



PAYMENT SYSTEMS AND THEIR DIRECTIONS OF ACTIVITY IN UZBEKISTAN

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Abstract: In the conditions of rapid progress of modern technologies and financial instruments of payments, each country has the necessity to develop national payment systems. Since, payment systems are responsible for the uninterrupted operation of financial transfers, as well as for the efficient operation of the country's payment turnover. This article discusses the functioning of the payment system of Uzbekistan, the key directions of its development.

Keywords: payment systems, interbank settlement systems, cards, clearing, faster payments.

Introduction. The national payment system of Uzbekistan has been formed since the 1990s. At the first stage of the formation of the national payment system and Bank automation, when it was necessary to ensure high-quality and fast payments between economic entities in the shortest possible time, this was the best option, in which the capabilities of the created Bank telecommunications network and hardware and software were used to the maximum. At present, the level of development of automated banking systems, software and hardware, and the experience of staff has risen to a qualitatively new level, and the time has come when banks should pay more attention to management issues, maintaining profitability and operating efficiency in order to develop dynamically in a competitive environment.

An important element of the financial and banking system in every country these are payment systems that allow non-cash payments money transfers between different businesses subjects. The main advantage of payment systems is their speed. For example, Bank transfers are executed during the banking day, in special cases, transactions take up to 3-5 days. Modern technologies allow us to perform instant transactions, whether it is paying for goods or services, booking tickets, or simply transferring money from one account to another. In fact, payment systems are an ordered set of rules, modern communication solutions and operations that allow for safe and fast financial settlements and transfers between individual participants. It does not matter who acts in their role: individuals, individual entrepreneurs, small or large businesses, government agencies.

The electronic payment system is implemented in various e-Commerce categories, such as Business-to-Business (B2B), Business-to-Consumer (B2C), Consumer-to-Business (C2B), and Consumer-to-Consumer (C2C). B2B transactions account for about 95% of e-Commerce transactions, while others account for about 5% (Turban et al., 2004). P2P, which belongs to the C2C category of transactions, is relatively small due to its strict practicality.

Systems that can support minor value transactions must find a compromise between transaction convenience (the bulk of the cost in an extremely cheap transaction) and transaction security. On the other hand, high-value transactions will require highly secure protocols that are expensive to implement: be online and/or carry traceability information. And average cost operations can be performed across almost the entire system.

Due to the growing complexity of e-Commerce operations, various electronic payment systems have emerged in the past few years. Grouping can be made based on what information is transmitted online.

Murty (2002) explained six types of electronic payment systems: (1) PC banking (2) credit cards (3) electronic checks (i-cheques) (4) micropayment (5) smart cards and (6) electronic cash.

Calacota and Winston (1996) identified three types of electronic payment systems: (1) digital token-based electronic payment systems, (2) smart card-based electronic payment systems, and (3) credit-based electronic payment systems. Dennis (2001) classified electronic payment systems into two categories: (1) electronic cash and (2) electronic debit and credit card systems.

Anderson (1998) divided electronic payment systems into four main types: an online credit card payment system; an electronic check system; an e-cash system; and an electronic payment system based on smart cards (Sumanjeet, 2009).

From the point of view of consumers of electronic payment services, it is logical to distinguish two levels of electronic payment systems, depending on the types of terminals (terminal devices) of the system used in them. The first level should include EPAS, in which the terminal devices belong to banks and non-financial organizations that carry out the payment business. The second level, a higher level, is Internet payments or mobile payments. Terminal devices, the first level, are such types of electronic terminals as payment terminals designed for cashless transfer of money from plastic cards and installed in retail and service enterprises; ATMs designed to receive cash on a plastic card; self-service information kiosks (payment and reference terminals). In this case, plastic cards are

used as electronic payment instruments (non-cash transaction instruments). Such EPAS are most common for users of electronic payments (Jurabaev, 2008).

Depending on who is the owner and operator of the payment system, we can divide payment systems into public and private payment systems.

