

Evolution of the national payment card system in Russia: stages of formation and prospects of development

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Abstract

Creating of a national payment card system (NSPK) in Russia is an important step towards building a safe and efficient cashless payment system in the country. The development of the Russian NSPK is relevant in the light of different approaches to the definition of its building-up principles, stages of development, and an assessment of its economic efficiency. This article analyzes the stages of formation and indicators of development of the national payment card system in Russia. The authors used a method of statistical analysis, in the course of which they analyzed the data from statements of Russian credit institutions, the national system of payment cards, as well as statistical indicators of the Bank of Russia. In order to solve the tasks set up in the study, a comparative analysis of the main characteristics of the national payment card systems in Russia and China was used. As a result of the study, specific features of the development of the Russian national payment card system were identified and the main directions for its improvement as one of the most important elements of the national payment system of Russia were defined.

Keywords: payment system, national payment card system, non-cash payment instruments, Mir payment card

Introduction

The creation and development of new payment systems is one of the most dynamically developing and promising areas in the activities of credit institutions, payment service providers and financial regulators around the world. This trend is confirmed by the active participation of the Bank of Russia in the creation in 2014 of the Russian national payment card system and the support of its development at the state level.

It should be noted that interest in the NSPK development in Russia was dictated not only by the economic reasons (the desire to reduce costs, improve the speed and security of payments, improve the payment infrastructure in the country), but also was triggered by a series of political factors, first of all, by the introduction on the part of the United States and other Western countries of economic sanctions against Russia, which resulted in sharply increased domestic payment risks.

There are a number of basic tasks that the Russian national payment card system is intended to solve: 1) provision of uninterrupted payments through the payment cards of the Russian citizens; 2) ensuring the sovereignty of the payment space inside the country; 3) issue and settlement of payments by the national payment instrument - a card of the Mir payment system in the territory of Russia and other countries.

The project of creating the NSPK in Russia is not a unique project for the development of the in-country card payment systems. The experience of creating national payment card systems in a

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number of Western and East Asian countries deserves attention. For example, Interac payment association in Canada, Cartes Bancaires system in France, Dankort in Denmark, JCB in Japan, UnionPay in China, RuPay in India, BankNet in Vietnam and others.

Each national payment card system is characterized by its functional and institutional features. In this regard, the purpose of the article is to determine the main directions of the development of the Russian national payment card system and its specific features and characteristics. In order to identify the characteristic features of the NSPK formation and draw conclusions regarding the prospects for its development, the following tasks were solved:

- prerequisites for the NSPK creation were determined;
- goals and objectives of the national payment card system development were outlined;
- the NSPK creation stages were analyzed and the main problems occurred in the course of its development were identified;
- internal structure of the NSPK was described and the sources of its financing were indicated;
- key indicators of the national payment card system development were analyzed;
- the most promising directions for the development of the NSPK in the field of regional and international cooperation were identified.

Creation background

Despite the fact that attempts to create a payment card system in Russia were made several times during the period of 1993–2014, these projects did not succeed because of the lack of the necessary financial resources to create an extensive infrastructure for emission, acceptance and using of such cards, in the absence of state interest and support in the development of national card projects. Initiators and participants of such projects were commercial banks. Examples of such systems are the Union Card system (founded in 1993, uniting more than 300 banks), Zolotaya Korona (founded in 1994, uniting more than 550 banks), as well as the projects of Sberbank - Sbercard and PRO100 (1994-2016) and others.

On the contrary, the Russian national payment card system was created in 2014 under clearly designated state support. On May 5, 2014 the President of the Russian Federation V.V. Putin signed a law on the creation of the NSPK. At the same time, the NSPK creation in Russia was carried out in the absence of explicit economic incentives for the creation of such a system and was triggered by the presence of the threat of the loss of the State's financial security. In particular, on March 21 international payment systems VISA and MasterCard, in order to comply with the US law, suspended access to payment services for the banks present in the sanctions list, namely: Rossiya Bank, Sobinbank, SMP Bank, Investcapitalbank.

It should be noted that at the time of the NSPK creation in Russia, more than 90% of the Russian market of card payments accounted for the international payment systems (IPS) cards both in terms of quantity and value. In addition, the creation of NSPK occurred in the conditions of the economic sanctions, with low economic growth in the country (less than 1% of the GDP according to the Federal State Statistic Service). These important economic determinants inevitably affected the choice of goals and objectives for the NSPK development.

