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# The current state of the payment infrastructure and development of payment systems in Russia and the Volgograd region

El estado actual de la infraestructura de pago y el desarrollo de sistemas de pago en Rusia y la región de Volgogrado

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### **ABSTRACT:**

Historically, four phases may be identified to show the genesis of institutional elements of the national payment system while describing the current payment infrastructure and payment systems. Phase I may be described as centralization of clearings by the State Bank of the USSR through standardization and unification of clearing and payment transactions; it laid the basis for the management and methods of the post-Soviet banking. At Phase II the Bank of Russia (with its institutional and infrastructural money transfer mechanisms) has formed the post-Soviet national payment system. Phase III is referred to the legislative response to establishing the national payment system by virtue of organizational and technological regularization, standardization and unification of clearing and payment transactions; and to the qualitative and quantitative growth of private payment

### **RESUMEN:**

1337/5000 Históricamente, se pueden identificar cuatro fases para mostrar la génesis de los elementos institucionales del sistema de pago nacional y describir la infraestructura de pago y los sistemas de pago actuales. La Fase I se puede describir como la centralización de las talas por parte del Banco Estatal de la URSS a través de la estandarización y unificación de las transacciones de compensación y pago; sentó las bases para la administración y los métodos de la banca postsoviética. En la Fase II, el Banco de Rusia (con sus mecanismos institucionales y de infraestructura de transferencia de dinero) ha formado el sistema de pago nacional postsoviético. La fase III se refiere a la respuesta legislativa para establecer el sistema nacional de pagos en virtud de la regularización organizativa y tecnológica, la normalización y la unificación de las transacciones de compensación y pago; y al crecimiento systems and relevant system hierarchy formation. Phase IV refers to standardization and unification of the national payment system elements and creation of the National Payment Card System to ensure the sovereignty of Russia's monetary system in internal payments, when there are certain risks of external and cross-border clearings and payments.

**Keywords**: payment systems, payment infrastructure, payment services, banks, clearings, monetary circulation.

cualitativo y cuantitativo de los sistemas de pago privado y la formación de jerarquía del sistema relevante. La Fase IV se refiere a la estandarización y unificación de los elementos del sistema nacional de pagos y la creación del Sistema Nacional de Tarjetas de Pago para garantizar la soberanía del sistema monetario de Rusia en los pagos internos, cuando existen ciertos riesgos de compensaciones y pagos externos y transfronterizos.

**Palabras clave**: sistemas de pago, infraestructura de pago, servicios de pago, bancos, clearings, circulación monetaria.

# 1. Introduction

Payment systems are an integral attribute of all market-oriented economies, being organically embedded in their financial mechanism and developing in accordance with the economic needs of contemporary society. Payment systems are characterized by the prompt response to variable needs for servicing economic relations, rapid implementation of scientific and technological innovations, high adaptability to risky environments, accelerated implementation of financial innovations into the system and their spread among the system elements, transparency and inherent tendency to expand territorial and transactional limits, which together determine both external controllability of the system and its ability to self-development. Simultaneously, whereas payment systems influence the economic environment, they experience a symmetrical (perhaps in a greater degree) influence of external forces on their transferring capacities, which makes them vulnerable to external and sometimes destructive impact.

Nowadays contradictions between the expansion of global economic institutions and the needs to ensure the sovereignty of national economies are becoming sharper. Establishing the Russian national payment system and strengthening its institutional framework in response to external sanctions imposed on the country's financial system is a vivid example thereof. Despite the fact that forming the unified national payment system and national system of payment cards, updating the payment infrastructure and adapting them to economic realities were made in a relatively short time, it can be argued that the national payment system has succeeded both institutionally and technologically.

Historical and national characteristics of Russia are of considerable importance while studying Russian payment systems. There are two diametrically opposed points of view whether the Soviet banking experience is useful: the first one says that historical traditions are aggravating for implementing innovations, and the second one says the best practices should be applied in order to avoid the known risks.

Russian payment systems are unique as they combine both elements of the Soviet banking and their own or those borrowed from foreign practice of organizational, technological and technical solutions. Nevertheless, most researchers consider that system integrity, territorial equality and proportional development of the national payment system elements have not yet been achieved. The payment and settlement structure of the Bank of Russia, being the successor of the State Bank of the USSR and characterized by large scale, standardization and unification, is the core of the national payment system. Independent competitive and incompatible elements of the national payment system are the so-called private payment systems, which are local or segmental in nature either on a territorial basis, or on operational and other grounds.