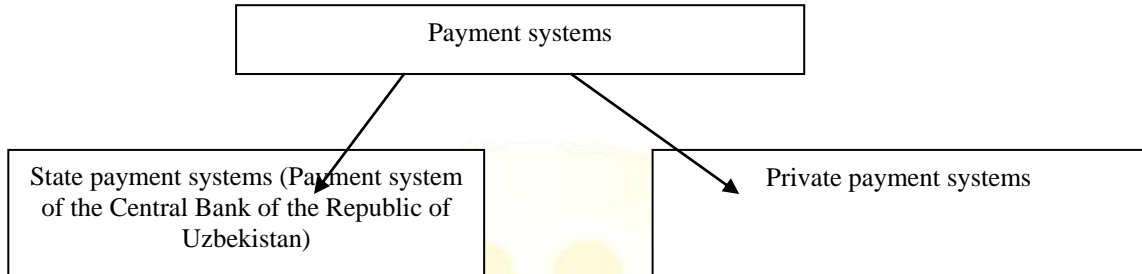


Figure 1. Types of payment systems by form of ownership

(Криворученко ва Лопатин, 2013).

Discussion. The main payment system in Uzbekistan through which payments are made the majority of money transfers, both in terms of their quantity and volume the payment system of the Central Bank of Uzbekistan is used for transferring funds.

Currently, the Payment system of the Central Bank of Uzbekistan looks like this:

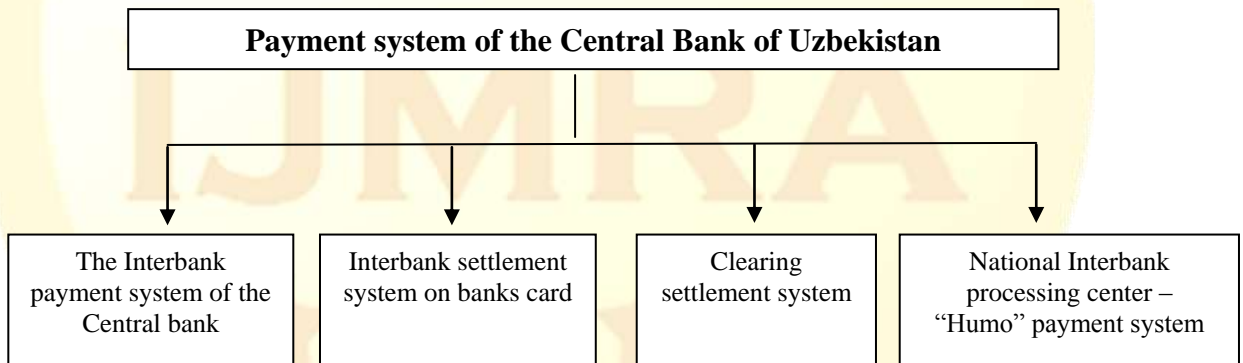


Figure2. Structure of the Payment system of the Central Bank of Uzbekistan* .

The Interbank Payment System is designed to conduct electronic payments in national currency (sum) among banks through their correspondent accounts opened at the Central Bank of the Republic of Uzbekistan. The Interbank Payment System is the personal property of the Central Bank of the Republic of Uzbekistan.

Participants of the interbank payment system are the Main Informatization center and the Central Bank's settlement Center. Users of the interbank payment system are banks as well as financial institutions that have accounts in the Central Bank's settlement Center.

The main informatization center of the Central Bank (hereinafter referred to as the MIC) is a center that provides technical, software and operational support for the interbank

