the event of an absolute embargo scenario, would turn out to be missed opportunities:

- The growth of the potential of the cryptocurrency market is an incentive for the development of blockchain technology and the expansion of the startup market (such as smart contracts and multi-signatures) in various fields of economics and management.
- The emergence of an alternative system of international bank transfer, which will contribute to the displacement of US dollars from foreign trade relations with major partners of the Russian Federation, by replacing them with cryptocurrency.
- The withdrawal of the system of international banking and financial transfers from the total control of the USA.
- The ability to bypass some sanctions and barriers to cross-border transfers.
- A lack of necessity for intermediaries, such as correspondent banks.
- It does not require the creation of an expensive infrastructure (except for some digital currencies, where there are increased hardware requirements for validators).
- Low transaction fees.
- High speed of financial transactions.
- Minimal risk of errors.

In addition to the main threats to the use of cryptocurrencies, it is also worth noting some technical shortcomings to be overcome through the development of technical means and greater adoption of cryptocurrencies:

- A high risk of theft of crypto assets (hacking).
- The anonymous payment for illegal actions and prohibited goods.
- US sanctions implemented through blockchain network validators.
- High volatility of cryptocurrencies.
- Control of over 51% of the blockchain network or attack of 51% of them.

Thus, it can be assumed that the use of cryptocurrency will affect the change in crime directly, and, consequently, the social security of society, which will inevitably result in a corresponding transformation of the law enforcement system. An increase or decrease in the number of overt acts associated with cryptocurrency demands an adequate response from law enforcement agencies.

The use of cryptocurrency can have both a direct and an indirect impact on social stability through factors that characterize the socioeconomic and political situation of society and the state, as well as the processes taking place within it. An analysis of such an impact and predictive scenarios for the implementation of various management decisions, in our opinion, should contribute to the effective transformation of the law enforcement system [3].

## REFERENCES

1. Kul'ba VV, Kovalevskii SS. *Upravlenie i kontrol' realizacii social'no-ekonomicheskikh celevykh programm*. Moscow: Knizhnyj dom Librokom; 2009. 400 p. (In Russ.).
2. Timoshenko AA. Improvement of cryptocurrency market regulation through the idea of fast law. *Russian Journal of Legal Studies*. 2022;(1(9)):93–98. (In Russ.), DOI: 10.17816/rjls105062
3. Timoshenko AA. External factors in the transformation of the judicial and law enforcement system and a scenario analysis of judicial reform. *Vestnik Voronezh State University. Series: Law*. 2019;(1):172–175. (In Russ.).

## СПИСОК ЛИТЕРАТУРЫ

1. Кульба В.В., Ковалевский С.С. Управление и контроль реализации социально-экономических целевых программ. Москва: Книжный дом Либроком, 2009. 400 с.
2. Тимошенко А.А. Совершенствование регулирования рынка криптовалют за счет идеи быстрого права // Российский журнал правовых исследований. 2022. № 1(9). С. 93–98. DOI: 10.17816/RJLS105062
3. Тимошенко А.А. Внешние факторы трансформации судебно-правоохранительной системы и сценарный анализ судебной реформы // Вестник Воронежского государственного университета. Серия: Право. 2019. № 1. С. 172–175.

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