Specific individual characteristics and multivariance of their combinations in external and internal dynamic environments of Russian payment systems that function and form the national payment system, require evaluation of their current state through the prism of the payment systems' evolution beginning from the period of transformation of the Soviet payment system till the current time, when innovations help to considerably improve financial mechanisms of the national payment system and its members.

## 2. Materials and Methods

A significant contribution to the development of the theory of money, monetary circulation, monetary policy, functioning of banking systems, clearings and payments was made by the following works: (Monetary and financial system, 2016), (Korobov Yu. I., 2015), (Korobov Yu. I., Dynnikova E. A. 2015), (Korobov Yu. I., Orlova A. N., 2010), (Semenyuta O. G., Amichba A. N., 2011), (Semenyuta O. G., Panchenko N. O., 2013), (Semenyuta O. G., Repkina I. V., 2014), (Semenyuta O. G., Donchenko I. V., 2015), (Usoskin V.M., 2006), (Chelnokov V. A., 2010) et al.

The following well-known Russian and foreign specialists have focused on the theory and methodology of payment systems (*The national payment system of Russia: problems and prospects, 2011*), (*Travkina E. V., Kovalenko S. B., 2016*), (*Stiglitz J. E., Bhattacharya A., 1999*), (*Bech M.L., Preisig C., Soramaki K., 2008*) et al.

The formation and development of contemporary payment systems based on the financial innovations are studied in the works (*Baydukova N.V., Orlova N.S., 2014*), (*Baydukova N.V., Vasilyev S.A., Chepikov D.A., 2016*), (*Kozenko Yu.A., 2013*), (*Kopytin V.Yu., 2010*), (*Korobeynikova O.M., Korobeynikov D.A., 2013, 2015*) (*Krivoruchko S.V., Lopatin V.A., 2016*) (*Obaeva A.S., 2010, 2012*), (*Perekrestova L.V., Korobeynikova O.M., Korobeynikov D.A., 2015*), (*Tamarov P.A., Mikhailova M.A., 2012*) et al.

This study is based on the general methodological scientific principles to ensure its complexity and systemic nature. The principle of the unity of theory and practice applied in the study supposes researching the current state of the payment infrastructure and payment systems to complement the traditional theoretical views, taking into account the specifics of the Russia's sovereign national payment system development and the current trends in integration thereof into the global financial system.

The principle of the specific historical approach is implemented while studying payment infrastructure and payment systems, not only taking into account traditional factors of socioeconomic development in Russia and its regions, but within the context of new threats caused by sanction restrictions and other external economic factors, as well as the opportunities offered by the policy of providing the sovereignty in financial sphere and import substitution of technologies.

The principle of objectivity is ensured by attracting a wide range of information and empirical sources presented by the legislative acts of the Russian Federation on monetary matters and policies, regulatory acts of the Bank of Russia that govern the functioning and development of the national payment system, being collected and summarized by the authors from statistical and analytical materials of the Federal State Statistics Service of Russia, the Bank of Russia and its territorial agencies, results of sociological researches, developments of Russian and foreign scientists described in fundamental scientific works and publications in periodicals.

The principle of completeness is manifested in a comprehensive, interconnected and interdependent research of the mechanisms of developing payment systems and payment infrastructure in the whole country and in the Volgograd region.

The principle of systemic nature makes it possible to form an integral picture of the current state of the payment infrastructure and payment systems within the emerging all-Russian payment system viewed in the study as a complex, multilevel, open type economic system.

## 3. Results and Discussion

In order to characterize the current state of the payment infrastructure and payment systems in the Russian Federation based on the above-mentioned methodological principles, we consider the genesis of payment systems gradually. For this purpose, four historical phases are identified to show the specific features of institutional elements of the national payment system and

applied payment instruments (Table 1).