Development goals and objectives

The Russian national payment card system had a tactical goal: to ensure uninterrupted and affordable payment card transactions, closing in-country transactions at one site and reducing the dependence on international payment systems. At the same time, the implementation of the NSPK in Russia is based on the requirement of economic security and international standards, and the existence of restrictions put on cooperation with the leading IPS.

The key task for the successful implementation of the NSPK is to create motivation for the main participants of payment and settlement relations, without which it is impossible to imagine the interest of economic agents in the development of a system of non-cash payments based on national payment products. While it is economically expedient for credit institutions and users of payment services to join the Mir payment system due to the competitive tariff policy, unique loyalty program¹ and the possibility of participation in various target projects, for retail chains the advantages of the national payment card system are still not obvious due to the high costs of organizing payment turnover and the lack of economic incentives. Therefore, developers of the NSPK, representatives of

government agencies and the Bank of Russia should develop functional solutions that fundamentally distinguish the Mir payment system from international card payment systems.

NSPK formation stages

The Russian national payment card system was created in July 2014 in the form of NSPK JSC. The controlling block of the NSPK JSC shares is owned by the Central Bank of the Russian Federation. Due to the fact that the creation of the national payment card system in Russia is dictated by the protection of the national payment space, this is associated with extremely short periods of the emission of the national payment products, the merger of emitting banks and acquirer banks into a single payment and settlement network, and the creation of the infrastructure for accepting the payment products at the national level are associated with this.

According to «National Payment Card Development Strategy» (2015), implementation of the project for the NSPK creation and development in Russia is supposed to be carried out in three stages (Fig. 1):

1. establishment of an operational and payment clearing center (hereinafter referred to as «NSPK OPCC») to ensure the processing of domestic transactions for cards of local and international payment systems;
2. national payment instrument issue and its introduction to the Russian market;
3. development of a multifunctional payment products line and services within the NSPK and entry into international markets with competitive payment instruments.

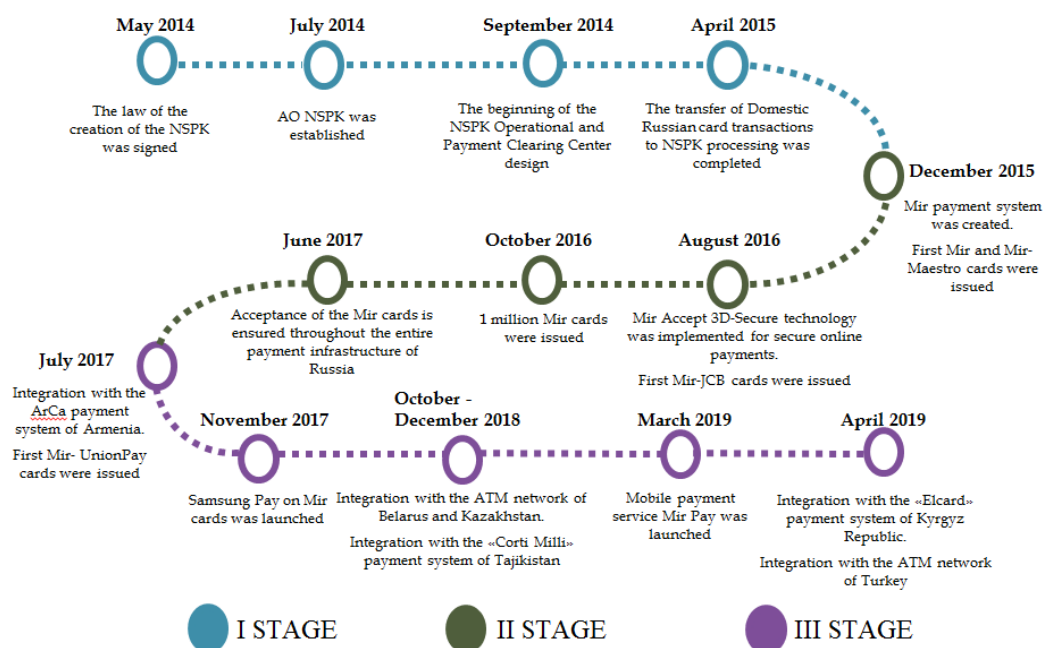


Figure 1. The main stages of the NSPK development.

