

ANALYSIS OF PECULIARITIES OF NATIONAL PAYMENT SYSTEMS FUNCTIONING AND CURRENT PAYMENT VOLUMES

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Abstract

Purpose of the study: In current conditions of globalization, the role and importance of non-cash payment systems have changed dramatically. The authors of the article are aiming to analyze and promote new banking products and describe the way of development of modern banking business trends in the field of electronic banking services in their article.

Methodology: In the course of this study, methods of comparative and statistical analysis, empirical, interviewing, observation and economic, and mathematical modeling were used.

Main Findings: The Central payment systems of the Republic of Kazakhstan provides options for the needs of the real economy sector, financial markets, and banks the other participants in the late payments and money transfers, as well as contribute to the effective implementation of monetary policy and the execution of the state budget.

Applications of this study: The theoretical and practical provisions of the research can be applied in the educational process in economic areas and banking organizations' activities. Calculations are a necessary accompanying element of the money supply's creation (withdrawal) as a derivative of money circulation and one of the monetary regulation's main objects.

Novelty/Originality of this study: Development of theoretical provisions aimed to modernize the mechanisms of state regulation of the domestic national payment system. It ensures its further development in current conditions and the formulation of practical recommendations and justification of organizational tools.

Keywords: *National Payment Systems, Current Payment Volumes, Cashless Payments, Money Transfer Systems, Bank, Interbank Clearing.*

INTRODUCTION

The modern economy of any country is a widely ramified network of complex relationships between millions of its economic entities. The basis of these relationships is settlements and payments, during which mutual requirements and obligations are satisfied (Andros, Akimova, & Butkevich, 2020). With the help of cash flow in cash and non-cash forms - cash turnover, as the aggregate of all payments, the gross product is distributed, the distribution, redistribution, and use of national income are ensured.

One of the fundamental factors for the stable development of the state's economy is the availability of an efficient and smoothly functioning modern national payment system that allows real-time payments to be made in accordance with generally recognized standards (Ayapova & Arynova, 1993). The evolution and diversification of risks associated with money transfers, global integration processes that are manifested in the strengthening of relationships between different areas of economic systems, institutionalization, and digitalization require constant improvement of mechanisms aimed at maintaining the smooth functioning of the national payment system, which is inextricably linked to ensuring the country's financial security (Zahorskyi et al., 2020). The goal is to develop theoretical and practical directions for modernizing the mechanisms of state regulation and operational functioning of the domestic national payment system, ensuring its further development.

As a result of efforts to bring the payment system of Kazakhstan in line with international standards, the system of large payments in February 2019, Kazakhstan was transformed into a system of interbank money transfers, which has a system value for non-cash payments and works in real-time. The introduction of the interbank money transfer system will serve as the next stage in the development of the payment system in Kazakhstan, allowing to improve the system monitoring mechanisms and manage the liquidity risks of banks participating in the system.

Cashless settlement and its tools should be an important part of business entities, and this, in turn, means a principled approach to cashless settlement. If payments for action are made in non-cash form, then economic entities should contact their banks or contact this Bank. Delays the payment processing time and stops fulfilling the conditions.

Due to the stability of the banking system, the country's economic development is determined. Therefore, it is necessary to pay great attention to the evolution of legislation aimed at regulating the banking system (Oteshova et al., 2020).

Before the widespread adoption of electronic technologies, paper documents used payment instructions as an effective carrier for the payer and Bank employees. The payer's acceptance is convenient for registration, as well as for monitoring the acceptance by the Bank's employees. Strict forms of payment and paper documents require the payer to take care of the initial payment actions. A paper document facilitates manual processing and serves as a basis for making payments accurate and fast.

At the same time, in the context of global economic uncertainty, increasing probability of risks in various sectors of financial markets, increasing complexity of relationships between economic entities, ongoing globalization and mutual integration of structural units of various national payment systems, digitalization of operational and technological mechanisms that provide money transfers, as well as the emergence of innovative payment and settlement mechanisms, once again, it becomes relevant to conduct a comprehensive study of the functioning and further development of the domestic national payment system in modern conditions, including the formation of cross-border mechanisms for multi-currency payments ([Akimova et al., 2020](#)).

