

Synergy of Business, Law and Economy in the Smart-Contract Implementation

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Abstract. The evolution of digital technologies leads to a tectonic transformation of all spheres of society. Law, as a system of regulating public relations, is changing dynamically along with the development of public relations in different spheres. The development of IT led to the emergence of blockchain technology, which, in turn, became the basis for the development of smart contracts. Smart contract technology, as it develops, causes changes not only in the legislation, but also in the model of interaction between the state and business. Due to smart contracts, a significant part of the rules can be algorithmized, and the regulation can become machine-readable. Purpose of the research: Legal research of the current legislation, the synergy of business, law and economy in the implementation of smart contract technology, determination of theoretical concepts in relation to smart contracts, the content and problems of the application of smart contracts, and identification of the most significant proposals for improving legislation. Methods: The authors of the research used general and specific scientific methods. In the study of the technological foundations of the smart contract, the main methods were analysis, synthesis, analogy, and a system-structural approach.

1 Introduction

As a result of the conducted research, the most essential statements and conclusions are determined, which are aimed at effective legal regulation and application of smart contracts in the business sphere [1]. An increase of the number of dispositive rules, which are introduced by the legislator to regulate economic relations required the creation of a certain internal structure of local acts [2]. Smart contracts are an important economic and legal step in automating legal relations. Despite the fact that the idea and technology have been existing for a long time, their implementation has been discussed in the last few years. At the mass level, the popularity of smart contracts is associated with their technical availability for businesses and individuals - earlier, there was not such a developed mass digital infrastructure for their use in economic turnover. Nowadays the project, which are connected with the use of blockchain technology, are no longer niche experiments and are

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gradually being prepared for implementation into civil-law transactions, including by the largest Russian companies. In particular, some familiar to citizens services are offered to be provided using smart contracts. It seems that this trend will only increase in connection with the relevant legislative regulation that came into force on January 1, 2021.

The necessity of the development and implementation of regulatory acts regulating relations in the field of digital assets and smart contracts is determined. It should be noted that until today, there is no comprehensive approach to the understanding of smart contracts in the economic turnover and civil doctrine. In science, there are polar opinions about both the definition of smart contracts and their legal nature.

It is necessary to pay special attention to the fact that the reform of civil legislation affected the basic institutions of civil law, and the main trends in the development of public relations, which are the subject of regulation of civil legislation were taken into account [3]. The contract is one of the main, fundamental regulators of civil, business, corporate and other public relations that develop between the subjects of economic activity. In law implementation, certain results of the reform aimed at the application of special treaties are evident [4]. In the literature, the problem of the contract in the field of entrepreneurship and regulation of business processes is mainly considered from the point of view of the entrepreneurs' interests as participants in the relevant contracts, which is quite obvious [5]. Business contracts are the most obvious direction for the active implementation of smart contracts.

2 Legal regulation

At that moment several attempts have been made to legally define smart contracts. However, due to the active scientific discussion and the dynamic development of technology, the direct definition of "smart contract" is still not fixed. Federal Law 31.07.2020 № 259-FZ «Digital Financial Assets, Digital Currency and Modifications of Certain Legislative Acts of the Russian Federation», defines a smart contract as a contract in electronic form, the fulfillment of rights and obligations which is carried out by automatically performing digital transactions in a distributed register of digital transactions in a strictly defined order and under the circumstances determined by it.

3 Results

At the moment Russian law has not yet developed a uniform approach to determining the legal nature and features of smart contracts. According to the scientists, two methods of legal regulation should be applied simultaneously to the relations of corporate governance [6]. Despite all the advantages of establishing the institution of a corporate contract with the participation of third parties, the scientific community expresses quite a lot of doubts about the unresolved problems, including the consequences of using this legal institution while using smart contracts.

The necessity for public intervention, state regulation, and the organisation of a system of registration and account of blockchain technologies seems to be very justified. It is necessary to agree with the opinion expressed in the doctrine that fixing the rules of interpretation of smart contracts together with one of the other proposed mechanisms, it seems, will reduce the risks of the consumer when the terms of the smart contract differ from the terms of the contract set out in natural language [7].

Today, there is a doctrinally fair opinion that the business contract is an institution of complex civil and public law regulation [1]. This statement is fully applicable to smart contracts.

4 Discussion

In practice, the idea of smart contracts as a mechanism for contractual regulation was implemented with the appearance of blockchain technologies, which were aimed at automating and decentralizing the financial sphere of public life. In the literature, the problem of contracts in the field of entrepreneurship, which can include smart contracts, is mainly considered from the point of view of the interests of entrepreneurs as participants in the relevant contracts, which is quite clear [5].