Source: Compiled by the materials of the Mir payment system and the NSPK creation information from the official sites.

The first stage of the NSPK development in Russia was the transfer of the processing for all transactions using the cards of IPSⁱⁱ on the territory of Russia. At the end of the first quarter of 2015, the processing of in-country transactions using VISA and MasterCard payment systems (which accounted for about 99% of the IPS cards issued in Russia) was transferred to Russia. Processing of the cards of other IPS - JCB, American Express and UnionPay (about 1% of the IPS cards issued in Russia) was transferred to Russia in 2016. Thus, in 2016, the Russian NSPK began to process the IPS transactions in the territory of Russia solely. This made it possible to exclude the potential impact of external factors, associated with the restriction in payments processing, on the Russian payment space functioning.ⁱⁱⁱ

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The second stage of the national payment card system development in Russia consisted in issue of a national payment instrument (according to the results of the all-Russian competition, the card and the payment system as a whole were named Mir), to develop a wide line of card products, as well as to develop an extensive infrastructure for receiving payments made by the national card. In this regard, on December 15, 2015, the issue of Mir cards was launched as part of the same-name retail payment system. At the same time, the rules and tariffs of the Mir payment system, the operator of which was NSPK JSC, were approved.^{iv} The first banks that issued national payment cards were seven Russian credit organizations, including those that fell under the sanctions, namely Bank Rossiya and SMP Bank.

Obviously, the payment system can be called established only if the «network effects» are realized (a large number of payment card holders and a broad infrastructure for servicing them). Since the developers of NSPK set unprecedented dates for the formation of the payment system, government support measures at the legislative and administrative levels are widely used to solve the problem of universal distribution of Mir cards and the creation of payment infrastructure. Among such measures are the regulatory requirements for: the issue of the national Mir cards by Russian credit organizations; acceptance of Mir cards in the existing payment infrastructure and ATM networks; transferring salaries, wages and various social payments to budget groups of the population on the Mir cards (according to the Law of the Russian Federation ‘On the National Payment System’), as well as the requirement to accept the Mir cards in large retail chains (according to the Law of the Russian Federation ‘On Protection of Consumer Rights). As a result, by 1 July, 2017, Mir cards were accepted in the entire payment infrastructure of Russia, and by 1 July, 2018, the wages of public sector employees were transferred to the national cards in a mandatory manner.

The third stage in the NSPK development is to saturate the NSPK product line with promising payment products and services and promote them in Russia and abroad. Despite the fact that the NSPK sets an ambitious plan to bring its card products to foreign markets, this task is one of the most difficult, which cannot be accomplished through regulatory or administrative measures. In this case, it is necessary to offer truly competitive advantages that would favorably distinguish the Russian cards from cards of international payment systems in foreign markets. Since the time allotted for the introduction of Mir cards to international markets is about five years - from 2015 to 2019, the NSPK developers are actively concluding international agreements regarding inter-system cooperation and integration of payment infrastructure with neighboring countries belonging to the Eurasian Economic Community (EAEU) and the Commonwealth of Independent States (CIS), and in popular tourist countries, which are preferred by the majority of Russian citizens.

NSPK key indicators

Let’s consider the current results of the Mir payment system development, which have been achieved by the moment. As shown in Fig. 2, if at the beginning of July 2018, 39.6 million Mir cards were issued, then at the beginning of July 2019, 60.9 million Mir cards were issued, which is a third more than the same indicator for 2018. However, according to the Bank of Russia statistics, at the beginning of July 2019, more than 275 million payment cards (credit and debit cards) were issued in the Russian Federation, the share of the national payment instrument was 22.1% (Fig. 3).