Customers strive to use an extended type of banking services through electronic terminal devices, as it is fast and not expensive. For banks, the provision of services on the basis of electronic channels is cheaper and more extensive than that of operators. Therefore, the volume and importance of electronic payment services online will increase day by day. The bank's demand for special electronic services is growing. Their desire to produce unique, unique products for their customers, rather than standard products, increases in accordance with the requirements of the time. All this encourages banks to attract customers and further improve relations with former customers, increase the number of electronic services ([Oteshova et al., 2020](#)).

LITERATURE REVIEW

The theoretical content of payment cards and non-cash payments in second-tier banks is reflected in the works of foreign, Russian, and domestic scientists and economists.

The scientific basis of the study was the works of foreign and Russian scientists – economists: [Lavrushin \(1997\)](#), [Bazhanov \(2018\)](#), [Didenko \(2017\)](#), [Kochergin \(2016\)](#), [Obaeva \(2017\)](#), and others.

The banking system of Kazakhstan at the present stage is represented by various aspects of development in the works of domestic economists: [Seitkasymov & Mauletov \(2013\)](#), [Khamitov \(2015\)](#), [Ilyasov \(2007\)](#), [Salimova \(2003\)](#), etc.

The development of the payment card system on the territory of the Republic will allow to expand non-cash money turnover, which will not be made by bad money, reduce the cost of issuing, provide services for cash, as well as move from low-performing payment instruments to a variety of new effective payment instruments ([Seitkasimov & Mauletov, 2013](#); [Tuleshova, 2005](#)).

Services of the processing center, as well as the creation and development of e-Commerce systems based on microprocessor cards, servicing commercial organizations, corporate and private clients, public institutions ([Akimov et al., 2020](#)); development of social services: insurance, systematization of citizens, statements on balances in accumulative pension funds, etc ([Pomfret et al., 2019](#)).

The main problem of the Central Bank in the development of Central payment systems in the medium term is to support the operation of the payment system between various entities of the economy of Kazakhstan at a high-tech level that ensures safe and timely payments and monetary circulation.

Currently, there is a large range of services on the markets and a significant number of different card programs are offered ([Agarwal et al., 2015](#)). For example, you can use payment cards to make payments for goods and services in stores and restaurants, pay for utilities, communication services, tax, and customs payments, repay loans, and transfer money from card to card.

Currently, there are certain problems in the retail sector related to the predominance of cash turnover, as well as insufficient development of infrastructure for servicing payment cards. Besides, one of the issues that need to be addressed in the framework of measures to further improve the operational reliability and security of the payment system is the creation of a backup center for the new payment system, which is due to the insufficient gap in the location of the main and backup centers of the payment system ([Keulimzhaev et al., 2001](#)).

The electronic money market of the Republic of Kazakhstan has been actively developing since mid-2017 and has shown progressive rates of development. For example, in 2018 on the territory of Kazakhstan with the help of electronic money of Kazakhstani issuers in the amount of 21.0 billion dollars in the amount of 7.9 million tenges, a transaction was made. Compared to 2017, the number of transactions using electronic money increased by 70%. As of January 1, 2018, 18.7 billion tenges was disbursed, electronic money was issued, and money in circulation amounted to 949.8 million tenges.

The dominant system in Card-present-transaction is EMV (sometimes called as Chip and PIN). In the following section, the authors describe briefly this system along with its major vulnerabilities against MITM, Pre-play ([Bond, Choudary, et al., 2014](#)), and relay ([Adida et al., 2009](#)) attacks.

In connection with the activation and liberalization of financial markets ([Allgood & Walstad, 2011](#)), there has been a radical reorientation of economists' views on the organization of cashless payments, from an infrastructure element that performs purely technical (mechanical) functions to the basic structure of the economy. The terminological apparatus in the field of settlements was also seriously rethought, which was primarily facilitated by the recommendations of the Committee on Payment and Settlement Systems ([Fonseca et al., 2012](#)).

One of the fundamental terms is "payment system," a payment system is a set of institutions, legal norms, tools, procedures, software, communication, and information tools that provide settlements between participants ([Gathergood et al., 2019](#)).

Although the proposed definition does not contradict the economic content, it should be noted that it does not contain a reference to such an essential aspect of the functioning of the payment system as its structural organization and exposure to risk phenomena. Based on the preceding, payment systems should also be classified according to their organizational structure (centralized, decentralized, distributed, local) and their exposure to risk events in the conditions of functioning within the economic environment ([Shemayeva et al., 2020](#)).

