



Bank of Russia



NATIONAL PAYMENT SYSTEM DEVELOPMENT STRATEGY FOR 2021–2023

Moscow
2021

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INTRODUCTION

Ensuring stability and development of the national payment system (NPS) is one of the strategic goals of the Bank of Russia.

As part of the NPS development strategy¹ of 15 March 2013, the Bank of Russia has collaborated with payment market participants to implement key projects related to the development of the national payment infrastructure that ensures the stability and independence of the Russian payment space.

Thus, the Bank of Russia Payment System has been transferred to an up-to-date centralised platform and now ensures continuous interbank settlements within a single extended regulation. The Bank of Russia Financial Messaging System has been launched, enabling credit institutions and large companies, including non-residents of the Russian Federation, to exchange financial information 24/7 through independent secure channels.

In an unprecedentedly short period of time, all domestic operations against bank cards of international payment systems were transferred to continuous round-the-clock processing in the Russian Federation. The Mir Payment System (Mir PS) has been established and now plays an important role in the Russian payment market, and the issuance of Mir cards (national payment instruments) has been launched. Consumers are able to make payments and transfers 24/7/365 to clients of any banks that participate in the Faster Payments System.

The dynamic development of the Russian payment market has allowed Russia to become a global leader in terms of growth rates of cashless payments, and placed it among the top five countries in terms of the number of such payments in 2018 and afterwards.²

At the same time, new challenges have emerged that significantly influence the development of the Russian payment market. Both the payment industry and society in general are undergoing digital transformation. Consumers are increasingly demanding when it comes to the speed, cost, and availability of payment services. Payment service providers are introducing new technologies to develop innovative payment products and services. International BigTech companies are actively expanding into new spheres, including the Russian payment market. Regulators of leading economies are exploring the possibilities of launching national digital currencies, and the Bank of Russia has released a consultation report on the digital ruble. Companies and banks with a large customer base have started building their own ecosystems, providing a wide range of various services, including non-financial ones. At the same time, a high concentration level has emerged in certain segments of the NPS, where one or two players dominate.

The requirements for ensuring information security and creating a trusted environment in the payment industry are also rising considerably.

The NPS Development Strategy for 2021–2023 is aimed at creating favourable conditions for provision of convenient, safe, and affordable payment services to consumers, development of a competitive and innovative payment market, and improvement of the payment infrastructure.

In the course of preparing the NPS Development Strategy for 2021–2023, strategic planning documents were taken into account, including:

- Strategy for the Development of the Information Society in the Russian Federation for 2017–2030, approved by Decree of the Russian President No. 203, dated 9 May 2017;
- Strategy on the Economic Security of the Russian Federation for the period until 2030, approved by Decree of the Russian President No. 208, dated 13 May 2017;

¹ Minutes of the Bank of Russia Board of Directors No. 4 // Bank of Russia Bulletin. 2013. No. 19.

² According to the Bank for International Settlements and World Payments Report.

- National programme “Digital Economy of the Russian Federation”, approved by the Presidium of the Presidential Council for Strategic Development and National Projects, Minutes No. 7, dated 4 June 2019;
- Guidelines for the Development of the Russian Financial Market in 2019–2021;
- Financial Inclusion Strategy for Russia in 2018–2020;
- Guidelines for Financial Technology Development for 2018–2020;
- Guidelines for the Advancement of Information Security in the Financial Sector for 2019–2021.

The Bank of Russia will implement the NPS Development Strategy for 2021–2023 in cooperation with payment service market participants and professional associations as well as stakeholders among Russian government agencies.

1. CURRENT STATUS OF THE NPS

The accessibility and efficiency of payment services play an important role in the development of the economy, the implementation of fiscal and monetary policy, and the creation of favourable conditions for businesses and households.

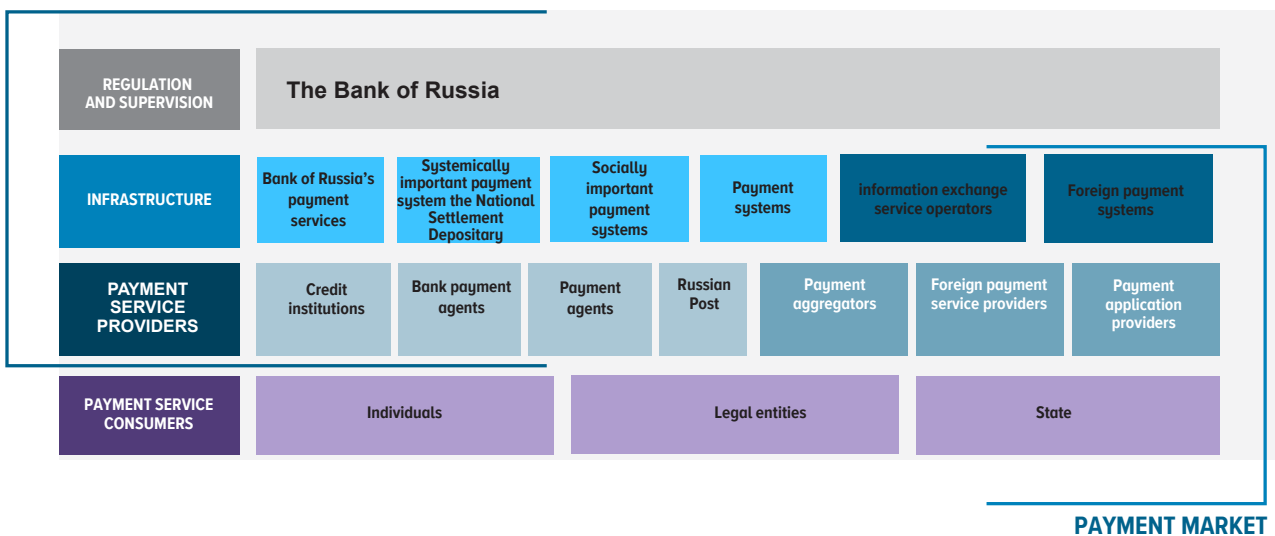
The current status of the NPS results from the implementation of the NPS Development Strategy adopted in 2013. In the course of its implementation, the legal framework for the NPS was improved, the conditions for the development of payment services were established, and the main elements of the national payment infrastructure were formed. In addition to the 2013 Strategy, the Bank of Russia has launched and is successfully developing Mir PS and the Faster Payments System.

Banks¹ and other payment market participants are actively developing remote banking systems, expanding card acceptance and contactless payment networks, and supporting payment applications on smartphones. All of these efforts, as well as promotional events and loyalty programmes, stimulate the use of cashless payments by consumers.