**Table 1**Genesis and Development of the National Payment System in Russia

Time Periods	Stage Characteristics	Key peculiarities					
		Payment System Elements	Payment Instruments				
Phase I. The Soviet period	Centralization of clearings by the State Bank through standardization and unification of clearing and payment transactions	<ul><li>Non-independent</li><li>Directly regulated</li><li>Standardized</li></ul>	<ul> <li>Standardized</li> <li>Mostly paper forms</li> <li>The closed list</li> <li>Internal circulation</li> </ul>				
Phase II. 1991– 2011	Creation and improvement of the market banking system along with decentralization of clearing and payment transactions based on the multiplicity of technologies and organization	<ul> <li>Independent</li> <li>Indirectly regulated</li> <li>Non-standardized</li> <li>Innovation-driven</li> </ul>	<ul> <li>Mostly standardized and non-standardized</li> <li>Paper, paperless, including electronic forms</li> <li>The open list</li> <li>Mainly serviced by foreign technological centers</li> <li>Innovation-driven</li> </ul>				
Phase III. 2011- 2014	Legislative response to establishing the national payment system by virtue of organizational and technological regularization, standardization and unification of clearing and payment transactions, minimization of dependence on foreign payment systems	<ul> <li>Independent</li> <li>System-based integrated</li> <li>Regulated by special legislation</li> <li>Standardized</li> <li>Innovation-driven</li> </ul>	<ul> <li>Mostly standardized and non-standardized</li> <li>Mostly paperless, includin electronic and paper form</li> <li>The open list</li> <li>Mainly serviced by foreign technological centers</li> <li>Innovation-driven</li> </ul>				
Phase IV. 2014 – to date	Standardization and unification of the national payment system elements and creation of the National Payment Card System	<ul> <li>Independent</li> <li>System-based integrated</li> <li>Regulated by special legislation</li> <li>Standardized</li> <li>Harmonized with international standards</li> <li>Accelerated innovation-driven</li> </ul>	<ul> <li>Mostly standardized</li> <li>Mostly paperless, includin electronic and paper form</li> <li>The open list</li> <li>Serviced by Russian technological centers</li> <li>Accelerated innovationdriven</li> </ul>				

Source: Compiled by the authors

For the above time limits, the phase logics requires relevant similarity of characteristics of money transfers and homogeneity of internal factors while developing the payment system elements. The first two Phases may be divided, but it is not necessary for the purposes of this study, which is aimed to substantiate the predictive aspects of the evolutionary process in developing payment systems and to evaluate their current state.

**Phase I** may be described as centralization of clearings by the State bank of the USSR through standardization and unification of clearing and payment transactions; it laid the basis for the management and technique at the beginning of the post-Soviet banking. Giving just common description of the above, we may emphasize the high continuity of methods, technology and organization as the main principle of transformations during Phase II (*Korobov Yu. I., 2015*).

Characterizing **Phase II**, it should be noted that the Bank of Russia as a successor to the State Bank of the USSR formed the national payment system. Whereas private payment systems and alternative payment technologies were absent in Russia, the national payment system is objectively based on the historical experience, which at that time was recognized as sufficiently progressive and adequate (*Korobov Yu.I., Orlova A.N., 2010*).

The first attempt to establish the national payment system was made by the Bank of Russia in 1993, when, against the background of the institutional transformation of economic relations in the society and changes in the principles of the organization of the banking system, it became clear that the core of the new national payment system should be the Central Bank with its infrastructural, technical and organizational capabilities. This statement found legislative formulation in the *Strategy for Developing Payment System of Russia* approved by Protocol No. 15 dated April 1, 1996 by the Board of Directors of the Bank of Russia. The Soviet banking system was reformed on two levels — interbank clearings were made mostly through the Bank of Russia, and large commercial banks serviced direct settlements.

The basic elements of the national payment system at Phase II are the following:

- 1) Payment infrastructure for clearings, processing and delivery of transaction details, transfer of funds;
- 2) Financial institutions, including operational accounts for transfers, payment instruments and payment services, providers of operational, clearing and transfer services;
- 3) Laws, standards, regulations and procedures that determine the monetary circulation mechanisms (*Obaeva A. S., 2010*).

At Phase II the national payment system was based on institutional and infrastructural money transfer mechanisms.

Having substantial organizational, scientific and methodological potential, the Bank of Russia payment system had obvious advantages in adapting banking innovations into emerging private payment systems. Scientific and IT progress helped the Bank of Russia to take a dominant position in clearings, increased the efficiency of existing schemes, and created prerequisites for implementing fundamentally new methods and systems. The Bank of Russia payment system was developing on a staggered basis: clearings were automated, powerful regional information processing centers and communication facilities were created, information security was strengthened, and the transition from paper to electronic document circulation became more active.

At the same time, alternative systems of interbank payments were created using private software developments. Based on correspondent banking relations, private payment systems were established, namely, those for the banks (intra-bank) or non-banking credit institutions. On the one hand, this was a kind of overstepping the difficulties and mistakes with the adoption of the best foreign experience, when the systems were created just from scratch. On the other hand, risks were inevitable and sourced by new relations, with unapproved or poorly tested minimizing techniques and methods, while the Bank of Russia developed its proprietary

payment system based on its own experience in risk management. In addition, the problem was the low interoperability (or lack thereof) of software and hardware complexes of various suppliers for banking payment and clearing transactions.