Calculations are a necessary accompanying element of the process of creation (withdrawal) of the money supply as a derivative of money circulation and one of the main objects of monetary regulation of the economy ([Ponce et al., 2017](#)).

In microeconomics, the role of cashless payments for organizations is that they act as a condition for the completion of transactions or the fulfillment of previously accepted obligations, contribute to ensuring the circulation of goods (services) and money, uniting the entire economy. This is the basis of liquidity management on the part of business entities, an integral element of budget units' functioning ([Choi et al., 2011](#)).

Ultimately, the state of settlements largely determines the stability of the monetary, financial, and credit system ([Barboza, 2018](#)), as well as markets: commodity, money, currency, stock, and precious metals. That is why in all countries, the organization of the payment system, is elevated to the rank of state policy. Moreover, it goes beyond the private interests of states.

The components of the necessary interpretation of the category "payment system" have a specific hierarchy in terms of their importance and functionality ([Klapper et al., 2013](#)). Therefore, it is most logical to single out macroeconomic and microeconomic levels when considering it ([Robb, 2011](#)).

A set of institutional and infrastructural elements depends on this level, which allows us to clarify and develop the definition of a payment system ([Lee & Kwon, 2002](#)), its functions, the composition of items, and regulatory features.

The main factors determining the state of the payment system of any state include the general development of the economy and the financial market, features of banking legislation, and established traditions in payments (payment customs) ([Lusardi et al., 2010](#)). The main organizer and intermediary in the implementation of cashless payments between various business entities is the banking system ([Nai et al., 2018](#)). It acts as the starting point of the cash circulation and the main volume of non-cash payments. The creation of means of payment, which is the most critical function ([Scholnick et al., 2013](#)), is closely connected with the credit operations carried out by this system.

METHODOLOGY

The methodological basis of research work is based on the fundamental principles of domestic and foreign scientists. The research used methods of marketing research, methods of system and statistical analysis, and some provisions of the works of scientists-economists in the field of Economics ([Sabyrbayev, 1993](#); [Trunk, 1997](#); [Pryanikov, 1998](#)).

Information base of research based on the laws and regulations of the Republic of Kazakhstan, statistical data of the National Bank of the Republic of Kazakhstan, annual reports and official websites of the Bank, periodicals, the Internet, the final survey. The market of fast money transfer services in the Republic of Kazakhstan offers a wide range of systems that can be used to transfer money to an addressee in another country in a matter of minutes ([Myrzakhmetova, 2019](#); [Shin, 2019](#)).

The empirical basis of the study is National Payment Systems, which reflect the state of application practice, based on the infrastructure of the payment committee, official documents, and reports. The functions of agents of international money transfer systems in the Republic of Kazakhstan are performed only by Kazpost JSC and second-tier banks that have concluded an Agency agreement with money transfer systems or are operators of direct systems, which will reduce financial risks and fulfill the basic principles of providing money transfer services in terms of ensuring transparency of operations and consumer protection ([Moiseev, 2005](#)).

Applications of various methods of scientific knowledge, including economic and statistical analysis, functional and structural analysis, subtraction, analysis, and synthesis. A special place in the study is occupied by the method of comparison, representation of statistical and other data using dynamic, graphical, and tabular methods. Due to the convenience and urgency of conducting operations, money transfer systems (hereinafter-AIS) are increasingly popular among the population of the country, which is characterized by an annual increase in the volume of transfers made through these systems ([Melnikov & Li, 2005](#)).

The potential of the methods used made it possible to solve the theoretical and applied problems set in the study.

RESULTS AND DISCUSSION

Digital currencies (cryptocurrencies) are the next stage in the development of electronic money, and, accordingly, money transfers and payments – a digital form of money. In addition, some countries have introduced their own terms in an attempt to formulate the concept of digital currency (cryptocurrency), for example, "virtual commodity" in Canada and China, "crypto-token" in Taiwan, "payment token" in Germany, and "virtual asset" in Honduras and Mexico» ([Global Legal Research Center, 2018](#))

In Kazakhstan, the President proposed the creation of a global digital currency (cryptocurrency) as an international settlement and payment unit, as a means of preventing currency wars and speculation, distortions in trade relations, and reducing market volatility ([Kulshmanov, 2017](#)). G. F. Ruchkina notes that significant changes are coming to the banking system due to the introduction of new financial technologies, which are a serious alternative ([Ruchkina et al., 2017](#)).

