ISSUES OF LEGAL REGULATION OF BLOCKCHAIN, BITCOIN AND OTHER CRYPTOASSETS

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Abstract: The article provides an analysis of German legislation on the legal regulation of blockchain, bitcoin and other crypto-assets, which is one of the new means of payment. It also cites Germany's official position on digitization and its elements. It was emphasized that in order to make the most effective use of digital technologies in various spheres of public life, the legislation should find a compromise between public interests, economic needs and technological opportunities.

Keywords: blockchain, bitcoin, crypto-active, crypto-exchange, securities, token.

Today, the whole world is talking about a new generation of currency - cryptocurrencies, which are already known to everyone. What is cryptocurrency and how did it come about? What country or organization manages it? How are payments made through it? Why does its value change so quickly? It's no secret that the question of how to buy it is of interest to investors and ordinary citizens almost all over the world. With the development of the Internet, people had to pay "remotely". Transferring money from hand to hand causes certain troubles. That is why they have to turn to intermediaries, that is, to electronic payment systems, banks or couriers. Naturally, this generates the obligation to pay them a certain amount of commission. Because any organization that has provided services requires a fee for its services. The more money is transferred, the more money is withheld. With the development of information technologies, people began to form an idea of how to reduce costs and maximize efficiency. Of course, there were all sorts of suggestions. After that, a new form of currency called "cryptocurrency" was born. The term currency refers to a specific unit of money. Since the whole idea is about money and its environment, it is appropriate to dwell a little on money and its types. Money is a currency accepted as a common equivalent for trading goods and services in a country or by agreement of several countries, and it is valid in a modern economy in paper, metal or electronic form. One of the most important aspects of currency is that the issuing (money-issuing) organization is defined and it is strictly defined that it will be accepted at its value in the areas specified in the calculations under the relevant law. Today's money is considered paper money (money whose face value differs significantly from its real value), and the cost of issuing it is usually much cheaper than the value stated on the money (e.g., it costs 14 cents to issue a $100 bill.)). Half a century ago, the value of money was backed by gold; today it is determined by the total amount of goods and services created in a country. However, every non-cash money transaction (money transfer) is made directly through a financial institution. There are special controls, it is established that financial intermediaries charge a commission for security and services provided. True, it is possible to make direct payments in cash without paying any commissions, but this is very inconvenient

for large transactions and settlements with remote partners. In addition, there is a problem of counterfeiting of cash, i.e. determining its authenticity.

As the twenty-first century is the age of information technology, with the rapid development of computer and Internet technology, several efforts have been made to improve and make payments increasingly convenient. Inter-country payments over the Internet, which are traditional payment instruments in national currencies, have faced several unique challenges. These are:

Paying the high fees set by banks when making a payment;

that full details of the parties (address, account number, F.I.Sh, etc.) must be known to a third party, except for those making reciprocal transactions;

that payments are centrally managed by an organization.

In some cases, the merchant will also need to request additional information to be sure, due to the possibility of canceling an order after payment and so on.

The first cryptocurrency, bitcoin, was created as a system that could solve all of the above disadvantages. It was created on January 3, 2009 by one or more people who called themselves Satoshi Nakamoto, but the first article about its working system and functions was written by Satoshi Nakamoto in the book "Bitcoin: A Peer Electronic Cash System") [1] published on October 31, 2008. Since all attempts to identify the person or group behind the name Satoshi Nakamoto have failed, the true creator of this great bitcoin is still unknown [2].

Bitcoin cryptocurrency is a payment system currency based on a cryptographic coding system rather than trust, which allows payments to be made directly between participants without any intermediaries (banks or other financial instruments). At the same time, each of the participants can issue these coins using a system in which the authenticity of the coins is confirmed based on complex mathematical algorithms, without the involvement of regulatory authorities.

Features of Bitcoin:

decentralized system - each participant has equal rights and opportunities;

full transparency of settlements - each participant can see all transactions;

lack of control - no government or organization can control transactions within the system;

confidentiality - the system does not ask for confirmation of information about participants;

limited coin issue - a total of 21,000,000 BTC (bitcoin coin) will be issued;

the balance is not based on two-way recording, and all transactions are visible to all participants in chronological order;

is not subject to inflation, its value changes according to supply and demand;

there is no legal basis.