Simultaneously with the improvement of the Bank of Russia payment system, alternative private had payment systems also developed. The qualitative development of private payment systems based on card instruments had been observed since the beginning of the 2000s against the backdrop of overall macroeconomic stability. The economic recovery in Russia in 2000–2008, with favorable external conjuncture and moderate inflation within the country, created positive conditions for solving economic problems that could not be solved under the previous conditions. Macroeconomic stability and high prices for exported resources removed the problem of external debt, led to an increase in Russia's sovereign rating, and created prerequisites for institutional improvement of the banking system, which were generally implemented. The specified period is characterized by active implementation of innovations into banking system (remote access system *Bank-Client*, electronic banking, mobile communication technologies, etc.). In 2003–2004, people's trust in the national monetary system and its infrastructure elements increased significantly. For a decade, the real consumption of the population had grown one and a half times, the nominal sales of consumer goods and services were estimated at trillions of roubles. Accordingly, the payment and clearing turnovers multiplied, including consumption of households, small and medium businesses, i.e. the main potential users of money transfers (Baydukova N.V., Orlova N.S., 2014). A new segment of micropayments of private individuals emerged, and a new processing infrastructure was formed to service it (according to the assessments of the participants of the XIVth International Banking Forum Banks of Russia — XXIst Century held in Sochi on September 7-10, 2016), for the period before establishing the national payment system an excessive volume of processing capacities had been accumulated (though used incompletely and ineffectively due to their fragmentation). Since the early 2000s, an important characteristic (which soon turned into a threat to the national financial sovereignty) of the Russian payment market had been the dominance of global non-resident payment systems.

The global crisis of 2008-2009 had strong negative impact on the stability of the Russian monetary circulation: the national currency was devaluated, the level of real income of the population decreased, a number of banks experienced liquidity deficit, which became almost systemic (*Kopytin V.Yu., 2010*); the vector of financial preferences and behavior patterns of business entities changed to more conservative. The problem of over-reliance on global payment systems and the threat to national financial sovereignty in Russia was bared sharply like never before.

According to Citibank's analysts, the crisis of 2008 had no negative impact on the online shopping performance, moreover, it contributed to the accelerated developing in terms of both the number of customers, volumes of transactions, and online shops that promoted new categories of goods to the markets. Online purchases (expressed in both monetary terms and the number of transactions) substantially exceeded the regular retail purchases, while the average online purchase amounted to 2,500 roubles. Mostly, online purchases and relevant Google Search queries for the word "to buy" originated from Moscow and St. Petersburg.

Consequences of the global financial crisis of 2008 accelerated the introduction of relevant government measures to form the sovereign national payment system, and the Federal Law *On National Payment System* was adopted in 2011 at **Phase III**. However, the banking system and other members of financial markets in Russia were not institutionally ready and properly economically interested in modernizing monetary circulation and monetary turnover as the above Law prescribed. As a result, the national payment system was gradually formed by complication of norms, regulations and elements. The main feature of the national payment system is that it was not a sovereign alternative to global competitors, but only complementation to them, which also didn't allow to win the competition with them (*Perekrestova L.V., Korobeynikova O.M., Korobeynikov D.A., 2015*).

The state approach adopted at Phase II to solve the current problems and develop promising directions for developing the national payment system was generally complex and had been developed at Phase III by approval of the *Strategy for Developing the Banking Sector of the Russian Federation up to 2015* (Statement of the Government of the Russian Federation No. 1472p-P13, Bank of Russia No. 01-001/1280 dated April 5, 2011), the *Concept for Developing the Bank of Russia Payment System up to 2015* (approved by the Board of Directors of the Bank of Russia, Protocol No. 16 dated July 16, 2010), and the Federal Law *On National Payment System*.

The above-mentioned Concept determined the design, principles of operation and main strategic approaches to constructing the Bank of Russia payment system. The Concept defined trends of improvement and determined relevant stages with an orientation toward the national payment system formation and accepting the Bank of Russia as the key member. With adoption of the Concept, according to N.A. Savinskaya, G.N. Beloglazova et al., the Bank of Russia payment system finally became the core of the national payment system that determined the standards for payments within Russia and the role of other banking and non-bank institutions. The Bank of Russia approved its positions as the regulating, coordinating and licensing authority with respect to payment systems (*The national payment system of Russia: problems and prospects, 2011*). The Concept's developers considered the vector of development as the growth of the payment systems' efficiency through reducing costs, improving quality of services, accelerating transfers, requests, and control actions, reducing liquidity, credit, and operational, systemic and legal risks.