Vladimir Frolov, the founder of the Copernicus Gold payment system, notes that a modern Bank, especially a large one, cannot be transferred to a distributed registry without the help of financial startups that already use such technologies ([Obukhova, 2017](#)).

The decrease in payment volumes is due to a decrease in the volume of interbank payments for transactions with securities issued by residents of the Republic of Kazakhstan by 18.8%. On average, 174.6 thousand transactions worth 3.4 trillion tenges were conducted through these payment systems in 2018 (Figure1).

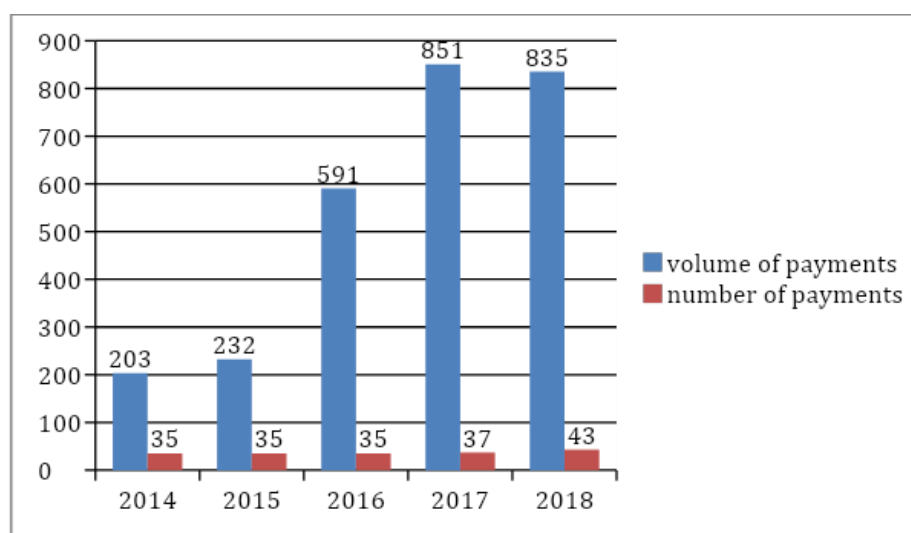


Figure 1: Dynamics of payment flows in the National Bank's payment systems

Source: [Report of the National Bank, 2019](#)

At the end of 2018, 43 financial organizations became participants in the interbank money transfer system. In 2018, 16.8 million payments totaling 828.1 trillion tenges were made through the system. Compared to 2017, the volume of payments decreased by 1.9% or 16.0 trillion tenges, the number of electronic payment messages processed through the system increased by 11.1% or 1.7 million transactions. In the interbank money transfer system, the average amount of one payment in 2018 was 49.4 million tenges, which decreased by 11.7% or 6.5 million tenges compared to 2017.

The maximum share of payments for intervals of amounts was up to 3 million tenge-87%. The largest amount of payments was observed in the range of 89, 75%, exceeding 1 billion tenges. Payments were made through the system for operations with securities of residents of Kazakhstan (44.1% of the total amount of payments), interbank operations with short-term deposits (28.2%), and operations with foreign currency and precious metals (10.3%). The volume of payments for goods and services in 2018 amounted to 8.1% of the total volume of payments processed by the system.

As of the end of 2018, 34 financial organizations were participants in the interbank clearing system. In 2018, the system processed 26.2 million electronic payment messages worth 6.4 trillion tenges. Compared to 2017, the number of payment messages in the clearing system increased by 22.0% or 4.7 million documents, the amount of payments increased by 0.2% or 10.6 billion tenges. In 2018, the average amount of one payment in the interbank clearing system decreased by 17.9% or 53.6 thousand tenges compared to 2017 and amounted to 246.1 thousand tenges. The maximum share in the number of transactions in the interbank clearing system was 91.3% - up to 500 thousand tenges.

The maximum amount of payments for amounts was observed in the range of more than 1 million tenge-81%. The main volume of payments in the clearing system is accounted for payments of economic entities for payments for goods and intangible assets (the share in the total volume of payments in the system was 28.1%), services rendered (25.9%),

payments to the budget and payments from the budget (17.2%). Emergency money transfer services are available to the population of Kazakhstan through the money transfer systems "Zolotaya Korona", "Leader", "Faster", "Western Union", "Moneygram", "Unistream", "Contact". In 2018, 2.9 million transactions worth 635.6 billion tenges were conducted through these systems, and the volume of transfers increased by 20.4% compared to 2017. In most cases, the country's population uses international money transfer systems to transfer money outside the Republic of Kazakhstan. In 2018, the share of money transfers sent abroad accounted for 94.7% of the total number of transfers sent via international money transfer systems.