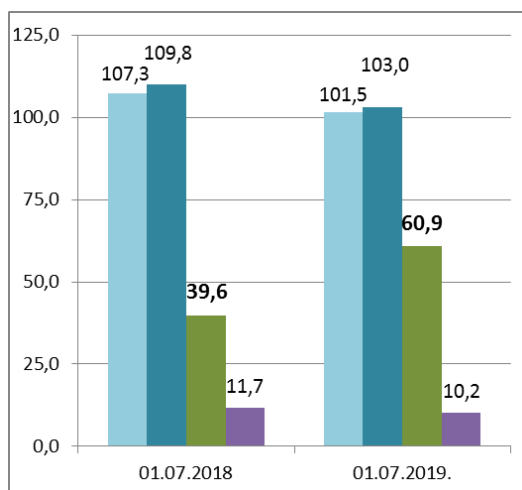


Figure 2. Number of cards in Russia by type of payment system in 2018-2019, million units
Source: Based on materials of Banking statements of Russian credit organizations.^v

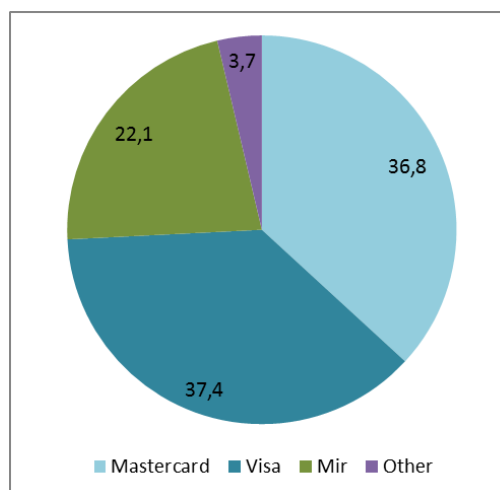


Figure 3. Share of cards in Russia by type of payment system as of 1 July, 2019, %
Source: Based on materials of Banking statements of Russian credit organizations.^v

As seen in Fig. 4, the number and amount of transactions made through the Mir cards during 2018-20189 was continuously increasing. Since the terminal and ATM network of Russian banks was ready to receive the Mir cards starting from July 2017, it was from that time that an active growth in card transactions was exhibit. According to the results of the 2nd quarter of 2019, the volume of transactions (payment for goods and services and cash withdrawal) amounted to 1 689.7 million units in quantitative terms and 3 203.9 billion rubles in terms of value.

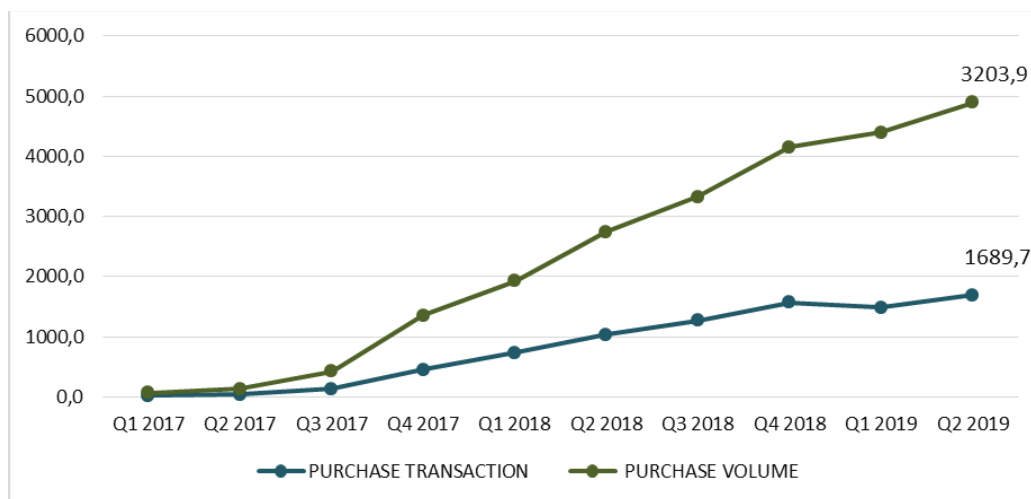


Figure 4. The number and amount of the Mir cards transactions, million units. and billion rubles.
Source: Based on materials of Banking statements of Russian credit organizations.^v

NSPK internal structure and sources of financing

The central element of the Russian national payment card system is NSPK JSC, controlled by the sole shareholder of the organization – the Bank of Russia. In addition, among NSPK JSC shareholders may be: Vnesheconombank; foreign credit organizations; foreign central banks; international financial institutions. All these institutions should act as individual NSPK participants. The Bank of Russia is the settlement bank for the transfer of funds using international payment cards and the national payment instrument in the NSPK.^{vi} Previously, Sberbank acted as the settlement center in Russia for MasterCard, while VTB Bank acted as such for VISA, from which fact it can be concluded that profitability in the area of settlements for these state-owned banks has decreased.