One of the features of the emerging national payment system was the high involvement of its elements, which was one of the prerequisites for integrating the payment area subjects. For example, its structural divisions, private credit institutions and their branches, the Federal Treasury and its territorial bodies, the Post of Russia, other clients of the Bank of Russia, which had accounts in its branches, were declared as members of the Bank's payment system. At the same time, the latter subjects, as well as private credit institutions, were members of different payment systems, which confirmed at least the organizational possibility of their interaction.

In this context, the dynamics of the institutional provision of the economy in Russia and the Volgograd Region with payment services provided by various members of the banking system is of interest (see Table 2).

**Table 2**Institutional Provision of the Economy in Russia and the Volgograd Region with Payment Services (as on the Beginning of the Year)

Indicators	2008	2009	2010	2011	2012	2013	2014	2015	2016	
Total number of banking institutions, units:										
Russia	41,081	43,294	42,360	42,904	44,838	46,451	46,598	44,511	39,397	
the Volgograd Region	716	726	723	715	772	740	725	700	585	
Including:										
Branches of the Bank of Russia, units:										
Russia	782	632	630	608	543	505	439	365	271	
the Volgograd	9	9	9	9	9	9	9	3	5	

Region										
Credit institutions, units:										
Russia	1,136	1,108	1,058	1,012	978	956	923	834	733	
the Volgograd Region	5	5	5	4	4	4	4	4	4	
Offices of credit i	nstitutions	, units:								
Russia	3,455	3,470	3,183	2,926	2,807	2,349	2,005	1,708	1,398	
the Volgograd Region	74	74	63	58	56	43	35	32	18	
Back-offices of cr	edit institu	tions, ur	nits:							
Russia	18,979	21,272	21,667	22,002	22,565	23,347	24,486	23,306	21,836	
the Volgograd Region	247	263	272	271	277	284	271	272	222	
Lending and cash institutions (bran			ıl offices	and out	-of-the o	office cas	sh desks	— credit	t	
Russia	16,729	16,812	15,822	16,356	17,945	19,294	18,745	18,298	15,159	
the Volgograd Region	381	375	374	373	426	400	406	384	336	
Number of bankir	ng institutio	ons per 1	L million	clients,	units:					
Russia	289	305	299	302	314	325	325	306	269	
the Volgograd Region	273	278	278	276	296	285	281	271	229	

Source: Compiled according to the data of the Bank of Russia. See

Certain extensive growth of banking institutions had been observed till 2013 because the number of credit institutions and their offices had increased, but later, since 2014 there had been a reduction related, on the one hand, to the policy of qualitative improvement of the Russian banking sector and, on the other hand, to the intra-bank structural optimization and implementation of innovations to release non-financial bank resources. Such performance correlated with the relevant global banking and FinTech trends: at a time when development of client-server technologies and static web applications was slow, cloud and mobile technologies, large data (BigData), Internet of things (IoT), artificial intelligence and robotics, distributed registries, open interfaces (API) and biometrics grew intensively. As a result, in 2008-2013 the number of bank institutions per 1 million clients (individuals) increased from 289 to 325

units, or by 12.46%. Then, there was an intensification of institutional provision with banking services up to 269 institutions per 1 million clients by 2016.

In the Volgograd region, there happened faster decline in the institutional provision of the region's economy with payment services. Such performance may be explained by the peculiarities of the post-Soviet socio-economic development of the region. The Volgograd Region is located in the southern federal district of Russia and has traditionally been a subsidized agrarian region that lost its Soviet industrial potential, and currently has an underdeveloped economy and financial infrastructure. At the same time, this region has a considerable territory — 113,900 km2, and the population — 2,545 thousand people as on January 1, 2016.

Optimized correction of the previously considered quantitative parameters of the institutional provision with payment services in the Volgograd region began earlier in 2012, when the maximum number of banking institutions was 772 units. Moreover, the number of lending and cash offices and operational offices and out-of-the office cash desks amounted to 426 units. The number of basic elements of the banking system in the Volgograd region, namely, branches of the Bank of Russia, regional credit institutions and their offices reduced throughout the period by 44.44%, 20.00% and 75.68%, respectively. As a result, the region had lower payment provision as compared to the average Russian regions, the number of bank institutions per 1 million clients in 2016 amounted to 229. Obviously, these indicators did not help with the accelerated socio-economic development of the region.

In the Volgograd region, there are 4 regional credit institutions (all of them are commercial banks): KOR Bank, Mikhailovsky Promzhilstroybank, Russian Southern Bank and Nokssbank — members of the national payment system and partners of its infrastructure elements. The first two institutions do not issue or acquire payment cards. The Russian Southern Bank issues and acquires Visa and acquires Zolotaya Korona cards; Nokssbank issues and acquires Visa and MasterCard and provides retail customers with access to both domestic and international payment products and services.