ELEMENTS OF THE NATIONAL PAYMENT SYSTEM IN THE RUSSIAN FEDERATION

Chart 1

NATIONAL PAYMENT SYSTEM



1.1. REGULATION

The legal basis for the NPS operations is provided by Federal Law No. 86-FZ, dated 10 July 2002, 'On the Central Bank of the Russian Federation (Bank of Russia)' and Federal Law No. 161-FZ, dated 27 June 2011, 'On the National Payment System', as well as regulations on the NPS issued by the Bank of Russia within its remit stipulated by Russian laws.

NPS laws and regulations define the key functions of the principal participants of the payment market, rules for providing payment services, and functionality of payment instruments. They also enable payment service providers to create their own additional services. Thus, credit institutions may (independently or by agreement with the customers) determine the forms of funds transfer

¹ Hereinafter the term 'banks' also includes non-bank credit institutions. In this Strategy, the terms 'bank' and 'credit institution' are interchangeable.

orders, provide automatic payments or contingent transfers to their customers, simplify and speed up the processing of payment information through encoding payment details, etc.

The legislation also stipulates the legal aspects of the operation of payment systems and the National Payment Card System, and the procedure for interaction between a bank and its client when using electronic means of payment.² Taking into account the international experience and standards, such as the Principles for Financial Market Infrastructures,³ the legal framework for the supervision and oversight in the NPS as well as the criteria of importance of payment service providers have been established.

In order to protect consumer rights, requirements for disclosing information about the payment service and informing the customer about payments and transfers have been established. Ban on higher fees for intra-bank transfers when the payer and recipient accounts are opened in different branches (the ban on ‘bank roaming’) was also imposed. In addition, the law stipulates the rules for banks to reimburse funds debited without the customer’s consent when the client complies with the established rules for the use of electronic means of payment.

It is important to emphasise that the principles governing the payment sector in the Russian Federation are generally comparable to those applied in other countries. In the EU as well as in Russia, regulations have determined the main participants of the payment market, types of payment services and instruments, as well as requirements for information disclosure and consumer protection.

At the same time, the existing features of the NPS regulation are dictated by the market structure and business models used. For instance, in the EU, independent non-bank payment service providers operate alongside with banks and are a distinct institution type with European regulation and supervision largely focusing on the activities of these participants. In Russia, however, non-bank organisations (e.g., bank payment agents and payment aggregators) provide payment services under agreements with banks. Banks and payment systems are regulated and supervised, while the operations of non-bank intermediaries are monitored through credit institutions, taking into account Bank of Russia regulations.

1.2. NPS INFRASTRUCTURE

As of 1 January 2021, the NPS included 28 payment systems,⁴ including systemically important payment systems of the Bank of Russia and the National Settlement Depository (NSD), and 36 payment infrastructure service operators, i.e. operations, payment clearing, and settlement centres. Over 22 billion funds transfers totalling 1,852.3 trillion rubles were made via Russian payment systems in 2020, which is more than the annual amount of the Russian GDP each month.

The national payment infrastructure that ensures the independence of the Russian payment space plays a crucial role here.

1.2.1. Bank of Russia Payment System

The Bank of Russia Payment System (BRPS) is the key element of the national payment infrastructure through which fiscal and monetary policy operations, government payments, and interbank settlements of all Russian credit institutions are made.

Currently, the BRPS implements the features of cutting-edge RTGS⁵ systems:

- urgent funds transfer service where over 80% of payments are processed online;

² Article 9 of Federal Law ‘On the National Payment System’.

³ Principles for Financial Market Infrastructures are an international standard issued by the Committee on Payments and Market Infrastructures together with the International Organisation of Securities Commissions.

⁴ Including the Bank of Russia Payment System and Mir PS.

⁵ Real-time gross settlement. In developed economies, there is usually an RTGS system managed or launched by the central bank.

- non-urgent funds transfer service where payments are settled every 30 minutes;
- 20-hour operating day, one of the longest among global RTGS systems;⁶
- flexible liquidity management instruments, including a limits system and liquidity pools.

The operating days of the BRPS are among the longest in the world

In 2020, the availability rate of the BRPS was 99.99%.⁷

The key role of the BRPS is proven by its high share in the NPS: it handles nearly 93% of payments of all payment systems.⁸ The BRPS processes on average around 7 million payments each day.

In foreign countries, most interbank settlements are also conducted through the central bank's RTGS system, whose share by the volume of payments is 92.2% in France, 92.5% in the UK, and over 95% in Germany.

1.2.2. NSD Payment System

The NSD PS is part of the post-trading infrastructure of the Moscow Exchange Group. It provides transfers on transactions in organised trading and in the OTC market, as well as on Bank of Russia operations in the open market and with regard to refinancing of credit institutions.

The NSD PS is a systemically and nationally important payment system. NSD is the operator of the payment system and payment infrastructure services (operations, payment clearing, and settlement centres).

The NSD PS ensures uninterrupted real-time settlements between its participants. Risk monitoring and risk analysis are also conducted online. The assessment of the NSD PS conducted by the Bank of Russia in 2017–2018 showed a high level of compliance with the Principles for Financial Market Infrastructures.

In 2020, transfers through NDS PS totalled nearly 120 trillion rubles, with over 65% accounted for by funds transfers under deals made in organised trading.

1.2.3 Faster Payments System

The Faster Payments System (FPS) was launched in January 2019. The FPS allows consumers to make instant, secure and convenient online transfers to themselves and other persons 24/7/365 via a mobile phone number, regardless of which bank they hold accounts with.

In the FPS, banks offer retail customers unified fees on instant transfers between individuals:

- up to 100 thousand rubles per month – free of charge;
- if monthly payments exceed 100 thousand rubles - no more than 0.5% of the transfer amount, and no more than 1,500 rubles per transfer.

Aside from transfers between individuals, the FPS enables customers to pay for goods, works, and services, in particular by using a QR code, and to receive payments from companies. Since 2019, the FPS has handled transfers worth of over 1 trillion rubles.

The number of transactions via the FPS has grown 16-fold while their volume has increased 13-fold since the beginning of 2020.

⁶ Documents for same-day settlement are accepted 20 hours a day. For comparison, in Singapore, the RTGS system operates 10 hours a day, the figure is 12 hours in the UK, India and China, 13 hours in Japan, and 14 hours in Australia.

⁷ According to regulators' official websites, the target availability rate of their RTGS systems is set as follows: 99.7% for TARGET2 (European Central Bank), 99.0% for FedWire (US Federal Reserve), and 99.95% for CHAPS (Bank of England).

⁸ The ratio of BRPS turnover to that of all NPS payment systems (BRPS and 28 payment systems registered by the Bank of Russia).