At the same time, transfers from Kazakhstan through international money transfer systems significantly exceed receipts from abroad: the volume of money transfers sent abroad amounted to 601.8 billion tenges, and the volume of money transfers received from abroad amounted to 362.0 billion tenges. The average amount of one transfer from the country was 225.0 thousand tenges, the amount of the received transfer to the country-238.8 thousand tenges. Transfers in the amount of 33.8 billion tenges were sent across Kazakhstan using international money transfer systems. The average amount of one transfer was 176.2 thousand tenges. In comparison with 2017, the volume of deductions in Kazakhstan increased by 44.4% (Figure 2).

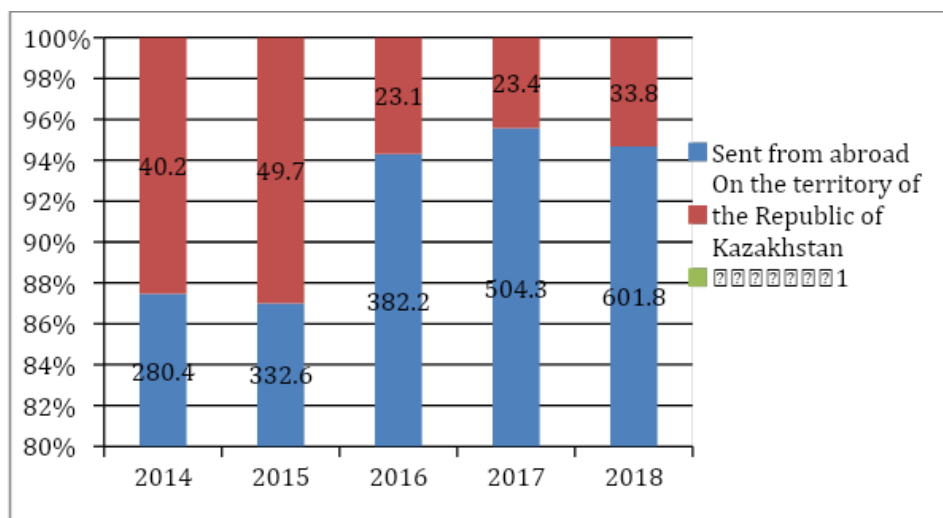


Figure 2: Dynamics of changes in the volume of money transfers sent through the money transfer system

Source: [Report of the National Bank, 2019](#)

In 2018, the volume of remittances sent via Aziska transfers amounted to 321,2 billion. For the 2017 year, remittances amounted to 474.1 tons were 2 thousand transactions in the amount of 2 474.1 tons were thousand tenges, which is 7.3% more number of transfers of money from indicators 2017 and 14.2% more volume.

In General, the money transfer system can be used not only by individuals but also by legal entities (the share of individuals in the total number and amount of money transfers was 96.5% and 94.5%, the total number, and share of legal entities in the amount of money transfers was 3.5% and 5.5%, respectively).

In most cases, money transfer systems are used by the population to send money transfers abroad (the share of payments and money transfers sent through the system abroad was 75.6% of the total number of transactions sent through the system and 87.3% of the total amount).

At the same time, these systems are also used for operational transfers in the Republic of Kazakhstan, the Average amount of which is about 67.5 thousand tenges. Thus, in 2018, it is planned to implement 40.8 billion tenges (227.7 million US dollars) using AIS in Kazakhstan. in the amount of 604,5 thousand. This is mainly the volume of gross payments amounted to \$19.9 billion. 474.5 thousand transactions in tenge were made in the national currency in tenge (78.5% of the total number of money transfers made through the money transfer system and 48.7% of the total amount).

The share of these transfers in the total volume of transfers of individuals made in tenge through the national payment systems of the Republic of Kazakhstan (interbank money transfer systems and interbank clearing systems) and money transfer systems, the total amount of payments was 1.0%. When both approaches are implemented, the role of state supervision is not reduced, but it allows the legal use of the digital currency and the improvement of the national payment system ([Barakina, 2020](#)).