At Phases III and IV the Bank of Russia, being an integration centre, had qualitatively different (in terms of territorial coverage, volumes of payments, rules and regulations, composition of participants and payment documents, terms of transfers, and technologies) multilevel payment systems and clearing mechanisms:

- BESP System (bank electronic urgent payments) for real-time clearings throughout Russia,
- VER System (intraregional electronic clearings) for real-time clearings,
- Moscow Region Clearing System (functioning both as real-time and discrete payment system),
- MER System (interregional electronic settlements) with payments between regions within one to two business days,
- Clearing system with telegraphic and postal advices (which allow transferring money within 1–5 for business days throughout Russia), and
- Specialized payment mechanisms for some regions and branches of the Bank of Russia.

As a result, the Bank of Russia payment system became a single, universal, centralized at the federal level, a multi-service payment system with implemented capabilities of the BESP and services of regional components. To prove the fact, there is relevant information on participation of the Bank in these payment systems. Though the total number of branches of the Bank of Russia reduced 1.67 times in 2011–2014 (Phase III) (see Table 1), 2,196 associated clearing members, 391 direct clearing members, and 86 special clearing members in the BESP System were registered there as of June 1, 2014. Despite the fact that this was the fastest growing client segment of the Bank, the number of transfers amounted to 2.9 million only at the end of Phase III. The prevailing payment system (with a downward trend) was the intraregional electronic payment system with 934.6 million transfers during Phase III. The second most important system was VER with 448 million transfers in 2014. As a result, by

the end of 2014, the total volume of money transfers within the Bank of Russia payment system had amounted to 1,205,179.9 billion roubles (see Table 3).

**Table 3**Basic Indicators of the Operation of Payment System of the Bank of Russia, units (as on the End of the Year)

Indicators	2012	2013	2014	2015	2016	
Number of clients	8,887	6,495	4,422	3,562	3,036	
Number of money transfers, bln.	1,259.0	1,341.2	1,370.6	1,398.5	1,435.9	
Including:						
Via VER System	923.4	934.6	919.7	894.8	839.9	
Via MER System	333.9	404.4	448.0	500.5	592.6	
Via BESP System	1.2	2.1	2.9	3.3	3.4	
Via post and advices	0.5	0.1	0.006	0.004	0.002	
Total amount of money transferred, bln. RUR	1,150,497.4	1,224,893.5	1,205,179.9	1,356,543.2	1,340,034.2	

Source: Compiled according to the data of the Bank of Russia. See

At the same time, along with the expansion of the Bank of Russia's payment segment, the orderly qualitative and quantitative growth of private payment systems at Phase III, as well as relevant system hierarchy formation with separation of nationally, systemically and socially important payment systems, money transfer operators, payment system or infrastructure operators, electronic money operators and other infrastructure participants (*Tamarov P.A., Mikhailova M.A., 2012*) in accordance with the requirements of the Federal Law *On National Payment System* might be noted (see Table 4).

**Table 4**Institutional Infrastructure of the National Payment System of Russia, units (as on the End of the Year)

Elements	2012	2013	2014	2015	2016
Number of payment systems	20	31	33	35	35
Including:					
Nationally important	-	-	10	18	18
Systemically important	2	2	2	2	2
Socially important	-	4	5	5	6

Number of money transfer operators	954	922	833	735	625
Number of payment system operators	20	30	33	35	35
Number of payment infrastructure operators					
Operating centers	23	34	35	35	31
Payment centers	21	31	36	35	31
Clearing centers	22	27	32	30	29
Number of electronic money operators	38	82	97	101	99
The Post of Russia	1	1	1	1	1

Source: Compiled according to the data of the Bank of Russia. See

The number of payment systems has increased by 15 units, or by 1.8 times since the above-mentioned Federal Law is in force. Half of those payment systems are considered national. The number of system-important payment systems remains stable. Those belong to the Bank of Russia and the National Settlement Depository (a non-banking credit institution). Socially important payment systems are currently represented by 6 systems, including Visa, MasterCard and Russian retail payment systems. The number of money transfer operators has decreased by 329 entities, or by 34.5%, for this period. The payment infrastructure operators, being represented by operational centers, clearing and payment centers, have positive dynamics over the five-year period — their growth rates are 134.8%, 147.6% and 131.8%, respectively. The fastest growth is observed in the segment of electronic money operators. Their number was 99 in 2016, and it had increased by 2.6 times in comparison with 2012. The growth of socially important payment systems and electronic money operators demonstrates the development of certain payment infrastructure in the retail segment and creation of conditions for the competition of such operators in making payments for goods and services.