NUMBER OF FPS TRANSACTIONS
(MILLION)

Chart 1

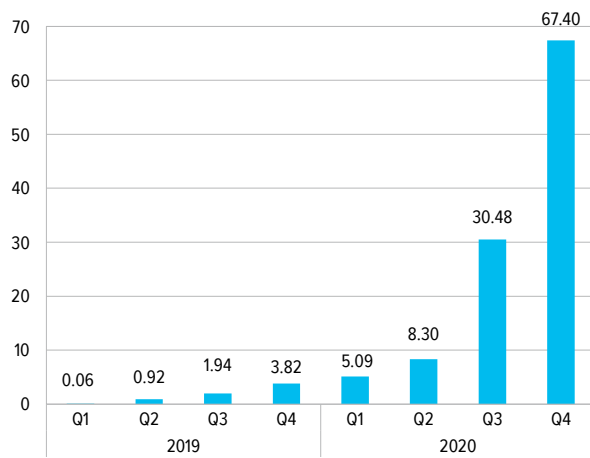
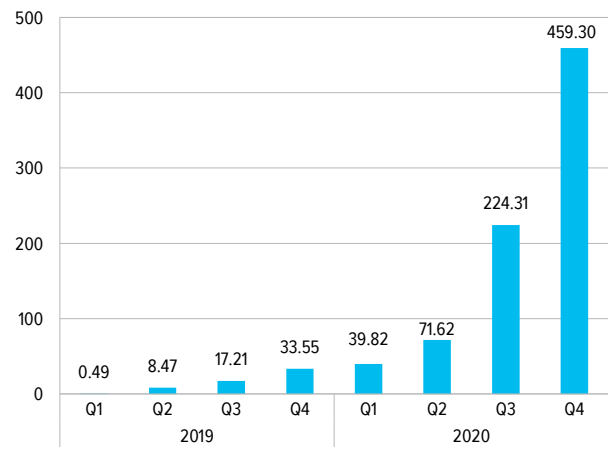
VALUE OF FPS TRANSACTIONS
(BILLION RUBLES)

Chart 2



In 2020, the number of banks participating in the FPS grew almost six-fold (from 36 to 210). At the same time, both the number and the volume of transactions rose more than ten-fold in 2020.

The development of faster payments systems is a global trend. During the last six years, the number of countries with faster payments systems launched has increased fourfold, to over 50 countries as of early 2021. In 2019 alone, new faster payments systems were launched in six countries,⁹ and in four countries¹⁰ the volume of payments in the existing operating systems has doubled. In most countries, faster payments systems are established at the initiative of the central bank.

Faster payment systems not only accelerate the receipt of funds by end recipients but also create opportunities for payment service providers to implement new online services, stimulating the development of other segments of the economy. According to FIS,¹¹ 85% of freelancers, couriers and employees under civil agreements would agree to work longer hours if they receive their remuneration instantly (online).

1.2.4 The Bank of Russia Financial Messaging System (SPFS)

The Financial Messaging System of the Bank of Russia (SPFS) was launched in 2014 and provides banks and other legal entities with a secure and protected financial information exchange environment. The SPFS operates 24/7/365 and ensures the transmission of messages in the SWIFT format and in proprietary formats of its users. The SPFS also provides services for transmitting financial messages of the Federal Treasury.

Traffic in the SPFS nearly doubled and amounted to over 20% of the domestic SWIFT traffic in 2020.

Non-residents can also gain access to the SPFS. 21 foreign organisations have concluded agreements on the provision of SPFS services, 12 of which are already connected to the system. About 400 credit institutions and other users are connected to the SPFS, with more than 70 thousand messages transmitted on a daily basis.

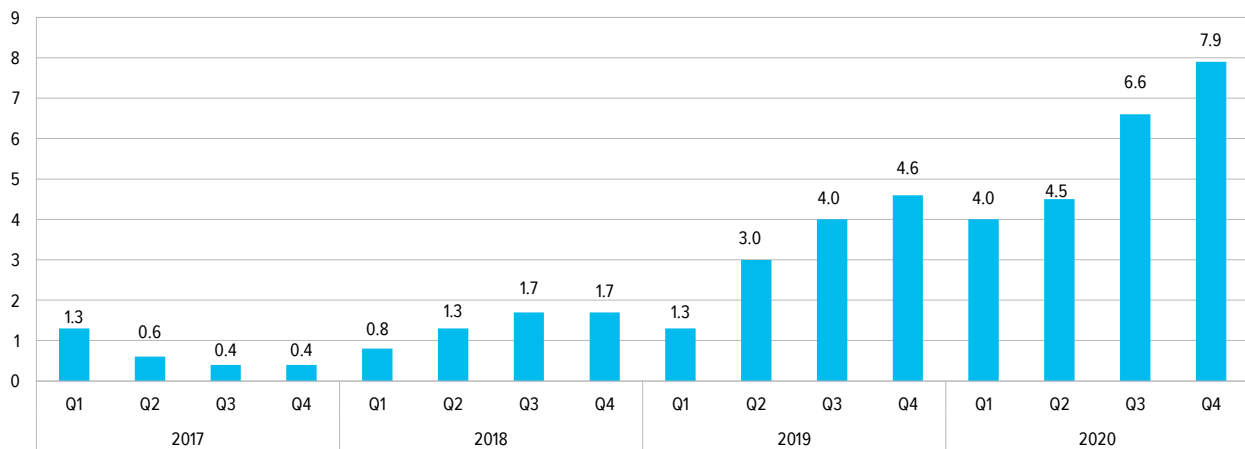
⁹ Brazil, Hungary, Malaysia, Romania, Saudi Arabia, and Croatia (according to FIS).

¹⁰ Australia, Bahrain, India, and Thailand (according to FIS).

¹¹ Fidelity National Information Service is a US provider of IT solutions and payment services. According to Bloomberg, after buying the European company WorldPay, FIS became the world's largest payment service provider.

SPFS QUARTERLY TRAFFIC
(MILLION MESSAGES)

Chart 3



More than 2 million messages were transmitted via the SPFS monthly in 2020, exceeding 20% of the domestic SWIFT traffic.

