

Blockchain technology and law (questions of theory and practice)

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Abstract — This article is devoted to the analysis of the mechanisms of legal regulation of the Blockchain system, as one of the new directions of development of the world economy. The authors define all basic concepts used in the implementation of crypto-currency technologies, study the existing experience of regulation of the Blockchain system in certain foreign countries, as well as elements of responsibility and taxation of transactions and revenues received through Blockchain technologies. The aim: to study all the main elements of the Blockchain system in terms of modern legal approaches of the Russian Federation, as well as the basis of its legal regulation in world practice. Methods: formal-logical, comparative-legal (comparative), analysis, sociological. Results: Currently, the Blockchain system is actively developing both in general and in its individual directions. It is important to understand that attitudes towards this system are becoming increasingly positive in society, despite existing problems. The most promising, according to the authors, is the issue of production tokens with due legal formalization, as it is this form of the issue of crypto that solves the tasks of developing the economy of the state by means of attracting the necessary funds for the implementation of any project. At present, there is a need to develop common approaches and adopt international acts defining the foundations of the legal status and regime of circulation of crypto and the implementation of the Blockchain system, both at the national and international levels, which allow to ensure the proper level of security, both for States and for participants in these processes. Undoubtedly, in the future, certain registration of Blockchain projects will be required, which will ensure a proper level of transparency and as a consequence of the legality of these projects. Moreover, the mechanism of taxation not only of transactions with crypto, but in general of organizations implementing Blockchain technologies and receiving profit from it, as well as the issues of liability of these firms under the legislation of the Russian Federation and foreign countries are still unclear, which will not allow this system to develop successfully in the future.

Keywords — *money, securities, cryptocurrency, blockchain, mining, token, crowdfunding, tax, responsibility, government regulation.*

I. INTRODUCTION

The modern system of monetary and settlement relations in world practice continues to develop actively. The most important direction of such development was the market of crypto, which until recently had no legal regulation, which on the one hand became a great advantage over other currencies, on the other hand a significant disadvantage, which prevents crypto currencies from taking a worthy place in the sphere of financial activity.

II. ALTERNATIVE MONEY CIRCULATION

The circulation of crypto is not just a way to make a profit quickly, as many currently perceive it. Thus, an integral element of this market is so-called mining (this is the concept most often used in Russia) (from English mining - mining), a paid technological process carried out decentralized using computer equipment to produce new blocks and combinations of figures, i.e. creation of new units of crypto. Such process has also other names - forging (from English forging - forging to forge) or Minting, from English minting - stamping, to mint). Despite the differences in name, generally the same process is meant.

In the system of monetary relations, the market of crypto, on an equal basis with regional and local currencies, refers to the so-called alternative monetary circulation, which «includes the issuance and use as a settlement instrument of additional currency, both authorized and not authorized by public authorities of the state, which are in circulation on an equal basis with the legal means of payment. Alternative monetary treatment in its form can be divided into two main types:

- 1) *alternative cash circulation;*
- 2) *alternative cashless cash circulation» [1].*

It is important to understand that the market for cryptocurrency alternative monetary circulation is constantly evolving. Originally emerged as a way to make settlements without the use of banks, that is, absolutely impersonal, allowing participants of operations to remain incognito. In the second stage, individual crypto currencies began to be

significantly expensive due to high demand for them, which made them investment attractive. At the third stage of its development, crypto currencies showed their third property - it is universality in the implementation of projects, allowing to attract the necessary for the implementation of an interesting project in the form of sale of the share of the project for tokens.

III. CRYPTOCURRENCY

It should be noted that recently, including at the level of official authorities, both the Russian Federation and many other countries, it is the market of crypto that is called one of the most promising directions of development of the world economy. As for the professional community of experts, opinions vary significantly, from the attitude towards crypto currencies, as a «bubble», which will soon cease to exist, to the currency of future world trade - a real alternative to the US dollar.

Before starting to study the peculiarities of the legal regulation of the system of circulation of crypto, it is necessary to break with the basic concepts used in the Blockchain system of technologies. So, the concept of «crypto» abbreviated from «cryptographic currency» is a currency distributed through computer networks, in the form of unique digital codes, having a certain measure of value and used in calculations, as well as for investments. The most common and known and common cryptocurrencies are Bitcoin, Ethereum, Litecoin, etc.