External economic sanctions imposed on Russia in 2014, which critically increased the risks of loss of operationality not only in international and cross-border transactions but also in the domestic payment turnover, accelerated the sovereignization of the national payment system. Thus, the creation of the National Payment Card System (NPCS) that applied the Russian technology platform with its own payment instrument — MIR cards — was an expected response to the arosen risks. In our opinion, **Phase IV** started with this event representing a new stage of developing the national payment system.

Unlike previous attempts to implement similar projects (Sberkarta, etc.), the NPCS is a fully functional, operationally independent platform for processing Russian transactions through its own payment and clearing centre (intra-Russian transactions have been processed by international payment systems before), which significantly reduces the risks related to continuity of money transfers at experts' opinions (*Krivoruchko S. V., Lopatin V. A., 2016*). The NPCS pilot projects are implemented in various regions of Russia with the involvement of regional banks to develop innovative payment products and services (transport, campus, medical and other applications), as well as to promote them abroad. Thus, it can be argued that the NSPC can make a significant contribution to securing the sovereignty of Russia's monetary system in domestic turnover, but the risks of external and cross-border clearing and payment turnover remain.

# 4. Conclusion

Thus, the presented study results support the achievement of the goal - the evaluation of the current state of payment systems and payment infrastructure in Russia and in the Volgograd region. The conducted study has made a definite contribution to the development of the monetary circulation theory due to the gradual selection of features and patterns of establishing the national payment system in Russia. The evaluation of the current state of payment systems and payment infrastructure in Russia has shown their institutional viability. The allocation of stages in developing the national payment system has proven certain historical and national characteristics, and revealed the sovereignty and relative overcoming of dependence on global payment systems. The Bank of Russia is the core of the national clearing and payment structure. Being the successor to the State Bank of the USSR, and being characterized by large scale, standardization and unification (Baydukova N.V., Vasilyev S.A., Chepikov D.A., 2016), it confirms its uniqueness, which combines the elements of the Soviet banking and its proprietary or borrowed practice of organizational, technological and technical solutions, and equal and proportional development of the elements of the national payment system. Private payment systems that are mostly local or segmental in terms of either territorial or operational characteristics have been developed on a competitive basis (Korobeynikova O.M., Korobeynikov D.A., 2013).

Therefore, further studies of money circulation and payment systems in Russia should be related to the sovereignization of money transfers based on the innovative mechanisms for the national payment system and implementation of financial innovations into the social and economic sphere of the Russian regions.

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# References

Baydukova N.V. and Orlova N.S. (2014). Roznichnye klienty na rynke platezhnyh uslug [Retail Customers on the Market of Payment Services]. Saint-Petersburg: Bulletin of the Saint-Petersburg State University, 2, 31-41

Baydukova N.V., Vasilyev S.A. and Chepakov D.A. (2016). Bankovskie sistemy i megaregulyatory na finansovom rynke: inostranniy opyt i otechestvennaya praktika [Bank Systems and Megaregulators on the Financial Market: Foreign Experience and National Practice]. Saint-Petersburg: Bulletin of the Saint-Petersburg State University, 1, 17-26.

Bech M.L., Preisig C. and Soramaki K. (2008). Global Trends in Large-Value Payment. FRBNY Economic Policy Review.

Chelnokov V. A. (2010). K voprosu o suschnosti, funktsiyah i roli sovremennyh deneg [To the Issue of the Essence, Functions and Role of Modern Money]. Money and Credit, 5, 68–70.

Kopytin V. Yu. (2010). Novye tendentsii v razvitii roznichnyh platezhnyh uslug [New Tendencies in Developing Retail Payment Services]. Calculations and Operational Work in Commercial Bank, 1, 28–34

Korobeynikova O. M. and Korobeynikov D. A. (2013). Razvitie sovremennyh platezhnyh uslug v sfere svyazi i elektronnyh kommunikatsiyah [Development of Modern Payment Services in Communication Sphere and in Electronic Communications]. Financial Business, 3 (164), 24-30

Korobeynikova O. M. and Korobeynikov D. A. (2015). Problemy transmissii denezhnyh i