1.2.5 National Payment Card System

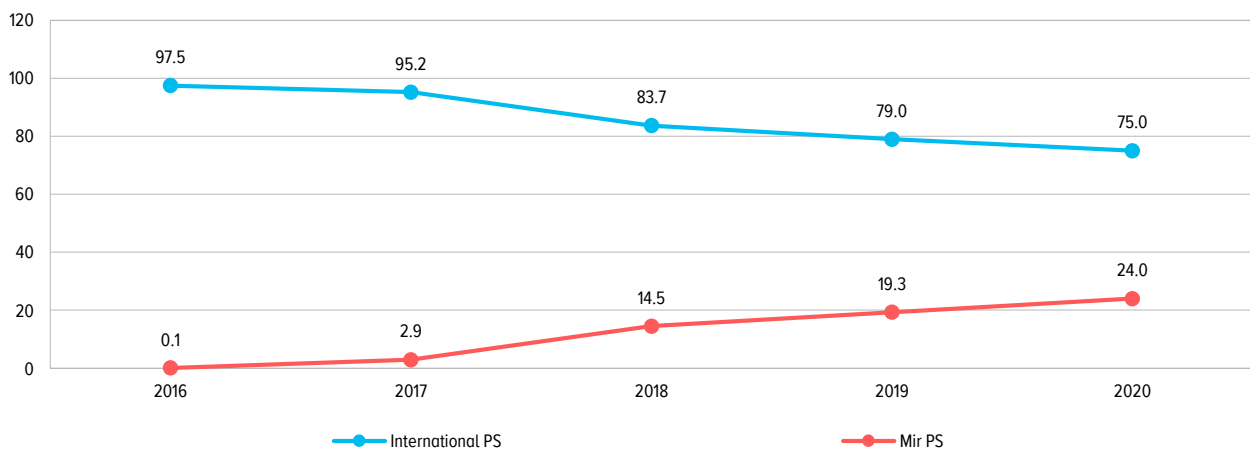
National Payment Card System (NSPK JSC) processes all domestic transactions with bank cards. At the same time, NSPK JSC is the operator and the operations payment clearing centre of Mir PS.

Mir PS provides for the issue of national payment instruments, Mir cards. Currently Mir cards are accepted across the Russian Federation, including by online acquiring.

As of early 2021, approximately 95 million Mir cards had been issued, which accounted for more than 30% of all payment cards issued in the Russian Federation. The share of transactions with Mir cards in the total amount of payment card transactions reached 24% as of 1 January 2021.¹²

PAYMENT SYSTEMS' SHARES IN CARD TRANSACTIONS IN RUSSIA
(%)

Chart 4



¹² Also, operations with the use of cards issued by other Russian payment card systems account for nearly 1% of the total volume of domestic transactions.

The use of Mir cards is expanding worldwide. Currently, they are accepted in all EAEU countries and in other jurisdictions¹³ that are popular tourist destinations for Russian citizens.

1.2.6 Reliability of the payment infrastructure

The reliable functioning of payment systems is important for people, society, and the state. With a large number of remittances in a payment system, serious disruptions in its functioning may pose risks to the stability of the entire financial system of the country. It is vital to ensure smooth functioning of payment systems that provide payments using retail payment instruments, especially bank cards.

Using a risk-based approach, the Bank of Russia sets high requirements for the payment systems that are of particular importance for financial stability or consumer confidence in cashless payments. These payment systems are recognised as systemically important (BRPS and NSD PS) or socially important (four payment systems).

The Bank of Russia conducts regular assessment of their compliance with legal requirements on NPS and international standards. The results of the assessment are published on the Bank of Russia website and demonstrate a high level of compliance.¹⁴

International organisations also assess the regulation and functioning of Russia's important payment systems. Based on the results¹⁵ of the first stage of the monitoring (self-assessment) of the implementation of the Principles for Financial Market Infrastructures, the regulation of payment systems in Russia has been awarded the 4th (highest) level of compliance with the requirements of international standards.

1.3. PAYMENT SERVICE PROVIDERS

Banks and other payment service providers offer their customers access to bank accounts, a wide range of payment instruments and enable them to make payments and funds transfers, in particular through remote channels. As of 1 January 2021, there were 406 credit institutions in Russia, including 274 bank card issuers, 251 acquirers, and 80 e-money operators.

Banks provide payment services in cooperation with non-bank organisations, the majority of which are payment agents and bank payment agents (totalling about 5,000 organisations). Non-bank organisations play a crucial role in ensuring financial inclusion by offering more than 350,000 cash desks and offices providing payment services. Together, banks, bank payment agents and payment agents operate more than 500 thousand ATMs and payment terminals, and more than 3.5 million POS terminals.

These figures generally correspond to the average European level of availability of retail payment services. For instance, there are about 260 bank offices per 1 million adults in Russia, nearly 340 offices per 1 million adults in Germany, and over 110 offices per 1 million adults in the Netherlands.

¹³ As of early 2021, Mir cards were accepted in Abkhazia, Armenia, Belarus, Vietnam, Kazakhstan, Kyrgyzstan, Turkey, Uzbekistan, Tajikistan, South Ossetia, and Cyprus; inaugural transactions have been carried out in the UK and South Korea. For the updated list of countries, please refer to [the NSPK website](#).

¹⁴ The results are available on the Bank of Russia website in the [Supervision and Oversight over the National Payment System](#) section.

¹⁵ The assessment results are published on the Bank for International Settlements website in the [Committees and associations/Committee on Payments and Market Infrastructures/Monitoring implementation of the PFMI](#) section.

1.4. PAYMENT SERVICE CONSUMERS

There were about 75 million economically active individuals,¹⁶ 3.7 million individual entrepreneurs, and 3.5 million legal entities in Russia as of 1 January 2021.¹⁷ They make over 1,500 payment transactions every second, using various payment and funds transfer instruments. Besides, 87% of Russian bank customers use various digital channels (mobile apps, internet banking, and bank websites).¹⁸

1.4.1. Consumer confidence in cashless instruments

Cashless payments are firmly integrated into the everyday life of Russian consumers. The share of cashless payments in retail payment turnover increased almost fivefold from 2013 to 2020 and exceeded 70% as of 1 January 2021, which indicates a high level of consumer confidence in the payment instruments and services offered. The use of cashless instruments (e.g. letters of credit instead of safe deposit boxes) in real estate purchases and sale transactions is gradually expanding.

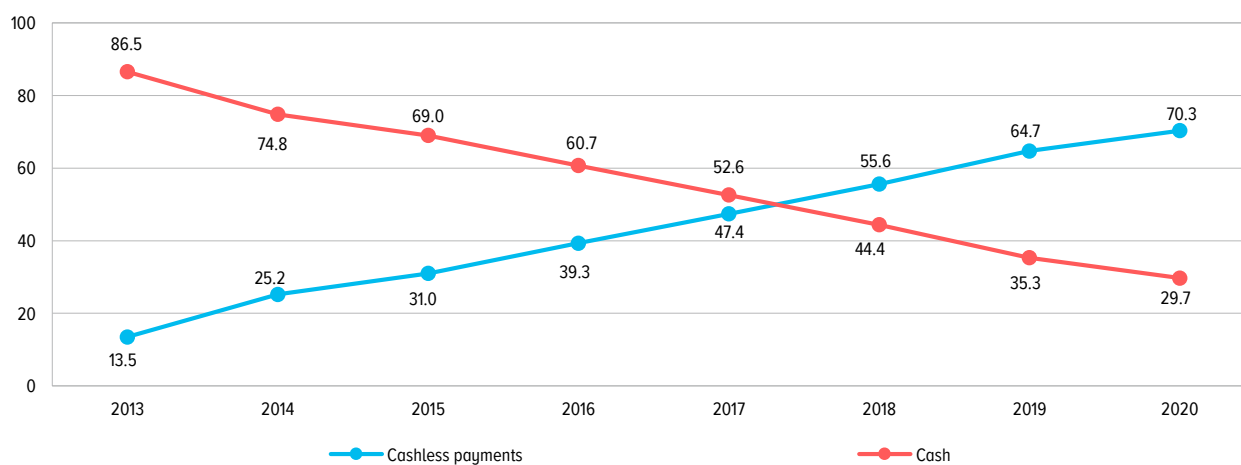
Consumer confidence creates favourable conditions for the introduction of new technologies in the payment sector. Almost 70% of cashless payments for goods and services in 2020 were made using the contactless payment technology, of which one in four payments was made using smartphones and other contactless payment devices.¹⁹ Russian consumers are getting accustomed to using new payment services faster than the residents of most countries. For example, in the US, where the infrastructure is at a comparable level,²⁰ only one in nine customers has used a smartphone or other contactless payment devices. In 2020, the COVID-19 pandemic further boosted the development of digital services, remote channels, and contactless payments.