Smart contracts will be understood as «agreements recorded in the form of computer codes, which, under the conditions specified in such agreements, can be automatically executed without any additional actions on the part of the counterparty» [8].

According to IT specialists, a smart contract can be considered as an autonomous computer program located at a specific address in the blockchain, which can be restarted an endless number of times and programmed for the most diverse needs of the business community [9]. So smart contracts can be used for the accounting of an enterprise through a distributed registry, the organisation and conduct of electronic voting (electronic election system), as well as for the purposes of automating the company management.

«The desire for entrepreneurial initiative is organic to human nature» [10]. It is no coincidence that the foreign doctrine defines the basic indisputable characteristics of the necessity of widespread use of smart contract technologies:

1) The main feature of smart contracts is to make the obligation self-fulfilling. This implies that the dependence on the subjective factors of the counterparty associated with improper performance of the contract, for example, to miss the deadline, etc. will be reduced.

2) business technologies of smart contracts are based on software code, its statements cannot be interpreted differently. So, the possibility for counterparties in a contractual obligation to ambiguously apply and interpret a particular condition of the contract is eliminated.

3) smart contract releases a person from technical functions while discharge of contract. Of course, the possibility of legal mistakes, negative impact on the performance of the obligation is reduced, the negative "human factor" is reduced to zero [11].

It should be acknowledged that the technology of applying smart contracts - blockchain - is quite implemented in the field of entrepreneurship and business. However, this is not the only legal and technological solution to economic legal relations.

A blockchain is a database that is managed autonomously, without a single center. The information is stored and updated simultaneously on different technical systems. Depending on the access to information, management of the system and the capabilities of the participants, the existing blockchain platforms can be divided into public and non-public (private blockchain, consortium blockchain) [12].

Before signing a smart contract, the parties first develop a legal architecture for automating obligations, determine what the smart contract will regulate, its legal conditions. The signing of a smart contract is aimed at protecting the rights of participants in economic activities and business processes. To protect the rights of economic organisations, the legislator determines special ways to protect their rights and legitimate business interests. Relations in the field of safeguarding and protecting the property rights of participants in economic activity in the Russian Federation have the widest application internationally [13].

Special corporate methods within the framework of the implementation of smart contracts are the sale of shares in accordance with the procedure established by law; the transfer of the rights and obligations of share buyers to the bearer of a specific right of first redemption, and others [14].

From the point of programmers' view, a smart contract is a piece of code programmed to perform certain tasks if a certain predefined condition is fulfilled. At the same time, its feasibility from a technical point of view does not depend on the existence of duplication of contract terms in natural language. And in this sense, it is not necessary to duplicate the will of the parties expressed in the smart contract in any other way.

In our opinion, there are at least two possible approaches to confirming the parties' knowledge and understanding of the terms of the smart contract. The first is a legal fiction in the form of a presumption of understanding the terms of a smart contract by each person who concluded it. That means, a person who made a transaction using a smart contract is considered to be properly aware of its terms, including those expressed by the program code, until proven otherwise. At the same time, the burden of proof in such a construction is placed on the applicant.

The second approach is the obligatory duplication of the terms of the contract specified in the smart contract in natural language. Such requirement certainly creates additional costs for the parties and must be justified for the cases in which it is introduced. We suppose it is necessary to agree with the position of E. E. Bogdanova that in smart contracts with the participation of consumers, it should be possible to print and store the full text of the agreement [15].

It should be pointed out that both in the Russian and foreign doctrine there is a polarization of views. L. G. Efimova and O. B. Sizemova distinguish between a smart contract as a computer code and as a civil contract (legal relationship) [16]. We believe that both points of view have the right to exist and objectively implement economic obligations in the law enforcement sphere. Usually, a smart contract as a legal relationship and program code is also studied in foreign theory and practice [17].

The analysis of doctrinal sources allows us to make a conclusion. According to the well-founded point of view of some authors, this term is used to refer to legal contracts (or their elements) concluded in electronic form, and the performance of the obligation is automated and provided by a computer program [18]. From the point of view of other theorists and practitioners, smart contracts are either a way to secure obligations, or a way to fulfill contractual contracts [19].

In terms of the necessary balance between ensuring consumer protection and the development of the digital economy, the use of a risk-based approach is considered reasonable. In this case, this approach can be formulated as follows: a citizen can enter into transactions using a smart contract, provided that his potential losses on the transaction are limited (the maximum transaction price is limited) and legal regulation is introduced to minimize the risks discussed in this article. Until the relevant rules are established, it is undesirable for consumers to enter into transactions using smart contracts in the Russian jurisdiction, since the potential losses from such transactions seem to exceed the possible benefits for citizens.