It is important to understand that crypto currencies themselves would not have received such widespread distribution without the Blockchain system, first implemented in Bitcoin, which provides all the elements necessary for circulation. So, Blockchain (<https://blockchain.info/>) is a single system of circulation of crypto consisting of certain blocks (a set of elements of actions), allowing this currency to circulation.

The next important phenomenon and concept used in the circulation of crypto is ICO Initial coin offering (abbreviation came from IPO, from English Initial Public Offering), which is a certain type of Crowdfunding (from English words directed to the Internet – «crowd», funding for the implementation of the project [2] Investors of the project are owners of crypto. It is worth noting that many owners of electronic currencies, despite their rather high value, psychologically treat crypto currencies as non-real money, which allows them to quietly invest them in various, often risky projects. In the future, the attitude towards digital currencies should be positive, due to the increasing penetration of crypto into public life, as well as state policy in this sphere.

IV. TOKENS

Tokens are the different digital assets attracted to implementation of any project both at ICO stage, and at other stages of Blokchen for the purpose of attraction of tokens for development of the project, at the same time investors, in fact, become co-owners of the project.

For understanding of bases of legal regulation of cryptocurrency technologies, it is important to give an assessment to the legal nature of digital currencies. The first question on which it should be noted – whether it

cryptocurrencies money are or it is a kind of securities. So, foreign experience, and first of all experience of the USA in this sphere very contradictory. In the USA extraterritorial operation of the legislation which extends to the territory the USA and depends on the subjects participating in transactions and on this basis the American commission on the exchanges and securities of SEC actually equated ICO to the IPO and arrested the non American cryptoexchange BTC-E. As a result the BTC-E Exchange was fined \$122 million, and her cofounder, Russian Alexander Vinnik, arrested in Greece upon the demand of FBI and fined \$12 million [3]. That is by the American legislation the cryptocurrency under certain circumstances is a security in spite of the fact that in July, 2016. By district court of Miami-Deyd of the State of Florida it is established that the bitcoin is not «the payment tool» (payment instrument), and is «the check, the warrant, the payment order, the traveler's check, the electronic tool or other tool, payment or monetary value or is not the reverse document» [4].

In this regard it is important to distinguish two types of tokens. First, the tokens which are released for support of implementation of any project or as they are named still – production tokens. Secondly, investment tokens which mean receiving means from operations with purchase and sale of tokens (use of growth of their market value) and also payment of dividends, percent on these tokens. In the second case upon the demand of the legislation of the USA provided that a participant of operations is the natural or legal entity directly or indirectly connected with the USA. The list of such persons is rather extensive. So, for the natural person – citizenship of the USA, the status of the resident of the USA (existence of «green card»), the birthplace to the USA, the address and the postal address to the USA, telephone number to the USA, regular transfers of money to accounts at financial institutions of the USA, the power of attorney on implementation of legal actions issued to the person with the address to the USA and even the right to sign given to the person with the address in the USA. For legal entities – the USA as the country of establishment or registration and also the organization in which tax residents of the USA have a possession share (direct or indirect) over 10% [5].

It is important to understand that it is production tokens that are by their legal nature money or monetary surrogates, so they cannot be subject to securities legislation. Moreover, tokens can actually be issued as a discount when buying a stake in a project. In a similar way, Sberbank of Russia, which carries out, in fact, its electronic issue - the issue of «bonuses of Sberbank». Thus, when buying less than the number of bonuses on the card, the transaction is actually issued for 1 rubles (in order to comply with the requirements of the legislation), and the rest is a discount, although the calculation was actually made at the expense of bonuses, which indicates that it is a full-fledged own electronic currency issued by Sberbank of Russia. Every year in Russia, using bonuses, deals for several billion rubles are carried out, which is nothing but a hidden issue.

V. THE LEGALITY OF CRYPTOCURRENCY CIRCULATION

Currently, many large trading networks use their electronic bonuses, and some switch to paying for bitcoins and even issue their own cryptocurrencies. For example, in August

2017, the Russian branch of the Burger King trading network announced the release of its cryptic currency - Arderkoin [6].