The share of cashless payments in the retail turnover was at 70.3% in 2020.

Besides, there is still potential for further growth of cashless payments. For instance, the average number of cashless payments per capita in Russia is 318, while in the UK it is 450, it is 500 in the US, 550 in South Korea, and over 750 in the leading countries (e.g. Singapore).

SHARE OF CASHLESS PAYMENTS IN RETAIL PAYMENTS IN RUSSIA (%)

Chart 5



¹⁶ According to the 2020 data of the Federal State Statistics Service (Rosstat).

¹⁷ According to the data of the Federal Tax Service as of 1 January 2021.

¹⁸ According to estimates by Ernst & Young, 2019.

¹⁹ According to the accounting statements of credit institutions and NSPK JSC's information.

²⁰ In Russia, contactless payments are supported by more than 80% POS terminals, in the US the figure is about 75%.

1.4.2. Payment services for population

The most popular payment services for households are payments and transfers, including the use of bank cards, as well as automatic payments set up by customers through remote banking systems. Individuals actively use remote banking channels when interacting with banks. For instance, 98.9% of all funds transfer instructions by individual customers were submitted to credit institutions electronically in 2020. Furthermore, according to BCG²¹ research, 30% of Russians used mobile banking more often in 2020 than in 2019.

In the payment turnover, 67.6% of all payments are made using bank cards, 29.7% are made with cash, and around 1.5% use electronic money. All other payment instruments account for 1.2%.

Currently, around 70% of Russian citizens are used to bank cards functioning as instruments for everyday payments. Besides, holders of debit cards are the most loyal bank customers.²²

98.9% of all instructions by individual customers were submitted to banks electronically

Bank cards are also among the most popular instruments for retail cashless payments in other countries. For instance, the share of bank cards in retail payments in France and the Netherlands is around 55%, it is about 66% in Sweden and the UK, and nearly 75% in South Korea and the US. In Singapore, more than 94% of payments are made with bank cards, and an average citizen holds 11 cards. At the same time, card payments account for around 44% of retail payments in India, while in Germany their share is less than 25%.

Since SPFS was launched, funds transfers via mobile phone number have been gaining popularity. 111 million operations were made via SPFS for the amount of 795 billion rubles in 2020. The number of transactions via SPFS rose 16-fold and their volume increased 13-fold over the year.

1.4.3. Payment services for business

More than 250 banks and many thousands of offices offer services to legal entities and individual entrepreneurs for maintaining settlement accounts, accepting cashless payments, and making funds transfers (settlement/cash services and SCS). Furthermore, many banks offer concluding SCS agreements remotely using government information systems. In 2020, over 1.5 million new bank accounts were opened for legal entities, and the total number of such accounts exceeded 13 million as of 1 January 2021. Legal entities actively use remote banking channels when interacting with banks. About 96% of all legal entities' funds transfer instructions were submitted to credit institutions in an electronic form in 2020.

The highly developed payment infrastructure allows banks to provide additional payment services to businesses, including liquidity management through pooling, offsetting incoming payments, execution of periodic payments, etc.

In addition, banks engage non-bank organisations, such as payment aggregators, in order to increase the accessibility of payment card acceptance services, electronic wallets, and other payment instruments. As of the beginning of 2021, the Bank of Russia register contained over 30 payment aggregators. According to experts, up to one-third of Russian internet stores accept cashless payments through intermediaries.

Around 96% of all legal entities' instructions to banks were submitted electronically

²¹ According to Boston Consulting Group's report 'The Front-to-Back Digital Retail Bank' for 2020.

²² According to NAFI's report 'NPS-2020: loyalty of customers using retail banking services'.

In order to reduce the costs for retail and service outlets (RSOs) and to promote competition in the payment market, the FPS introduced payments for goods, works and services using a QR code (a C2B service). Bank fees for RSOs in the FPS cannot exceed 0.7%, which is 2 to 3 times lower than the average acquiring fees. The service has already been implemented by over 40 banks and the number of RSOs connected to it has exceeded 47 thousand.

1.4.4. Security and protection of consumer rights

Implementation of the Bank of Russia system of information security standards, the introduction of a requirement to equip all payment cards issued in the Russian Federation with a data protection chip, and a range of other information security measures helped reduce the share of unauthorised transactions with electronic means of payment by more than 30% in 2015–2019. However, the development of technologies creates more advanced means of stealing funds. The total amount of unauthorised transactions was 6,426.5 million rubles in 2019, and social engineering was the main method used to steal funds: over the first three quarters of 2020, it was used in 65.6% of unauthorised transactions.

The current legislation protecting payment services consumers' rights provides for mechanisms of compensation for incurred losses. For instance, the NPS legislation stipulates the bank's obligation to reimburse any funds debited without the customer's consent upon timely notification of the bank and in the absence of violations by the client of the bank rules for using cards and other electronic payment instruments.

The number of cases or attempts of unauthorised debiting of funds from corporate accounts as a result of fraud or cyberattacks remains high. Over 2019, legal entities informed banks about 4,609 unauthorised transactions for a total amount of 701 million rubles.

In order to reduce businesses' losses from fraud, in 2019 the NPS legislation expanded the capacities of legal entities and banks servicing them with regard to countering unauthorised transfers. At the same time, improving the security of customers' funds remains a key issue both for commercial banks and the regulator.

Creation of a secure trusted environment and the use of modern technologies to rapidly identify and eliminate possible vulnerabilities are important elements of managing information security risks.

Conclusion:

- Main guidelines for the **NPS Development Strategy 2013** have been successfully implemented.
- A **national payment infrastructure** ensuring the **independence** of the Russian payment space and promoting the reliability and development of the financial sector has been established.
- High level of consumer confidence in cashless payments and new payment instruments based on innovative technologies has been reached.