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Among positive effects for the Russian economy, the accumulation of funds within the country should be noted, which previously directly flowed into various IPS.

There is no exact information on the amount of sums required for the implementation of the Russian NSPK. However, it is obvious that the development of infrastructure and promotion of payment products and services requires large financial investments, because NSPK JSC not only provides functions via NSPK OPCC and within the Mir payment system, but it has been working as operational and payment clearing center of the System of Instant Payments (interbank instant cash transfer) since 2018 – a joint project of the Bank of Russia and Russian Fintech Association. Thus, the Bank of Russia contributed half a 4.3 billion rubles to the authorized capital of NSPK JSC, issuing a total of 43 thousand shares with a nominal value of one hundred thousand rubles.

By the end of 2018, the net profit of NSPK JSC increased by 43% compared with the 2017 year and amounted to 4.8 billion rubles. Return on capital was maintained at a traditionally high level - 38.5%. Thus, the financial performance of NSPK JSC, which were published in NSPK JSC annual report for 2018, indicates that at present the NSPK is able to independently implement the necessary investments and bear operating costs without attracting credit resources while maintaining consistently high rates of profitability and return on capital.

International cooperation and joint regional projects

Despite the obvious conflict between the NSPK and IPS, the Russian payment card system is interested in international cooperation, since only it can provide access to international payment markets. At the moment, the Mir card is planned to enter the international market together with the member countries with the member countries of the EAEU and the CIS by creating a single payment space, as well as through cooperation with the IPU MasterCard, JCB, AmEx, UnionPay in order to launch the co-badged cards. Thus, in December 2015, first co-badged cards Mir-Maestro, in August 2016 co-badged cards Mir-JCB, and in July 2017 co-badged cards MIR-UnionPay were issued. In addition, currently Mir cards are accepted in the ATM infrastructure of the Republic of Belarus and the Republic of Kazakhstan. Mir payment system cards can be paid in most commercial networks in Turkey. Mir payment system has been fully implemented in the Republic of Abkhazia and the Republic of South Ossetia, as well as mutual acceptance of Mir cards and cards of the national payment card system of the Kyrgyz Republic «Elkart» in the infrastructure of both payment systems. Such partnership projects allow distributing products and services of the Mir payment system outside Russia and leveling the issues of incompleteness of the functionality of the national payment cards at the initial stage of their emittance. However, such cooperation opens up only certain and very limited interaction markets and questions the requirements for ensuring payment sovereignty and the desire to create a unique payment system capable of competing with IPU.

In order to consider the interests of each of the participants of the payment and settlement relations, the Russian NSPK focuses on the development of regional joint projects, which distinguishes it from international payment systems. In particular, the NSPK strives to provide the national payment instrument with additional functionality, cooperating with the governments of the constituent entities of the Russian Federation, the largest credit organizations and private companies.

Thus, at present, NSPK JSC has entered into agreements with the number of regional Governments of the Russian Federation, for example, with the Rostov Region, the Republic of Tatarstan, the Far Eastern Federal District etc. on issuing of a multifunctional smart card based on the national payment instrument, equally accessible throughout the country (table 1).

Table 1. Main regional projects implemented by the NSPK

Project name	Card tool used in the project	Members
Muscovite's social card	A multifunctional personalized smart card based on the Mir card, which will	The Bank of Russia and the Government of Moscow

St. Petersburg resident's unified card	combine the following applications: - for payments; - for identification; - electronic signature; - social services (storage of the information about the compulsory health insurance policy, insurance number of the individual ledger account, etc .; - transport.	The Bank of Russia and the Government of Saint Petersburg
Rostov region resident's card		NSPK JSC, the Government of the Rostov Region, Bank «Center-Invest»
Unified social electronic card (The Republic of Mordovia)		NSPK JSC, KS BANK, the Republic of Mordovia
EKARTA (Yekaterinburg)	The Mir card with regional transport application	NSPK JSC, Gazprombank, the Administration of Yekaterinburg
Republic resident's payment card (the Karachay-Cherkess Republic)	Multifunctional personalized smart card based on the Mir card, which will combine the following applications: - for payments; - for identification; - electronic signature; - social services (storage of the information about the compulsory health insurance policy, insurance number of the individual ledger account etc.; - transport.	NSPK JSC, Sviaz-Bank, the Karachay-Cherkess Republic
Republic of Tatarstan resident's card		The Bank of Russia and the Government of the Republic of Tatarstan
Republic of Bashkortostan resident's card		NSPK JSC, the Government of the Republic of Bashkortostan, BANK URALSIB
Nizhny Novgorod region resident's card		NSPK JSC, the Government of the Nizhny Novgorod Region
Card for the students of higher institutions		Combining payment and identification functionality, as well as an electronic record book on the basis of the NSPK Mir payment card.