It should be noted that from the point of view of civil law of the Russian Federation Bitcoins and other crypto currencies do not refer to money, non-cash funds, or even more to securities. They could be classified as information, but such an object of civil rights was relatively recently excluded from article 128 of the Civil Code of the Russian Federation. And if Bitcoin cannot be classified as any of the objects of civil rights, it is not suitable as a reward for transactions, therefore, cannot be used in calculations. It is important to understand that at present the legal regulation of crypto-currency relations, including the use of crypto as a means of payment, is in the plane of public law rather than private law.

The most important aspect of the legality of the circulation of crypto is the receipt of profits, which entails naturally the need to pay taxes. This issue, in the case of the Russian Federation, needs to be studied separately, as it depends on the national tax system of each State. Thus, this question was studied in sufficient detail in the work of I.I. Kucherov and I.A.Havanova, Including in terms of the analysis of foreign experience, where the authors come to a fair conclusion, That «national regulators and fiscal authorities are still only in the process of understanding the problems, That arise in the virtual world, including problems, Associated with the use of virtual currencies, «but» most states are not willing to exclude persons, Using Bitcoins, as well as trading platforms receiving income from the corresponding transactions, from the circle of potential taxpayers» [7].

In this regard it is important to understand that in the certain states approaches to the mechanism of administration of taxes on income gained at the address of Bitcoin began to form, and in a number of the countries taxes began to be levied already taxes [8].

So, for example, in Japan the cryptocurrency sales tax in the amount of 8%, and in Singapore income tax, received from operations with cryptocurrencies by the firms registered in this state is paid.

VI. BLOCKCHAIN

At present, the Blockchain system is actively developing both in general and in its individual areas. It is important to understand that attitudes towards this system are becoming increasingly positive in society, despite existing problems. The most promising, according to the authors, is the issue of production tokens with due legal formalization, as it is this form of the issue of crypto that solves the tasks of developing the economy of the state by means of attracting the necessary funds for the implementation of any project. At present, there is a need to develop common approaches and adopt international acts defining the foundations of the legal status and regime of circulation of crypto and the implementation of the Blockchain system, both at the national and international levels, which allow to ensure the proper level of security, both for States and for participants in these processes. Undoubtedly, in the future, certain registration of Blockchain projects will be required, which will ensure a proper level of transparency and as a consequence of the legality of these projects. Moreover, the mechanism of taxation not only of

transactions with crypto, but in general of organizations implementing Blockchain technologies and receiving profit from it, as well as the issues of liability of these firms under the legislation of the Russian Federation and foreign countries are still unclear, which will not allow this system to develop successfully in the future.

In the case of the Russian Federation, it is almost impossible to achieve a positive attitude towards the private issue of currency at present, despite the support of the President of the Russian Federation, Vladimir Putin [9]. This is due to the fact that in Russia there is a well-established opinion that there is no money other than money issued by a public authority (in Russia by the Central Bank) [10], therefore, any actions of individuals with payment means issued not by public entities and not authorized by the state, will be qualified in accordance with criminal legislation and legislation on administrative offences. From the point of view of civil turnover, it is not important how and how the goods or services are paid, in which the investment in the project takes place, as long as with the help of these investments this project could be realized, and the transaction could be made. Therefore, private law and public law are two opposite systems, developing in parallel and little connected to each other and until they develop common approaches and are systematized among themselves, there will be no market of crypto in Russia.

As for the right regulation of blockchain technologies, it should include three main elements in the first stage: first, the obligation to report on the conduct of ICO; Second, ICO taxation and third, liability. For example, a State may introduce certain permitting procedures in the form of a notification, for example, an electronic document is completed that a legal entity plans to carry out ICO within such a time frame. The most optimal form of taxation of blockchain technologies at present in Russia, according to the authors, is patent taxation. And as a result, responsibility for not notifying the ICO and not acquiring a patent for this activity.

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[10] At the same time, central public bodies, as regional currencies, including those issued by public bodies on the ground, raise many questions in practice (See, more about this: Regional financial law: monograph/issue.

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