It should be noted that the money transfer system is mainly aimed at conducting gratuitous other transfers (99.5% of the total amount of money transfers in tenge through the money transfer system), which own about 13% of the total amount of such money transfers made in the country in tenge (through interbank money transfer systems, interbank clearing system, and AIS).

The most popular system for money transfers in the Republic of Kazakhstan is the faster system (Kazakhstan's system of international Express money transfers without opening a Bank account among individuals), which in 2018 carried out 33.3% and 40.5% of the total number and amount of transactions conducted using the money transfer system in the country.

In addition, the population of the Republic of Kazakhstan actively uses such systems as Kolibri (Blitz), Western Union for intra-country transfers, and postal transfers of Kazpost JSC ([Musabekov, 2019](#); [Myrzakhmetova & Celetti, 2019](#)).

Table 1: Volume of international transfers

Zieler	Quantity (thousand transactions)	Share in total, in %	Amounts (in millions of tenge)	Share in the total amount, in %
Faster	201,0	33,3%	16 536,1	40,5%
WesternUnion	88,1	14,6%	12 035,9	29,5%
Hummingbird (Blitz)	44,4	7,4%	4 937,0	12,1%
Postaautoritari	260,7	43,1%	3 704,0	9,1%
Contact	1,9	0,3%	1 027,2	2,5%
Unistream	2,6	0,4%	704,9	1,7%
Leader	0,3	0,1%	526,5	1,3%
Jedelposhta	1,5	0,3%	426,6	1,0%
Bank of satin aspecten GILDAN ash Audru	1,7	0,3%	365,0	0,9%
Anelik	1,0	0,2%	284,7	0,7%
Goldencrown	1,1	0,2%	244,1	0,6%
CoinstarMoneyTransfer	0,1	0,01%	13,6	0,03%
MoneyGram	0,002	0,0003%	0,4	0,001%
Jalpajintai	604,5	100,0%	40 806,1	100,0%

Source: [Report of the National Bank, 2019](#)

Mainly, the overall growth in the volume of money transfers made through the money transfer system by country includes using such systems as Western Union, fast, and Blitz (compared to 2017, respectively, 4.4 billion tenge, 2.2 billion tenge, and 1.7 billion tenges). Money transfer system under the main purpose, the priority share belongs to the gratuitous transfer (except for deductions for treatment and training) in favor of other persons ([Berg & Wilts, 2019](#); [Hajek et al., 2019](#)).

Money transfers through the Republic of Kazakhstan's money transfer system are transferred abroad more than transfers received in the country. Thus, in 2018, the total volume of money transfers from the country abroad amounted to 280.4 billion dollars. If the number of transactions amounted to 1,869,6 thousand tenges, then money transfers from abroad amounted to 121.4 billion dollars in 948,3 thousand transactions. Simultaneously, the money transfers sent out exceed the transfers received in the country by 2.0 times in terms of the number of transactions. The average amount of one transfer sent from the Republic of Kazakhstan is about 150 thousand tenges, the average amount of a transfer received to the country is 128 thousand tenges.

The priority and growth in remittances from the money transfer system of the RK (compared with 2017 growth in numbers of 4.7% and 17.4% on the amount of the transaction) is largely due to the migratory activity of the population (2018 arrived in the country 14 842 persons), as well as demand for remittances for the acquisition of various goods and services from abroad. Giancarlo Bruno, Managing Director of the financial services industry at the world economic forum, notes that systems such as blockchain should not remain in the shadow of the financial industry, because in the future they will become its heart.

Thus, in December 2018, there was a significant increase in cash payments and transfers sent to Russia to pay for the cost of goods due to the cheapening of the cost of goods by the population of the Republic of Kazakhstan (more than 69% compared to the same indicators in November).

However, even though the main flow sent to the Russian Federation at the end of 2018 belonged to money transfers sent for the further purchase of certain goods, their encoding through banks was carried out as gratuitous transfers, which are one of the main problems of money transfers.

For example, gratuitous transfers (except for medical treatment and training) make up more than 98% of all money transfers sent abroad via the money transfer system ([Sagiyeva & Zhuparova, 2019](#); [Georgieva et al., 2020](#)).