- kreditnyh resursov v kontekste provedeniya denezhno-kreditnoy politiki [Problems of Transmission of Monetary and Credit Resources in the Context of Monetary and Credit Policy]. Bulletin of the Nizhnevolzhsk Agro-University Complex: Science and Higher Professional Education, 2(38), 246-251
- Korobov Yu. I. (2015). Razvitie bankovskoy sistemy: modernizatsiya ili transformatsiya? [Development of Bank System: Modernization or Transformation?]. Science and Society, 3 (22), 39-41.
- Korobov Yu. I. and Dynnikova E. A. (2015). Bankovskaya infrastruktura v razvitii natsionalnoy platezhnoy sistemy [Bank Infrastructure in Developing National Payment System]. Fundamental researches, 11 (Part 1): 170-173.
- Korobov Yu. I. and Orlova A. N. (2010). Paradoksy bankovskoy sistemy Rossii [Paradoxes of the Russian Bank System]. Finances, Money, Investments, 3, 7-11.
- Kozenko Yu. A. (2013). Protsessy zarozhdeniya universalnoy platezhnoy substantsii [Processes of Universal Payment Substance Occurrence]. Integration of Science and Production Strategy of the Sustainable Development of the Russian Agro-Industrial Complex and WTO: Materials of the International Research and Practical Conference Devoted to the 70th Anniversary of the Victory of the Battle of Stalingrad, pp. 317-321
- Krivoruchko S. V. and Lopatin V. A. (2016). Banki kak subjekty natsionalnoy platezhnoy sistemy: sovremennye problemy [Banks as Subjects of the National payment System: Modern Problems]. Financial Journal, 2, 113
- Monetary and Financial System: Manual. In by M.A. Abramova, E.V. Markina. (Eds.). (2016). Moscow: KNORUS, pp. 446.
- Obaeva A. S. (2010). Natsionalnaya platezhnaya sistema: infrastruktura, innovatsii, perspektivy razvitiya [National payment System: Infrastructure, Innovations, Perspectives of Development]. Money and Credit, 5, 34–41.
- Obaeva A. S. (2012). Obespechenie stabilnosti i razvitie natsionalnoy platezhnoy sistemy novaya tsel deyatelnosti Banka Rossii [Providing Sustainability and Development of National Payment System is the New Goal of the Bank of Russia]. Money and Credit, 1, 26–30.
- Perekrestova L. V., Korobeynikova O. M. and Korobeynikov D. A. (2015). Kontseptsiya modernizatsii platezhnyh sistem v Rossiyskoy Federatsii [Concept of Modernizing Payment Systems in the Russian Federation]. Fundamental Researches, 8 (Part 3), 591-595.
- Semenyuta O. G. and Amichba A. L. (2011). Teoreticheskie osnovy issledovaniya infrastruktury rynka bankovskih uslug [Theoretical Basics of Researching the Infrastructure of Bank Services Market]. Financial Researches, 2 (31), 34-40
- Semenyuta O. G. and Donchenko I. V. (2015). Strategiya prodvizheniya natsionalnoy platezhnoy sistemy: problemy i puti ih resheniya [Strategy of Promoting National Payment System: Problems and Ways to Solve Them]. Financial Researches, 3 (48), 39-48.
- Semenyuta O. G. and Panchenko N. O. (2013). Bankovskiy sektor Rossii osnova modernizatsii otechestvennoy ekonomiki [Banking Sector of Russia Basis of Modernizing National Economy]. Finances and Credit, 41 (569), 2-7.
- Semenyuta O. G. and Repkina I. V. (2014). K voprosu ob ekonomicheskoy suschnosti i soderzhanii ponyatiya "platezhnaya sistema" [To the Issue on Economic Essence and Content of the "Payment System" Notion]. Financial Researches, 3 (44), 29-34.
- Stiglitz J. E. and Bhattacharya A. (1999). Underpinnings for Stable and Equitable Global Financial System. New-York: World Bank
- Tamarov P.A. and Mikhailova M. A. (2012). Razvitie roznichnyh platezhnyh uslug: ot platezhnyih servisov k uslugam platezhnoy sistemy [Development of Retail Payment Services: from Payment Services to Services of Payment Systems]. Money and Credit, 9, 31–39.

The National Payment System of Russia: Problems and Prospects. (2011). Saint-Petersburg: Publishing House of SPbGUEF, pp. 14.

Travkina E. V. and Kovalenko S. B. (2016). Nadzor Banka Rossii za deyatelnostyu kommercheskih bankov [Surveillance of the Bank of Russia over Commercial Banks]. Traditional and Innovational Science: History, Modern State and Perspectives. Collection of Articles of the International Research and Practical Conference. Ufa: Aeterna LLC, pp. 139-141.

Usoskin V.M. (2006). Sovremennye tendentsii razvitiya platezhnyh sistem. Finansovye instituty i ekonomicheskoe razvitie [Modern Tendencies of Payment Systems Development. Financial Institutes and Economic Development]. Moscow: IMEMO, pp. 428.

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