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THE THEORETICAL BASIS OF DIGITAL PAYMENT SYSTEMS AND THEIR OPERATION

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Abstract: This article deals with the key issues that hinder the development of digital payment systems market in the Republic of Uzbekistan in the current economic conditions of information technology implementation and digitalization of the economy in the banking sector. Details of the main payment systems, their development and prevalence in the countries have been identified. The actual directions of development of systems and services of electronic payments with the use of advanced IT-technologies are given.

Keywords: payment systems, digital economy, electronic money, cashless payments, bank, plastic cards, bank cards.

Introduction. The active development of the digital economy is leading to virtualization, an accelerated rhythm of life and a radical transformation of social reality. As the global economy emerges, the national payment system should be integrated with the payment systems of other countries and participate in global financial markets. To improve the quality of the national payment system, it is objectively necessary to effectively integrate it, especially through the use of new information technologies related to the digitization of payment transactions and financial transactions. For transactions in goods or services, it is essential that the buyer pays the buyer "money". In some cases, this is banknotes and coins and in others it is deposit money. This process is usually referred to as 'payment'. If the payment is successful, a repayment will take place between the buyer and the seller. This repayment measure is called a 'settlement'. A payment system is a procedure that allows payments or transfers to be made between buyers and sellers or directly between banks. As defined by the Bank for International Settlements (BIZ), a payment system comprises a number of instruments, banking procedures and, generally, money transfer systems between banks that enable the circulation of money [17].

An overview of the literature. Payment system as a universal form in practice refers to private forms of payment relationships such as relationships between companies, organisations and states, banks, private individuals as well as relationships between individual regions and states.

The concept of "payment system" was introduced by bankers in the 2nd half of the 1990s, replacing the previously used term "cashless payment system". The emergence and spread of the term "payment system" is linked to the penetration of Western payment systems, especially Visa and MasterCard card systems and SWIFT interbank communication systems, into the country [1].

There are several definitions of the payment system in modern economic literature. In order to formulate it as completely and accurately as possible, we propose a few.

Foreign scholars in their works most often consider the concept of "payment system" as a set of established rules, processes and systems of technical infrastructure that ensure the transfer of funds from one entity to another [3].

In the area of payment systems, there are a number of key concepts for central banks and the practical application of their policy decisions, such as daily banking liquidity, risk management and control of payment systems.

Under the conditions of modernisation of the economy, the acquisition of goods and services, including financial leverage, is carried out through payment by free financial resources and as deposits in loan accounts. For enterprises operating both in the real segment and in the financial market, the proper organisation of payment transactions has implications for improving their efficiency and thus for the country's economy as a whole [4].

According to A. S. Obaeva, the settlement system within the framework of laws, rules and regulations, rules of procedure, obligations and rights of participants, the implementation of a financial mechanism for the transfer of money from one person to another [5].

A. Lipis, T. Marshall, and J. Linker were the first to define the term "payment system", viewing a payment system as "a set of appropriate software, communication links, computer technology, working organizations, economic and legislative support" and as "a set of rules, institutions and technical tools for the transfer of funds" [6].

The shortcoming of these definitions can be seen as the deficiency in the organisational side of the process of interaction between participants in the payment system. Moreover, the principles of the relationship between the participants of the settlement system are not described.

One of the earliest definitions of the terminology "payment system" belongs to O.I. Lavrushin: "The payment system is a set of regulated components facilitating payments to meet obligations that arise in the process of economic activity" [7].

V.M. Usoskin characterises the payment system as follows: "it is a multitude of means and methods used to transfer funds, to make settlements and to settle debts of participants in economic relations" [8].

Obaeva A.S. defines the payment system as one of the most important elements of the monetary and credit and financial system of the country, including a set of various forms of organizational environment and interaction mechanisms in the system of financial relations, carrying out the transfer of funds from the payer to the recipient [9].

Summers D.B. (Fed specialist) notes that the payment system is an imperative binding part that integrates a number of subsystems, rules, regulations, arrangements, policies, infrastructures, technological mechanisms for money transfer that are part and parcel of the monetary policy system [10].

Other foreign experts view the issue from a different perspective. Paul van den Berg simultaneously presents a payment system as well as a set of commitments that are undertaken by economic actors and carried out in the process of their acquisition of tangible and financial and other assets and values [11].

The approach of E.N. Malysheva developed from the elements of architecture: "The payment system is an organized interconnection of a set of structures responsible for settlements and repayment of debts of economic entities on the use of tangible, intangible and monetary resources, as well as the legislation that regulates these structures and defines the binding legal relations between organizations and clients" [12].

First of all, this distinction fails to distinguish between the categories of actions that enable digital interactions between transactors.