Banks, organizations that perform certain types of banking operations, and non-Bank payment organizations are provided payment services. In 2018, the growth trend of non-cash payments and money transfers, improving the quality and expansion of payment services, and switching to remote customer service channels continued. The dynamics of the

growth of non-cash payments in the payment card market, including via the Internet and mobile banking, and the expansion of the card service network, remained unchanged (Tovma et al., 2020). At the end of 2018, 26 banks and Kazpost JSC issued payment cards. The total number of issued payment cards amounted to 23.4 million payment cards, which is 20% more than in 2017, including debit cards-17.8 million units, credit cards-4.8 million units, debit cards with a credit limit-0.5 million units, prepaid cards-0.4 million units. Payment cards of the international payment systems "VISA International", "Master Card Worldwide," "China Union Pay" and American Express International" make up the main share of payment cards in circulation. In 2018, the growth rate of existing payment cards, i.e. cards used for transactions, was maintained. The average number of cards in 2018 was 10.2 million units, which is 16.9% more than the corresponding indicator in 2017 (Figure 3).

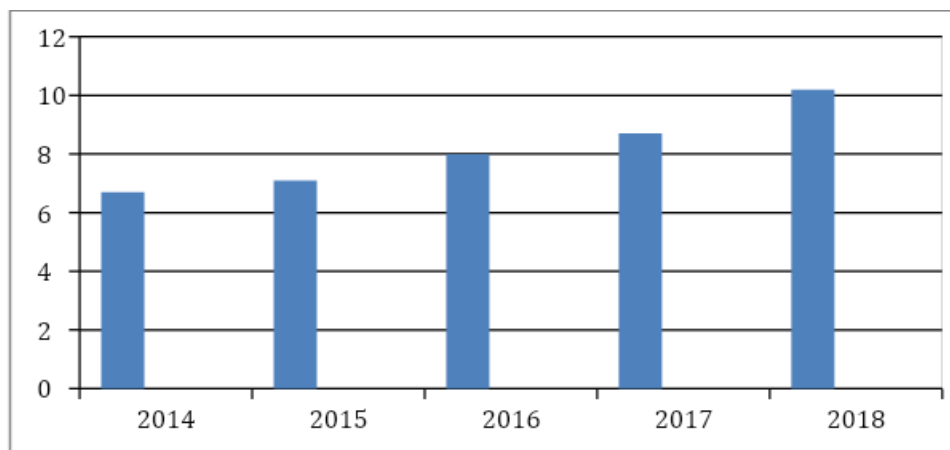


Figure 3: Number of payment cards used on average per month

Source: [Report of the National Bank, 2019](#)

The most dynamically developing direction of providing remote payment services is the Internet and mobile banking systems. Through these systems, 36.3% of the total number of non-cash payments and money transfers were made using Kazakhstan issuers cards and 49.2% of the total amount made in 2018, which amounted to 190.2 million transactions worth 3.1 trillion tenge. At the end of 2018, the number of Internet and mobile banking users amounted to 13.1 million people. On average, 3.5 million users actively use the Internet and mobile banking per month. In 2018, Kazakhstan continued to expand its remote service network. The number of POS terminals increased to 135,796 by 7%, of which 94% served by entrepreneurs, and the number of retail enterprises accepting payment cards increased to 82,527 to 5%. In 110,153 retail outlets, entrepreneurs installed equipment for servicing payment cards, which is 11% more than in 2017. The number of ATMs and instant payment terminals has also increased (Figure 4).

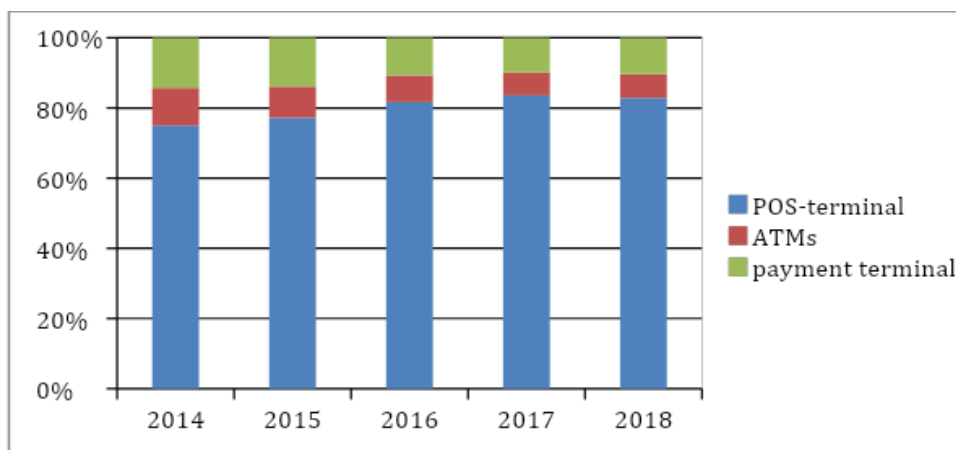


Figure 4: Expanding the remote service network

Source: [Report of the National Bank, 2019](#)