* Prepared by the author according to the site information <https://cbu.uz/ru/>

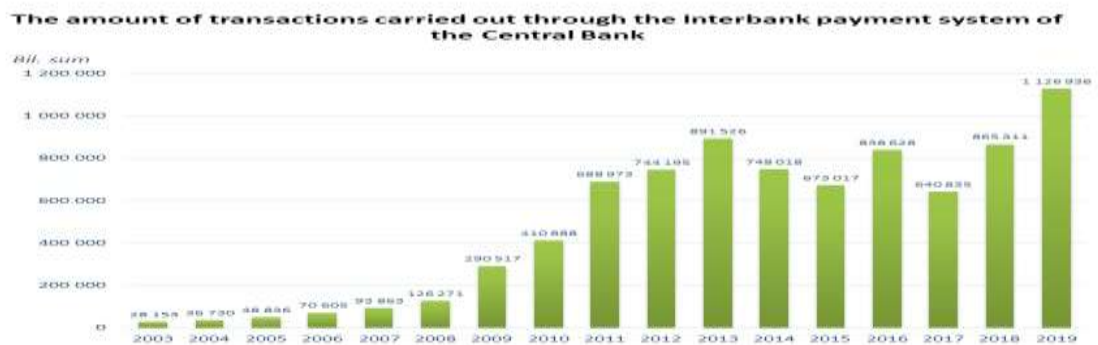
payment system in accordance with current legislation, as well as agreements between the MIC and banks. The Central Bank settlement center (hereinafter referred to as the CB SC) is a Department of the accounting, reporting and settlement Department of the Central Bank of the Republic of Uzbekistan in Tashkent, whose functions include opening and servicing correspondent accounts of commercial banks' head offices and ensuring uninterrupted electronic payments between them.



Figure 3. The flow of electronic payment documents via Settlement Center of the CBU (<https://cbu.uz/ru/payment-systems/interbank/>).

The rights and obligations of participants and users of the interbank payment system are regulated by mutual agreements between the user banks and the CB SC for opening and servicing Bank accounts, and with the MIC for conducting electronic payments through the interbank payment system.

Electronic payments from banks are performed only within the balance of funds on the account, unless otherwise specified in the agreement between the Central Bank and the Bank. From 9-00 to 17-00 hours - the time of transmission-reception-control of electronic payment documents for interbank settlements.



- Figure 4. The amount of transactions carried out through the interbank payment system of the Central Bank, bil.sum (<https://uznews.uz/ru/article/19131>).**

Transactions that passed through interbank payment systems of Central bank increase over the years, as this number in 2019 is 1 126 936 billion sum against 865 311 billion sum in 2018 (figure4).

Uzbekistan is now quite widely developed system of non-cash payments based on plastic cards. It has an extensive network of information and reference terminals of mass self-service, allowing the clock to provide services cardholders, organized after-sales service for repair of terminals, ATMs and kiosks in all regions.

In accordance with the Decree of the President of the Republic of Uzbekistan dated June 27, 2013 PP–1989 "On measures for further development of the National information and communication system of the Republic of Uzbekistan", the Central Bank's project "Clearing system for payment of retail payments in real time with further integration with the billing systems of service providers" was developed and implemented in 2014. There is a regular increase in the volume of payments through this payment system and an expansion of the range of services provided.

The procedure of operation of this system is regulated by the "Regulation on the clearing system of settlements of the Central Bank" (reg. no. 2570, 04.04.2014). The banking infrastructure provides opportunities for real-time payment of municipal services, taxes, customs and other budget payments, state duties, fees, notary and civil registry services, fines of the Ministry of internal Affairs, provided through the Agency of state services, in the field of cadastre, cars " UzAuto Motors", mobile communications, Internet and other services through the Clearing system of calculations of the Central Bank by identifying the payer using the billing systems of service providers.

The clearing system of settlements of the Central Bank performs the function of a settlement Bank for conducting interbank settlements based on the results of clearing operations using Bank cards of the retail payment systems operating in the Republic (Uzcard and Humo). The number of organizations and departments that have shown interest in performing online payments through the Central Bank's Clearing settlement system is constantly growing. Today it is used for payments for more than 30 types of services.

The National Interbank Processing Center – "HUMO" payment system provides for each client an individual comprehensive solution for organizing and supporting authorizations and transaction clearing for clients of the partner bank. HumoCard is a Humo payment system based on bank payment cards to settle transactions both in

Uzbekistan and abroad. The Humo system is an integral part of the payment system of Uzbekistan.

Humo is a complex of the settlement participants, payment instruments and settlement funds, software and hardware, as well as the flow of funds within the country and the interaction with foreign payment systems. The Clearing Centre of the Central Bank of the Republic of Uzbekistan performs the function of the Bank, which carries out settlements in national currency within the HumoCard payment system. The Humo payment system represented by its operator has established relations with international payment systems (Visa, MasterCard, UnionPay International) to ensure the conduct of operations in foreign currency by Humo bank cards abroad and by the cards of foreign banks of the above systems in Uzbekistan. The Bank membership in the HumoCard payment system is voluntary.