2. GLOBAL AND DOMESTIC TRENDS AND CHALLENGES OF THE PAYMENT MARKET

In the past decade, most innovations in the payment area were focused on improving user interfaces without fundamentally altering payment instruments themselves. However, a number of crucial trends have emerged lately:

- payment industry, governments and society in general, are passing through a **digital transformation**, in Russia and worldwide;
- payment process has become less visible due to its integration into other services with the use of **new technologies**;
- **new players, namely major FinTech and IT companies**, have started to play a more active role in the payment sphere, now challenging traditional payment institutions;
- there is an increasing demand for **seamless interactivity and interoperability** of all payment market participants;
- risks of **the largest players' domination** are increasing, which requires establishing conditions for maintaining competition in the payment sphere;
- the **role of regulators** is becoming ever more important with regard to maintaining the continuity of payment services, creating conditions encouraging the transition to digital payments with high security standards, and maintaining consumer confidence in cashless payments.

2.1. Transformation of client experience and consumption models

The level of penetration of new technologies in the financial sector quadrupled, reaching 64% globally and over 80% in Russia in 2015–2019. At the same time, payments are still the most popular area of application of FinTech instruments: 96% of customers worldwide know about FinTech solutions related to payments and transfers. Russia occupies the leading position in respect of this indicator (99.5%).¹

This leads to the transformation of client experience:

- possibility to receive information online creates a need to perform an increasingly wide range of operations instantly;
- time required for a customer to perform transactions is becoming the most valuable factor.

Therefore, the demand for fast, secure, affordable and convenient payments using simplified identifiers (mobile phone, e-mail address, social ID, etc.) is growing. At the same time, consumers are demanding more transparent and simple terms and conditions for payment services. For consumers, it is very important to be able to compare products offered by different suppliers 'here and now' and choose the best option instantly.

2.2. NEW PAYMENT TECHNOLOGIES

Innovations and digitalisation are changing the traditional payment principles. To improve the loyalty of the customer base, payment service providers have started to abandon their traditional channels and payment instruments by introducing both new products and services, and digital payment initiation methods. The use of digital methods of initiating and making payments, including biometrics and voice assistants, payment bracelets and other wearable devices, messengers and chat bots, is growing rapidly.

¹ According to estimates by Ernst & Young, 2019.

2.2.1. Biometrics in the payment sector

Biometrics technology is being used more actively to identify and authenticate users, as well as initiate and accept payments. Currently, the bio-acquiring technology is piloted by many points of sale, including large Russian retailers and fast-food chains. Experts estimate² that by 2024 the global market volume of biometric payments will reach 2.5 trillion dollars, with the forecast for average annual growth rates of the use of biometric technologies in Russia exceeding the global average by more than 50%.³

2.2.2. Payments using wearable devices

Payments with the use of smart devices, such as payment bracelets, rings and other devices, are being actively introduced. According to expert assessments,⁴ they already account for over 1.2% of all contactless payments worldwide. This segment will grow faster than others because of the convenience and security of such means of payment. Furthermore, if a bracelet is lost or stolen, the damage is considered significantly lower than when the same happens to a smartphone.

2.2.3. Payments via messengers and chat bots

It is projected that the volume of payments via messengers and chat bots will be growing significantly, exceeding 8 trillion US dollars by 2025 as per some estimates. This is largely due to messengers' huge customer base. For example, as of October 2020, WhatsApp had roughly 2 billion users, Facebook Messenger had almost 1.3 billion users, and WeChat (Weixin) had over 1.2 billion users. In China, where payments via messengers have already been available for 4–5 years, this function is used by more than 30% of the population. Payments via WhatsApp and Facebook Messenger are currently available in a number of countries, including India (the second-largest market by the number of potential users after China). These systems plan to launch the payment functions in new markets in 2021.

2.3. NEW PAYMENT MARKET PARTICIPANTS

The dynamic introduction of new technologies in the payment sector enhances the role of technology companies and other non-bank institutions that can swiftly launch innovative solutions and implement new efficient business models. At the same time, such companies are often not subject to AML/CFT legislation, and their activities are not always regulated and supervised by central banks or other financial regulators.

2.3.1. Global IT (BigTech) companies

Global IT (BigTech) companies are entering the payment market with new high-tech products and services.

By market capitalisation, seven of the ten top companies in the world are BigTechs: Microsoft, Apple, Amazon, Alphabet (Google), Facebook, Alibaba, and Tencent. They have substantial financial resources, high competencies, infrastructure required for using new technologies, as well as a large and loyal customer base, and now BigTech companies claim leading positions in the digitalisation of retail payment services. In other countries, BigTech companies have implemented projects related to electronic money, money transfers, online acquiring, and stablecoins.⁵ As for the Russian Federation,

² Juniper Research, 2019–2020.

³ J'son & Partners Consulting, 2018.

⁴ Reports And Data: Wearable Payments Devices Market Report, 2019.

⁵ In this document, stablecoins mean a type of cryptocurrency with built-in mechanisms for stabilising its exchange rate against other assets or cryptocurrencies secured by other assets.

more than 20% of all contactless payments are made using BigTech payment applications, and their share is growing.

By offering payment services to consumers, BigTech companies accumulate financial (transactional) and social (marketing and behavioural) customer data, which they use afterwards in promoting their own products. In this way, the role of major players keeps increasing, stimulating an oligopoly or monopolisation in the payment market.

2.3.2. Platforms and ecosystems

With a large amount of information about their customers, major companies are able to offer them a single environment for obtaining a wide range of services to satisfy their everyday needs – on a **unified technological platform**.

In addition, the leading players form entire **ecosystems**, not only expanding their own product line but also interacting with service providers from other sectors of the economy. This creates a synergistic effect due to more efficient processing of client information and the provision of common services available within an ecosystem.

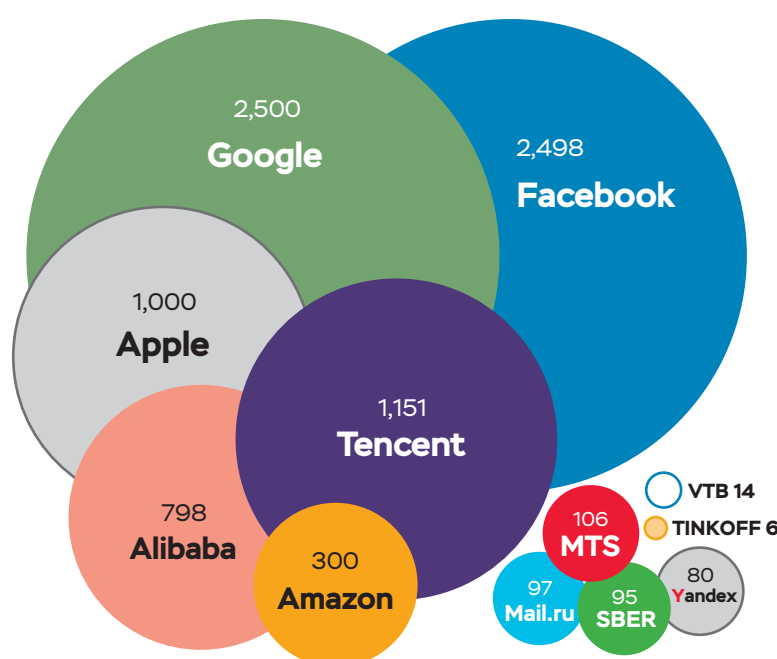
Its participants also accumulate customer data, which allows them to acquire non-competitive advantages compared to other players on the financial market.