Source: Based on NSPK JSC annual report for 2016-2018 materials.

Developers of the NSPK pay special attention to saturation of functionality of the Mir card with additional non-financial services (transport, identification, social and campus student applications). As an actual project can be highlighted the «St. Petersburg resident's unified card» based on the Mir payment system, which emission has been started in May 2019. «St. Petersburg resident's unified card» is a product that combines the functions of a payment card, a transport application, as well as the ability of its holders to use a number of public services. Thus, a multifunctional card based on the national Mir card can combine the convenience of using financial and non-financial instruments, targeted social support and transparency of spending the budget funds. An important addition is that multifunctional applications on the card take into account the territorial interests and can function independently of each other.

In order to promote the Mir card using in contactless payments in some Russian regions, a discount on public transport, which in some cases can be up to 30% of the fare, was implemented. In addition, the NSPK plans to create a platform for transport preprocessing, which will allow you to pay for travel with a national card in any Russian region without purchasing a local ticket. It is assumed that

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the new project will avoid monopolization of fare by individual banks. The ability to pay for one-time trips with Mir cards has already been implemented at all metro stations in 7 Russian cities, as well as in ground municipal transport in more than 70 cities. The project is expected to be implemented by January 1, 2021.

An important element of increasing the competitiveness of national payment cards are technological innovations introduced by the NSPK. They affect, first of all, contactless payment services for goods and services. Since the beginning of March 2019, Mir cardholders can use the new contactless payment service Mir Pay. In addition, Mir cards are combined with Samsung Pay and Android Pay contactless payment services.

Thus, according to the study results of the main stages of formation and key characteristics of the development of the Russian NSPK, table 2 presents main results of the Russian NSPK analysis by the selected factors and criteria.

Table 2. The main factors and criteria characterizing the development of the NSPK in Russia
Source: compiled by the authors.

Factors	Criteria	Russian NSPK (Mir payment system)
Main steps	Establishment Date	23 July, 2014
	Time frame and stages of formation of the payment system	1) 2014-2016 - creation of NSPK JSC, processing and clearing transfer of IPS cards to the territory of Russia. 2) 2015-2017 - creation of a national payment instrument - the Mir card, the development of a payment cards product line, their mass issue, creation of an infrastructure for accepting the cards in Russia. 3) 2015-2019 - access to international markets
	Issue of the first payment card	15 December, 2015
Development goals and objectives	Key objectives	- ensuring uninterrupted payment card transactions at the national level; - closing of in-country transactions with bank cards on the one site controlled by the regulator; - reduction of dependence on the IPS through the introduction of the national payment instrument
	Target user	Population receiving budgetary charges and social payments
Internal structure and sources of financing	Management	The Central Bank of the Russian Federation acts as the controlling body and settlement center.
	Authorized capital	4.3 billion rubles
	Sources of financing	the Central Bank of the Russian Federation, NSPK JSC profit
International cooperation and joint regional projects	Concluded agreements with in-country organizations	Regional projects with banks, transport and other companies to create a multi-functional payment card
	Concluded agreements with international organizations	Partnerships: 1) with the payment systems of the EAEU and CIS member countries: Belcart, Armenian Card, Tengri-card, ELCART, with the payment system of Uzbekistan UZCARD, with Corti Milli, etc. It is planned to complete the formation of the single payment space by the end of 2019; 2) with international payment systems: MasterCard, JCB, AmEx, BanknetVN, UnionPay; 3) with the most popular tourist destinations (negotiations to accept cards in Turkey, Thailand, the United Arab Emirates, the Czech Republic are underway)

Summary

The following conclusions can be drawn as a result of the study of the development of the national payment card systems in Russia.