Along with the Payment system of the Central Bank of Uzbekistan, various private payment systems have started to develop actively. Private payment systems were most active in e-Commerce and other areas of activity. Creating and implementing an e-money system is a new system process that allows banks to provide customers with another tool for managing their funds.

The most popular e-wallets in Uzbekistan are «Yandex.Dengi», «WebMoney» и «Qivi Wallet» and others.

It should be emphasized that Central bank monitors payment system operators and payment service providers for compliance with the information security rules. According to the Law "On payments and payment systems" in the country, payment systems are divided into significant payment systems and other payment systems. The Central Bank of the Republic of Uzbekistan classifies a payment system as a significant payment system if its uninterrupted operation contributes to the stable functioning of the payment services market of the Republic of Uzbekistan, and stops (failures) in its operation may lead to risks in the payment services market of the Republic of Uzbekistan.

A payment system is considered significant if it occupies a share of the payment services market in excess of the value set by the Central Bank for this market, and (or) if payments are made through the payment system on the territory of the Republic of Uzbekistan during the year in the amount of not less than the indicators set by the Central Bank. Remaining payment systems are referred to other payment systems.

The Central Bank should monitor the stability of not only public but also private payment systems. Moreover, law assigns this function to it. One of the main goals of the

Central Bank is to ensure the stability of payment systems. According to the Law, a payment system is a set of relations that ensure the implementation of payments through the interaction of the payment system operator, payment system participants and (or) payment organizations through the application of procedures, infrastructure and rules of the payment system established by the payment system operator. Participants in the payment system are banks that perform payments and have concluded an agreement with the payment system operator on participation in the payment system.

E-money operators are organizations that have the right to perform money transfers that make e-money transfers without opening Bank accounts, i.e. e-money transfers. The growing needs of the economy in making payments, the increase in the cost of cash flows passing through many payment systems, require the development of the payment technology market, the constant search for innovative solutions. Thanks to this, fast payments have started to develop in Uzbekistan. According to the Committee on Payments and Market Infrastructures of the Bank of International Settlements, fast payments are “payments in which the transmission of the payment message and the availability of final funds to the payee occur in real time or near-real time, and on as near to a 24-hour and 7-day basis as possible” (https://cbu.uz/ru/press_center/reports/134774).

In February 2020, the Central Bank of the Republic of Uzbekistan launched a pilot launch of the "Anor" instant payment system for interbank money transfers between legal entities and individual entrepreneurs. The system is based on web services technology using an electronic digital signature. Funds received to the recipient's account via this payment system become available at the moment of their receipt. Testing of the system, which involves a number of commercial banks, including "Hamkorbank", "Trustbank", "Ipotekabank" and "Turkistonbank", was initiated by the Central Bank at the end of 2019. Pilot operation was launched on February 18, 2020 (Implementation of faster payments, 2020).

According to the Central Bank, mobile remote banking systems are popular among bank customers in Uzbekistan – about 9.5 million individuals use this service (Anderson, 1998).

The Central Bank has developed and is currently testing a system for using QR codes based on a Clearing settlement system. Several commercial banks participate in testing, and mobile applications of the corresponding commercial banks are used.

Work is underway to organize remote and biometric identification of individuals. Thanks to this mechanism, it will become much more convenient for the client to receive services regardless of the time of day, location of the client or the Bank's branch network.

Conclusions

Following these facts, we can see several priority areas for the development of the payment system in our country.

The first and extremely important direction is the further development of the Payment system of the Central Bank of Uzbekistan, which is the basis for building the country's payment system as a whole.

In particular, it is necessary to further introduce and improve the system of faster electronic payments, which will allow not only reduce the settlement time between different business entities and this will speed up the economic processes in our country, but also get it closer the system of interbank payments of Uzbekistan to international standards, thus increasing its competitiveness in the world market. For this some of the key considerations in successful implementation of faster payments systems are:

1. Open banking combined with real-time payments.
2. Bank-wide modernization programs of legacy payments platforms.
3. Real-time payments and security.
4. Expanding the use case to payment adjacency will help bolster the business case for faster payments.

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