In international practice, ecosystems are usually formed on the basis of BigTech firms due to the size of their customer base and the availability of sufficient financial resources. In Russia, ecosystems are often built on the basis of large financial institutions that have the necessary resources and technological base.

Platforms and ecosystems can improve customer experience and provide a greater choice of products and services on more favourable conditions. At the same time, participation in ecosystems leads to the transformation of risks of financial institutions, which often act as the basis of ecosystems. The formation of ecosystems can potentially strengthen the positions of major companies, which will increase the concentration in the payment market. In addition, the development of ecosystems entails a restriction of independent service providers' access to the customer base and information, which affects competition in a negative way.

COMPANIES' CUSTOMER BASE
(BILLION USERS*)

Chart 6



* According to Reuters as of February 2020.
Source: companies' data.

2.3.3. Non-bank payment service providers

The growing role of non-bank payment service providers is typical for many countries. As of the end of 2019, non-bank companies FIS and First Data became the largest payment service providers in the world. These companies provide a wide range of services: POS acquiring and servicing POS terminals, processing electronic payments, transferring financial messages, maintaining ATM networks, etc.

In the US, non-bank organisations provide acquiring services to 80% of all points of service; in the EU, more than half of all e-money issuers are non-bank organisations. In China, non-bank payment service providers AliPay and WeChat (Weixin) control over 70% of the retail payment market. At the same time, the payment business is classified as a separate activity of non-bank organisations, which is why regulators in many countries are actively developing approaches to regulating such activities.

According to expert assessments, more than one-third of Russia's websites accepting bank card payments interact with payment aggregators. Nearly 20% of all contactless payments are made using payment applications developed by non-bank vendors.

2.4. SEAMLESS INTERACTION AND INTEROPERABILITY

The growth of customer expectations with regard to the speed and convenience of services, introduction of innovative payment solutions to the market, and a more diverse landscape of payment market participants require a seamless exchange and online processing of payment information.

In foreign practice, uniform schemes and formats of electronic financial messages based on the international standard ISO 20022 are used to ensure interoperability, structuring and expanding the composition of transferred payment information. For instance, more than 60 countries have already implemented or are implementing ISO 20022 in the financial sector.

Implementation of application programming interfaces (API) is also expanding for the purposes of seamless interaction of information systems. More than 75% of global banks have already implemented or are planning to implement API within a year.

2.5. COMPETITION IN THE PAYMENT SECTOR

The creation of conditions for maintaining competition in the payment sector is the most important factor for the emergence of new products and services, and the reduction of costs for consumers and society in general. Moreover, in the Russian payment market, despite a large number of payment service providers, only one or two major participants hold the major share. For instance, more than 65% of all bank accounts and payments of individuals, and more than 70% of the market⁶ for issuing and servicing payment cards (in terms of the share of customers and transfers using these cards) are occupied by a single player.

This situation not only allows such payment market participants to achieve significant economies of scale in their operations, but can also limit their customers' use of other suppliers' products and services as they become less attractive compared to the products and services of the main supplier.

Moreover, the dominant position of certain players in the payment market may have a negative impact on the accessibility of payment services. Neither the dominant player nor players with a small market share are interested in providing services in remote or sparsely populated areas. This is especially important for Russia, given its geographical scale and the uneven development of regional infrastructure.

In other countries, the concentration level in the payment sector is much lower. For example, while nearly 50% of the US banking system's assets are concentrated in four largest banks, the

⁶ By number of customers and amount of card transfers.

share of each in the payment market does not exceed 15%, and they actively compete with each other.

2.6. INCREASED REGULATORY INFLUENCE

The above trends are being studied in detail by the regulators of the world's leading economies. In a number of cases, foreign regulators are actively influencing the market by providing equally accessible infrastructure, stimulating competition and supporting the introduction of innovations in the payment sector.

Acting as payment infrastructure operators, many countries' regulators seek to provide population and businesses with modern payment services and tools. For example, **faster payments systems** are operating in 56 countries.⁷ The European Central Bank launched the EU-wide TARGET Instant Payment Settlement service (TIPS) at the end of 2018. The US Federal Reserve System announced its decision to create a similar service (FedNow) in 2023–2024. The People's Bank of China has created a special settlement service for online trade (IBPS), as well as a special infrastructure for the interaction between banks and non-bank payment service providers (Nets). The Reserve Bank of India and the country's commercial banks are developing a common infrastructure for mobile and biometric payments.

Many regulators support and coordinate market participants' efforts to develop payment products and services based on new technologies, support **new and promising initiatives**, while striving to bring reliable and safe products to market. For example, the Monetary Authority of Singapore (MAS), as an initiator of changes that support innovations, maintains the operations of the regulatory sandbox, keeps the catalogue of financial APIs, develops payment standards, and allocates grants for promising start-ups. In addition, the MAS has initiated the creation by market participants of a professional association (the payment board), and issued recommendations on cybersecurity and the use of modern technologies. Similar measures have been implemented in the UK, the Netherlands, and a number of other countries.

Given a significant increase in the concentration level and the absence of market mechanisms to maintain a competitive environment in the payment market, regulators are forced to resort to structural measures. When the share of the seven largest banks in the mass payments and retail lending segment exceeded 66% in the UK, the regulators have established an obligation for them to open free access to bank customer accounts for third-party service providers. This became the starting point for the development of **open banking** in the UK and the active involvement of non-bank organisations in the payment sector.

Authorities in Australia, the UK, the EU, and a number of other countries have established requirements for banks to provide access to information about customer accounts, and enable any payment market participant to conduct payment operations under the consent of the respective client. These rules became the main incentive to **implement Open APIs in payments**, or for banks to use open programming interfaces. To promote competition in the payment market, regulators in China, the US, the EU, and other countries have established the institution of an **independent non-bank payment service provider**.