Blockchain technology also exists to centralize information about transactions made through Bitcoin and similar cryptocurrencies, which allows cryptocurrencies to be used in civil law relations as a means of payment. The Uzbek legislation has not yet fully developed an understanding of what blockchain is. At the same time, the active use of blockchain in various spheres creates the need to define it from a legal point of view. There are several approaches to defining the legal nature of blockchain. Thus, many argue that it is this technology that will lead to the emergence of many cryptocurrencies [3]; distributed technology, that is, a single space technology without an intermediary [4], another author points out. A.I. Savelyev

mentions that it is a technology that is a "decentralized registry of information about completed transactions based on cryptographic algorithms that protect against counterfeiting" [5].

The main features of blockchain, according to Frankfurt researchers:

- decentralization: data is not stored on one central server, but on the computers of all parties: the blockchain is based on a peer-to-peer (P2P) system, thanks to which all participants in the chain have equal rights and in direct contact with each other without intermediaries can;

- universality: transactions need not be financial in nature. Any information can be transmitted through the blockchain, including textual information, except for financial transactions, which, once recorded, cannot be changed in the future.

Transactions require a digital wallet consisting of a public key and a private key. The private key cannot be shared with anyone (similar to a PIN or other passwords), thereby authorizing all transactions and authenticating the transaction. A public key is a cipher that transmits information. Both private and public keys are based on cryptography that makes the transaction confidential [6].

But there is another aspect of the case related to the legal regulation of cryptoassets. This problem has become one of the pressing issues of the last decade. Because there is no separate governing body or organization that would control transactions made with cryptocurrencies (Bitcoins). Even the details of the parties making the transaction are hidden. In the last decade, the concept of "terrorist economics" has become increasingly popular among professional economists. Often this term is synonymous with the concept of "economic terrorism" [7], which is the financing of terrorist activities by economic means as a special type of terrorist activity [8]. Indeed, there is no doubt that cryptocurrencies are becoming a unique tool for financing terrorism by illegal means. Because there is no way to determine who sends a transaction to whom.

Governments always react to rapidly developing modern financial technologies. They work to minimize risks, optimize trade, banking and other operations and, accordingly, take the lead in regulating the resulting social relations, influencing to a certain extent the existing legal relations. It cannot be said that such an effect has only positive sides: even if a smart contract is used in the conclusion of a transaction, there may be cases of causing harm to one or another person. The task of the legislator in this case is to form a legal regulation of general and private aspects of the use of digital technologies in everyday life, which should keep pace with rapid scientific and technological progress in order to avoid negative consequences for the economy. as well as the state, the whole society, as well as individuals should achieve the goal of protecting their interests.

A characteristic feature of modern digital technologies is the possibility of their use on a global scale, in this regard, the issue of their legal regulation can be considered an international issue, and in this situation it is useful to study the experience of different countries. Despite the fact that the technologies in question are not fully regulated anywhere, it can be said that Germany and Italy have made the greatest progress in this direction. Analysis of the legislation of these countries in this area allows us to draw conclusions about the effectiveness of legal regulation of relations related to the use of digital technologies in Western Europe, as well as the possibility of extracting a model from legal norms and experience.

Germany is one of the model countries in terms of legal regulation of cryptocurrencies and blockchain technologies. Germany was one of the first in Europe to pay attention to the development of cryptocurrency. In 2013, the Federal Financial Supervisory Authority of the Federal Republic of Germany (BaFin) issued the following regulation, which recognized cryptocurrency (including bitcoin) as a unit of account as well as a means of payment under the German Credit Institutions Act [9] . Since then, the means of payment used for cryptocurrencies have been regulated by law in Germany.

However, in the legal regulation of cryptoassets, the question of their legal nature and essence remained open. According to BaFin's position on this issue, cryptocurrencies should not be referred to electronic money. According to the German Payment System Supervision Act, electronic money is an electronic value that has monetary value and is issued by issuers for the purpose of payment. It should be noted that an important feature of digital money is the presence of a central issuer. Any cryptocurrencies, including Bitcoin, do not meet the latter criterion and therefore cannot be considered e-money under German law [10].