We assume that the implementation of the proposed measures to minimize the risks outlined above will contribute to ensuring the protection of consumers' rights and the formation of their confidence in the stability and security of relations arising from the conclusion and execution of smart contracts [7].

5 Conclusion

Thus, the legal, economic and technical features of the implementation and use of smart contracts, the main theoretical approaches to the legal definition of the essence of a smart contract were considered and defined.

We believe that it is the synergy of business, law and economics in the implementation of smart contracts that will allow us to solve many economic and legal unresolved issues and minimize the risks of participants in business processes, both in Russia and abroad.

The definition of the economic and legal nature of smart contracts is established as independent, but interrelated theories that determine the multifaceted essence of the considered complex phenomenon-smart contracts:

- automatic machine that guarantees the fulfillment of the terms of the concluded contract in the field of economic activity;
 - computer software;
 - separate contractual model;
 - form of fulfillment of the terms of the contractual obligation;
 - a special construction of a private law contract (civil law, business, corporate, etc.), which has specific features that are implemented in economic turnover;
 - method of securing the performance of a contractual obligation.
- From these positions, we have studied the possibility of applying the smart contract technology to the existing types of economic and legal relations regulated by the legislation of the Russian Federation. It seems that the smart contract technology can significantly affect public legal relations in the sphere of:
- contracts: lease, supply, electricity supply, franchising, agency, etc;
 - tenders;
 - intellectual property rights;
 - corporate relations.

Taking the potential application of smart contracts in the above-mentioned areas of economic and social relations into consideration, the essential features of smart contracts were identified, as well as what systemic obstacles arise in the application of smart contracts in practice in the field of economic activity.

Of course, the technologies of "smart" contracts are developing and changing rapidly. However, in the Russian jurisdiction and economic turnover, we see actual problems in the application of smart contracts, which require both legislative regulation and further technical and economic progress.

The basic problem aspects should be defined as:

- language barrier while signing, reading and interpretation of the content of a smart contract;
- the problem of interaction with public authorities regarding their compulsory participation in some smart contracts (for example, registration and certification of smart contracts);
- the problem of possible non-feasibility of all the principles of economic activity and private law in the conclusion and execution of a smart contract;
- the problem of consumer rights compliance in the implementation of a smart contract in the field of consumer legal relations with the participation of business representatives;
- the problem of judicial protection of the rights of economic enterprises in case of their violation while using a smart contract.

A particularly important part of the study was the analysis of the regulatory legal acts of the Russian Federation, as well as the regulatory framework of other countries that already regulate the use of smart contract technology.

In the Russian Federation, the legislator has not yet explicitly formulated definition of a smart contract, although attempts to do it have been done. However, as part of the latest reform of the Civil Code of the Russian Federation, an important amendment to the Article 309 of the Civil Code of the Russian Federation came into force, which indirectly expresses the attitude of the legislator to the smart contract as a way to ensure the performance of

obligations under the contract. We believe that this is an important step forward for creating a legal practice of using smart contracts, but from a theoretical point of view, such rule leaves the legal status of a smart contract largely uncertain. So, from the point of view of the method of securing the performance of obligations, a smart contract does not generate an independent security obligation. Accordingly, in this interpretation, the positioning of a smart contract, on the one hand, is not sufficiently defined from the point of view of law, and on the other hand, it blurs the concept of ways to ensure the performance of a contractual obligation.

It seems that such non-independent contractual structures include, for example, a contract of accession, a public contract, an option contract, or a contract in favor of a third party. «Such contractual structures allow us to define the terms of business contracts included in their content, to establish general rules for contractual cooperation between the parties-entrepreneurs in the future» [20].

The qualifying features of a smart contract are collectively the following conditions::

1) performance is determined by the parties due to the appearance of certain circumstances (therefore, the use of smart contracts is regulated, including the regulations of Article 327.1 of the Civil Code of the Russian Federation on conditional performance of obligations);

2) the parties do not express a separately expressed additional will to fulfill the obligation;

3) execution is carried out through the use of information technologies that are determined by the parties of the transaction [21].

We believe that in the near future, smart contracts can be implemented not only in economic relations, but also in legal relations with the participation of individuals, namely, inheritance, labor relations.

The development of the principle of the open API of banks will allow the integration of smart contracts into the financial system without additionally making agreement with the bank. Smart contracts can be fully synchronized with both legislation and automatic implementation.

With the help of smart contracts, you can build an effective system of interaction between all participants in civil and business relations.

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