Dynamic growth trends in 2018 were also observed in the use of electronic money, which was calculated through 18 systems in Kazakhstan. E-money was issued by ten banks and Kazpost JSC, which issued e-money in the amount of 521 billion tenge over the year.

The total volume of transactions with Kazakhstan issuers' electronic money in 2018 compared to 2017 increased by 65.8%, in the amount of 1.6 times and amounted to 135 million transactions in the amount of 588.6 billion tenge. E-money transfers in favor of individual entrepreneurs and legal entities amounted to 119 million transactions in the

amount of 495.3 billion tenge, e-money transfers in favor of individuals-16 million transactions in the amount of 93.2 billion tenges. As part of its control and Supervisory functions, the national Bank maintains a register of payment systems operating in the country, as well as a Register of payment organizations and major payment service providers (Ermanova & Tishtykbayeva, 2019).

At the end of 2018, 42 payment organizations were registered that have the right to provide customers with certain types of payment services (payment via payment terminals, distribution of electronic money and processing operations using them, processing operations using payment cards via the Internet and mobile applications). In 2018, the volume of transactions conducted by customers through payment organizations' services amounted to 467.5 million transactions worth 1.3 trillion tenges (Turuntayeva et al., 2019).

With the advent of innovative technologies, another trend is an emerging-a reduction in government intervention (Kalyayev et al., 2019). Some researchers note that there is no need to regulate digital technologies, but it is necessary to establish norms related to these technologies (Financial Markets Interim Regulatory Outlook, 2020; Mihus, Andrienko, Molodets'kyy, & Blikhar, 2018). Technological algorithms assume part of the functions of the state. Tarasenko concludes that the development of financial technologies has made traditional banking regulation impossible, and suggests introducing applied framework solutions that allow for the rapid implementation of innovative services (Andronova & Tarasenko, 2018).

CONCLUSION

The use of electronic money in the Republic of Kazakhstan is still a widely used experience, which has been mastered by only about 10% of Kazakhstan's population. However, even the smallest percentage can be compared with the population of Slovenia or Latvia. Priority areas for the development of payment systems should be the quality and expansion of the range of services provided to the population of retail banks increase, The company removes legal barriers to the development of the Bank's payment services market and the introduction of innovative technologies and provide the competitive market conditions for banks.

It is necessary to develop the infrastructure and create appropriate conditions for the use of payment cards. As part of the General development trend towards integration of the Republic of Kazakhstan's financial system with financial institutions of other countries, participation in the creation of a common payment system between the EurAsEC countries based on Central common real-time payment systems will continue.

The Central Bank is studying possible ways to integrate the swift system with the Republic of Kazakhstan's payment systems to provide users with additional channels for receiving and transmitting messages to the payment system via the SWIFT system. It is planned to further develop the SWIFT service Bureau with the inclusion of innovative financial institutions.

LIMITATION AND STUDY FORWARD

The study is limited by the Republic of Kazakhstan payment systems, which meet all the requirements of international financial organizations for payment systems of developed countries. As it continually improves the regulatory framework and technologies used mainly in payment systems, the further options and benefits should be studied. Regarding the part of the further development of the plastic card market, it is planned to implement the "payment gateway" project, which will integrate the banking system with the e-government system being created to expand the following tasks. It is necessary to improve the online payment system for electronic public services, implement innovative financial technologies, and switch to the digital economy. The development of a single digital currency within the framework of the agreements of the Eurasian Economic Union may be one of the directions of future research.

AUTHORS CONTRIBUTION

Almagul Kairgalievna Oteshova formed the calculation part of the study. Natalia Alekseevna Prodanova worked on the problem statement, the formation of ideas, and the development of research design. Vadim Alexandrovich Dikikh worked on a review of publications on the research topic. Natalia Viktorovna Savina and Aigul Amangeldyevna Niyazbayeva studied the theoretical part.

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