Despite the existence of economic prerequisites and attempts to form a national payment card system in Russia since the mid-1990s for 20 years, the formation of such a system had no economic justification at the Federal level. The formation of the Russian NSPK in 2014 was primarily conditioned by the potential risks associated with the threats of losing the financial security and payment sovereignty of the country, which manifested itself as a result of the geopolitical conflict between Russia and Ukraine and the subsequent introduction of the economic sanctions against Russia by the United States and other developed countries. As a result, in contrast to the international card payment systems, the Russian NSPK has to solve the problem not so much of the international scale of its business, as of winning a share in the Russian payment market dominated by international payment systems VISA and MasterCard.

For several years the NSPK has passed several stages in its development: from the transfer of processing card payments to the territory of Russia to the large-scale release of national payment products and the development of an extensive infrastructure for servicing payment cards. At the same time, the Russian NSPK is a developing system, both in terms of the number of cards issued and of the intensity of their use (in terms of value and quantity). It can also be called a specialized, rather than universal payment system, since the Mir cards are mostly of in-country distribution and dominate among certain segments of users.

The regional distribution of the Mir cards at the moment has a steady rate and dominates in the most densely populated regions of the country. The primary users of the national cards are the employees of the public sector and citizens receiving various social benefits, including pensioners and students. This is due to the measures on legislative regulation of the issue and use of national cards in Russia.

At the same time, it should be noted, it should be noted that government measures to support the development of the Mir payment system at the legislative and administrative level should not replace economic incentives for the participants of the payment system to the wider and more intensive use of national payment cards, as well as shouldn't level market competition in the payment market. Therefore, at the current stage of development, the NSPK is already paying great attention to the implementation of joint multifunctional payment, transport and social projects with credit institutions and transport companies in different Russian regions. In addition, one of the priorities of the NSPK is the creation of a single payment space between the EAEU and CIS member countries.

The Russian national payment card system also needs to improve infrastructure for accepting contactless payments on Mir cards, as well as payments on the Internet and mobile payments. At the same time, it is necessary to increase the level of financial literacy and trust in financial institutions among the public in order to encourage more intensive use of the Mir cards in cashless payments in Russia.

It should be noted that Russian NSPK will be able to compete adequately and win in the competition with IPS only if it is able to create favorable conditions for users of national payment cards, introduce innovations in the field of payment acceptance and processing, and offer competitive pricing and functional advantages in their payment products for different participants of the payment system.

ⁱ The loyalty program of Mir payment system «Privet.Mir» became widespread in October 2018, when it was joined by Sberbank – the largest Russian issuer of payment cards. The program is a single information platform that accumulates discount offers and discounts of retail chains and individual stores, which can be used by the holder of the Mir card in addition to cashback programs. The NSPK developers intend to create a transactional marketing platform for trade and service enterprises, which will allow analyzing customers' purchases and creating personalized offers for them.

ⁱⁱ In Russia, in accordance with the Payment System Operators Register, published on the official website of the Central Bank of the Russian Federation, five international card payment systems were operational in 2019: VISA, MasterCard, JCB, American Express, UnionPay.

ⁱⁱⁱ The transfer of processing to the Russian NSPK led to an increase of VISA expenses in annual terms by \$ 70 million, that of MasterCard - by \$ 50 million without taking into account the cost of processing transactions through the Russian NSPK. At the same time, in 2016, the revenue of the

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Russian NSPK for processing transactions of international payment systems amounted to 6.2 billion rubles (NSPK JSC annual report for 2016).

^{iv} In accordance with the Methodology of the statistics on payments and financial market infrastructures approved by the Committee on Payments and Market Infrastructures of the Bank for International Settlements, a payment system is a form of relationships based on common rules and standardized agreements in terms of payments and money transfers between the participants of this payment system (Methodology of the statistics, 2017)

^v Reporting form 0409250 'Information on transactions using payment cards and infrastructure designed to carry out operations of disbursement (acceptance) of cash and payments for goods (works, services) with and without using payment cards', sent by credit organizations to the Bank of Russia.

^{vi} According to the Glossary of terms used in payment and settlement systems, approved by the Committee on Payments and Market Infrastructures, settlement center of a payment system may be a central bank or a private bank that performs cash settlements (Tommaso P-S., 2016).

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