In February 2018, BaFin published the ICO Guidelines, according to which tokens or cryptocurrencies issued as part of an ICO may be classified as securities (further regulated by the German Securities Act [11]) or investments (and regulated by the "German Investment Money Act" [12]).

This rule is also followed by the Bundesbank, as cryptocurrencies cannot be classified as electronic money, they do not function as currency and are not part of the German monetary system. German Central Bank President Enns Weidmann stated that bitcoin has nothing to do with digital currency, as any means of payment must have a sign of price stability. In January 2018, the German Federal Bank even warned private investors about the risks of investing in digital currency. However, according to the regulator, banning the circulation of cryptocurrency is not a necessary measure [13].

In addition, in February 2018, the German federal government issued a warning regarding the problem of illegal cryptocurrency trading. The government states that cryptocurrency is not a legal tender, but only a means of currency exchange in certain commercial transactions. The adoption of this document was prompted by numerous complaints from consumers of services in the cryptocurrency market. In particular, in February 2018, the Federal State Agency for Consumer Protection of the State of Hesse launched an investigation and monitoring of 20 professional participants in the cryptocurrency market based on such allegations [14].

An important element of the legal regulation of any financial market is the licensing institution. In Germany, persons providing services on the cryptocurrency market (platforms, etc.) and conducting transactions with cryptocurrencies on a permanent and commercial basis (carrying out speculative activities) must obtain the appropriate BaFin license [14].

Thus, the state authorities regulating the financial sector of the German economy have already formed certain theoretical knowledge and attitude towards cryptocurrency.

In 2013, Germany took a decisive step towards the recognition of cryptoassets, but subsequent studies showed many risks and drawbacks in this area, which led to a significant decrease in confidence in cryptocurrency. Today, the German government is skeptical of cryptocurrency, considering it a potential threat to the economy and therefore in need of legal regulation. At the same time, Joachim Wurmeling, a member of the Board of Directors of the

Bundesbank, believes that cryptocurrency can be effectively regulated only at the international level, as domestic opportunities in this area are very limited [15].

With blockchain technology in mind, German scholars are scrutinizing the concept of smart contracts. A smart contract is an electronic contract that ensures the realization of rights and obligations through the automatic execution of digital transactions [16]. Contractor trust issues can be solved with it and it is initially agreed upon since changes in a smart contract cannot be erased [17].

One of the important problems currently being addressed by German legal doctrine is the issue of attributing smart contracts to the legal construction of a contract within the framework of the German Civil Code. Since the concept of "smart contract" is not regulated neither in the GFC nor in other normative documents, the legal nature of this phenomenon also remains unclear. The conclusion of a contract is a free expression of the will of the parties, but since program code cannot express the will of the parties, since a human being cannot read it, a smart contract is not a contract in the legal sense, but merely its expression in computer language. Therefore, it is still necessary to create a permanent contract, and the smart contract is used as a means to do so [18].

There is another point of view on the legal nature of a smart contract, according to which the program code used is the language of the contract text (along with foreign languages). Under this concept, the freedom of expression of the parties' will is simply expressed in another language, especially since the SFC guarantees the freedom to choose the language of the text of agreements. At the same time, it should be remembered that when a legal dispute arises, it is necessary to involve an expert to consider the case [19].

The main problem of smart contracts remains control over compliance with civil law principles and standards when writing the code. Currently there is no way to control the legality of these rules, now the question arises: in what cases violations of the law are allowed when using a smart contract? As mentioned above, the terms of a smart contract cannot be changed. In addition, a smart contract must be technically correct: it must not contain errors that could disrupt or invalidate its operation. Both of these aspects need to be taken into account when creating a smart contract: it must meet both legal and technical requirements, but this is still difficult to manage.

Based on the above, it can be concluded that German doctrine pays great attention to the development of digital technologies and tries to fill the main gaps related to their application, in particular, it tries to solve problems related to the concept and characteristics and legal nature of blockchain. At the same time, the following should be noted:

1. Cryptocurrency should be subject not only to domestic control, but also to international control. Germany's experience in regulating crypto relations can serve as a model for the legal systems of other countries.

2. In Germany, more stringent requirements are imposed on professional participants of the cryptocurrency market in connection with obtaining a license.

3. In Germany, there is no unified approach on a legal or doctrinal level regarding the consideration of a smart contract as an alternative to a written contract.

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