Research Methodology. The research of this topic involved a systematic literature analysis in the study of the scientific and theoretical foundations of the payment system of commercial banks. The scientific conclusions of the studies conducted by scientists in this area were also studied and independent approaches were formed. Materials of official

web-sites of commercial banks and statistical data of the Central Bank of the Republic of Uzbekistan were used in the analysis.

Research results. The European Central Bank refers to the payment system in terms of basic conditions, highlighting as the basis for a formal agreement, the ECB further details between whom this agreement will be concluded: the agreement must involve more than three parties, this does not include the service infrastructure: settlement banks, counterparty central banks, clearing houses or other indirect necessary participants. The main requirement is that they must operate within the limits of universal remittance principles and regulations [13].

This definition is the most general and does not include references to payment instruments which define the nature of a payment system. E.G. Khomenko defines a payment system as an association of legal entities, managed by payment system operators, which, based on certain contractual relations and payment system rules, execute remittances [14].

The payment system is part of the monetary system of any state, which proves its relationship and dependence on a variety of phenomena that occur in the economy. For example, the indicator of the speed of cash flow in turnover is one of the most important indicators, with the help of which it is possible to determine the current situation in the entire national economy and directly influence the rate of inflation. In this context, it is necessary to take into account the impact of inflationary processes and the situation of payment systems in the state. According to a number of studies, the payment system comprises more than 90% of the means of payment in the entire economy, including all types of non-cash payments and part of the cash turnover in which money serves as a means of payment. Accordingly, on the one hand, the flow of money directly affects the payment system, and on the other hand, the level of development of the monetary system is taken into account when determining the volume of money. Thus, the indicator of the speed of movement of money in circulation is inversely proportional to the amount of money needed to circulate. For example, if the processing time is calculated in weeks, the amount of money needed to supply the entire economy increases significantly [2].

It must be emphasised that payment systems promote the flow of funds and maintain the stability of the economic situation. An effective payment system makes it possible to increase the stability of the national financial system, ensure the effective use of funds and increase the liquidity of financial markets. Change in the payments industry has been particularly rapid, partly due to the introduction of competitive products that have enabled financial service providers to quickly deliver financial gains to large numbers of potential consumers. Banks are working closely with other online services and systems to gain more business opportunities. These include, for example, partnerships between financial institutions and retailers, integration of financial services in the range of services offered by mobile operators, cooperation with new companies (e.g., remote payment of fuel at petrol stations), etc.

Attention should also be paid to the definition introduced by M. P. Berezina: "The payment system is a complex of organised and regulated elements ensuring the fulfilment of obligations arising in the process of economic activity" [14].

The payment system can be defined in two ways. In accordance with the first incarnation, the payment system is a collection of means and methods for making transfers of money directly between the agents of economic movement. In the second option, the payment

system is used as an economic relationship that contains a set of all the components that are obligatory for the relationship, which are combined into a whole [15].

This definition, like the other two preceding ones, envisages limiting the possibilities of payment systems exclusively through remittance transactions. Part of the market for bank payment services is involved in the process of organizing payment acceptance, which was not taken into account by the authors of the definition.

The payment system is a collection of relations enabling payments through interaction between the payment system operator, payment system participants and payment systems through the use of procedural means, infrastructure objects and the applicable payment system rules by the payment system operator. From the perspective of the law under consideration, payments between the participants of the payment system - the payers - are carried out through their correspondent accounts opened in the payment system's settlement centre. Legal framework for digital money for the emergence of participants who provide new, innovative services on the market of payment services. Among them, projects implemented in the industry digital cash payment systems Oson, CLICK, E-CARD, Woopay and Alifmobi successfully entered the market of electronic payment providers in our country, the audit and Central Bank approved for operation in the prescribed manner by inclusion in the register of systems of digital money [16].

The formation of payment systems is due to the need to reduce costs and improve the payment infrastructure of the state. The goal of ensuring the functioning of the payment system can therefore be defined as improving the competitiveness of the national payment system.

The improvement of the national payment system to fully meet the growing demands of economic entities to process remittances quickly and reliably is an essential factor for the successful development of the digital economy and is one of the most important elements of the financial structure of the market.

National payment system is one of the main financial subsystems of the state economic systems, which are the payment business units.

In this context, the National Payment System (NPS) is not a nationwide payment system, but it combines all payment components of the state's financial system, including all state and private payment systems.

Using the NPS, the organization of the relationship between ATM cash and credit threads that make up payment transactions.

The selection of qualifying features allows NPSs to be viewed as a collection of institutional and infrastructural elements that collectively enable the settlement and regulation of debt obligations between economic agents.

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