

The use of blockchain technology in settlements for foreign trade payments

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Abstract. The article aims to analyze the possibilities of using blockchain in settlements for foreign trade transactions, identifies the prospects for using blockchain technologies. The author concluded that it is necessary to solve the problems that hinder the development and use of blockchain technologies in the field under study.

Keywords: blockchain, blockchain technologies, foreign trade activity, foreign trade payments, smart contract.

Introduction

One of the tendencies of the modern economy is the globalization of business relations, which lies in the increase in foreign economic transactions in countries with developed economies.

The use of international contracts allows entrepreneurs to regulate important economic issues: international transportation, sale and purchase, supplies, etc. [6, p. 136]. In order to simplify the process of document exchange and the conclusion of a treaty, complicated by various factors (disputes of the parties, geographical remoteness of counterparties), the means created with the help of high technology are urgently needed. Modern information technologies change the idea of traditional financial instruments, simplify and optimize the work of markets, contribute to the development of the legal environment of their functioning [3, p. 107].

In this regard, according to a number of researchers, the most promising technology is blockchain, a technological protocol that allows data to be exchanged directly between interested parties within the network without any help of intermediaries. The technology is an innovative way of storing data, based on software codes and digital records, and is a continuous chain of blocks built according to strict rules [2].

As noted by experts, the impact of removing barriers to cross-border trade through the introduction of blockchain-based solutions will have increased the revenues of the global trade industry by \$ 3 trillion by 2030 [1].

Among the benefits of using blockchain technology, researchers primarily mention the following ones:

- 1) the impossibility of interfering into the chain from the outside and arbitrarily changing it by its participants (special cryptographic means contribute to the integrity of the chain of information blocks constructed by the subjects) [2];
- 2) acceleration of global exports, which helps to reduce barriers that limit the cross-border movement of goods and increase mutual trust among participants in foreign trade activity [10, p. 191].

Futhermore, the global economic crisis has led to a loss of trust in the regulated financial system, and blockchain is the best alternative to the current system, which demonstrates its ineffectiveness.

Purpose of the study

It aims to analyze the possibilities of using blockchain in settlements for foreign trade transactions; determine the prospects for the use of blockchain technologies.

Materials and methods

The author researches the use of blockchain-based platforms that allow settlements on foreign trade transactions. The methodological basis of the work consists of methods of scientific and logical analysis.

Results and discussion

As a form of distributed ledger technology, blockchain offers great opportunities to improve the reliability and security of trade transactions. Blockchain is a decentralized distributed ledger, in which information about transactions is stored in a permanent and almost unchanged form using cryptographic methods [9].

The main differences between the traditional database of transactions and the blockchain are: the absence of a single holder of information, an administrator; transparency of the database (registry) and accessibility to all network participants; higher data protection against hacker attacks [10].

The main direction of using blockchain in settlements for foreign trade transactions is to increase the speed of payments.

The introduction of new means of digitalization of business creates the basis for accelerating payments in international trade. For example, in 2016, a consortium of banks involving the government of Singapore used blockchain technology to create a variant of the letter of credit through which banks guarantee payments to buyers.

The digitalization of financial services can reduce the cost of movement of funds between transaction entities located in different countries.

There are several options for using blockchain in order to optimize the process of cross-border financial transactions.:

1) the use of cryptocurrency payments (BitPesa in Kenya, Bitso in Mexico, OkCoin in China, OkLink/Coinsense in India, etc.);

2) the use of blockchain in order to provide users with low-cost fiat money transfer services [8].

The advantage of using blockchain technology can be seen in the ability to transfer money in a very short period of time. For example, the blockchain-based Ripple platform allows money to be transferred within seconds.

Large companies such as Visa, MasterCard and J.P. Morgan use blockchain technology because financial institutions save significant amounts of money with the help of blockchain.

Smart contracts are also actively used in international trade, the use of which has been developed since 2015. A smart contract is a computer protocol for the automated execution of contractual obligations. The smart contract automatically (without the participation of a third party) executes the transaction and controls its execution in accordance with the terms of the contract, which are also written in the form of a code [2].

An important advantage of using smart contracts, among others, is seen in the expansion of the possibility of monetary settlements of the parties, simplification of registration and implementation of a cross-border letter of credit (participation of smart contracts in the payment procedure for the delivery).

Although smart contracts significantly optimize international trade transactions, they have a restriction in the fact that these protocols can only work with data represented in the digital ecosystem, which means that the application of smart contracts requires the digitization of all information used in the transaction cycle.

At present, blockchain capabilities are not used due to the conservative behavior of individual foreign exchange market participants. Optimization of the system of foreign trade transactions will make them more transparent and improve the mechanism of mutual settlements [7].

Conclusion

As a result of the study of the use of blockchain in the settlement of foreign trade transactions, we can conclude about the benefits of using such technology. First of all, blockchain technology helps to reduce paperwork at all stages of the process. Secondly, existing forms of settlement are being modernized, and the trade finance procedure is being simplified. Primarily, the speed of transactions when using such a traditional instrument of payment as a letter of credit

increases significantly. The time for a letter of credit transaction is considerably reduced to 4 hours, while previously it was up to 10 days.

Researchers agree that there are problems on the way blockchain technology is currently being developed and used, and they have to be solved. Thus, exploring technical opportunities to expand the use of blockchain technology requires a significant investment from banks and high-tech companies.

An equally important problem is the lack of internationally agreed rules for the control of the enforcement of blockchain-enabled contracts. In addition, the legal status of cryptocurrencies and the identification of opportunities and limitations of its use both at the international level and within national jurisdictions requires legislative consolidation [5].

The prospects for using blockchain in settlements for foreign trade transactions are complicated by the difficulty of building "electronic channels" between the competent authorities of the exporting country and the importing country, via which the documentary turnover will be carried out. The solution to this problem could be the use of two types of technologies by the controlling authorities of the contracting States: 1) a single blockchain; 2) different blockchains but based on the same technological platform. Due to technical difficulties, the most optimal is to build "electronic bridges" according to the scheme, involving the use by government services of the countries participating in the foreign trade transaction of their own blockchains and even a mode in which the supervisory authorities of one of the states will be off-chain. [10, c. p. 195].

Therefore, for blockchain technology to function effectively in national and international trade practices, particularly in the area of foreign trade transaction settlements, it is necessary to solve existing problems and create an optimal ecosystem for blockchain.

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