Given the significant differences between non-bank organisations and traditional financial institutions, regulators have developed special procedures for market access, regulation and supervision of non-bank suppliers. In particular, China and the US have introduced special requirements for such organisations; if an institution complies, a special permission is issued for the types of services provided by non-bank suppliers. The EU⁸ and the UK⁹ use a non-bank supplier

⁷ FIS, 'Flavors of Fast', 2020.

⁸ The Revised Payment Services Directive (PSD2).

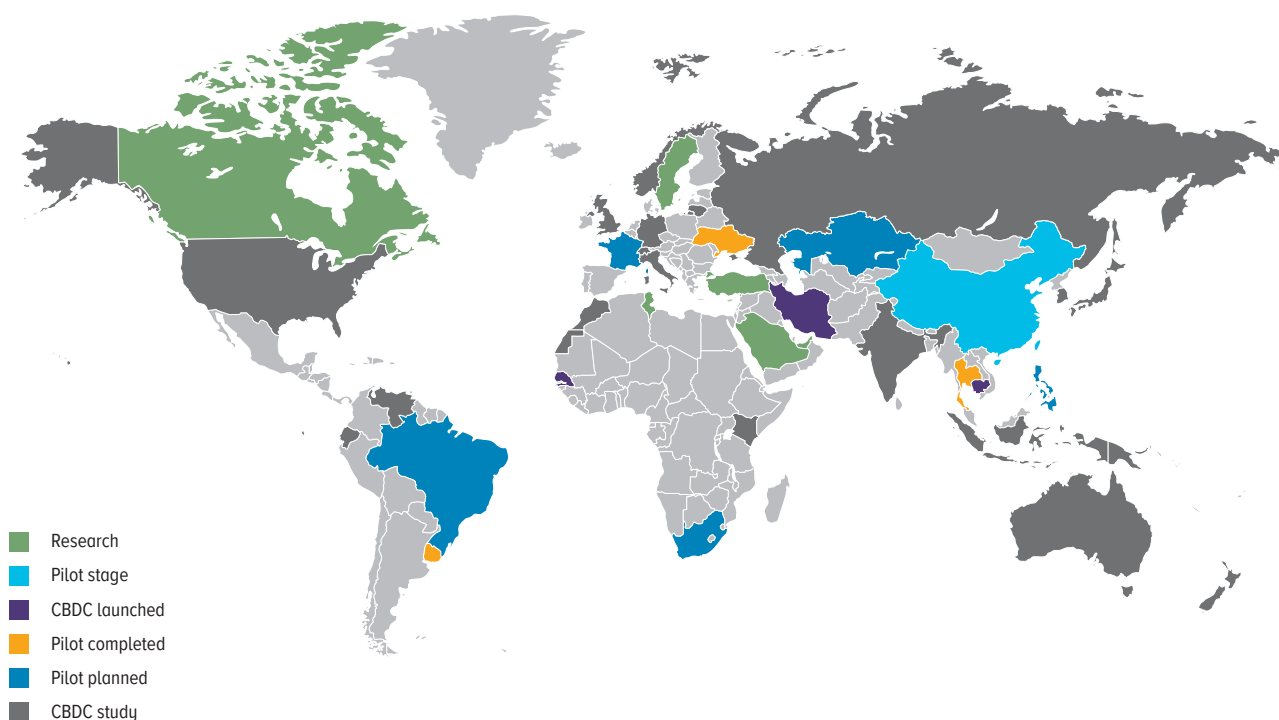
⁹ FCA Rulebook.

registration mechanism. For that purpose, non-bank suppliers are checked for compliance with the legislative requirements and the types of payment market activities that they have indicated when registering (issuance of electronic money, initiation of payment transactions, acceptance of electronic payments, etc.).

In addition, the most important initiative of regulators in many countries has been analysing the possibility of introducing **central bank digital currencies (CBDC)** as a new government payment instrument.

CBDC PROJECTS WORLDWIDE

Chart 7



Conclusion:

- The payment industry is undergoing a **digital transformation**.
- The digital transformation opens up new opportunities for the **development of a competitive and innovative payment market** in Russia.

Key challenges for the Bank of Russia:

- market power of major digital transformation leaders is growing;
- role of ecosystems is increasing;
- unevenly developed regional infrastructure development influences the accessibility of payment services for consumers;
- importance of ensuring continuity and cybersecurity is growing;
- weak competition in certain payment market segments;
- national digital currencies are emerging and developing.

3. NPS DEVELOPMENT AREAS FOR 2021–2023

The goal of the NPS Development Strategy for 2021–2023 is to provide convenient and accessible¹ payment services to households, businesses, and the state. The key objectives of the Strategy are:

- ensuring the stability of the NPS and payment sovereignty of the Russian Federation;
- creating conditions for the introduction of innovations in the payment sector;
- developing competition in the payment market and reducing consumer costs;
- promoting international cooperation in the payment sector and the export of payment services.

The achievement of the strategic goal and implementation of the above objectives will be carried out in collaboration with the payment market participants in the following interrelated areas:

1. Development of the NPS regulation.
2. Development of the national payment infrastructure.
3. Development of competition and technologies in the payment market.
4. Development of international cooperation in the payment sector.

3.1. DEVELOPMENT OF THE NPS REGULATION

The development of a competitive and technological payment market offering up-to-date payment solutions requires the creation of a secure environment that encourages the introduction of innovations.

3.1.1. Improving the regulatory environment

Expansion of proportionate regulation

It is planned that the principles of proportionate regulation currently applied to important payment systems will be extended to other important payment services market participants. Moreover, it is advisable to exclude a number of regulatory requirements for market participants whose activities are not of a significant scale and do not pose significant risks for consumers and society in general.

The Bank of Russia will also consider the possibility of creating self-regulatory organisations (SROs) in market segments where it would be advisable and efficient to transfer the function of monitoring compliance with regulatory requirements to SROs.

Regulation of payment services in ecosystems

Given that emergence and expansion of ecosystems has become a global trend in the development of the payment industry, the Bank of Russia will continue to analyse and assess the practice of providing payment services, as well as the use of transactional information within global and Russian ecosystems. It is planned to pay special attention to ensuring the freedom of selecting a payment service provider and the simplicity of switching providers for consumers, in particular through the access of payment service providers to the customer base, common data and ecosystem services.

Taking into account the risks for the competitive environment, potential barriers for the development of innovations and the need to maintain consumer confidence in cashless settlements, the Bank of Russia plans to develop methods of regulating the provision of payment services within ecosystems, including information protection and banking secrecy regulation.

¹ In this context, accessibility means the psychological readiness and technical capability of a consumer to receive a payment service, as well as the acceptability of its financial conditions.

Regulation of the institution of non-bank payment service providers

In order to develop a competitive environment, the Bank of Russia plans to establish a legal framework for the introduction of the institution of non-bank organisation (neither a bank nor a non-bank credit institution) as an independent payment service provider, including the establishment of criteria and procedure for such organisations to enter the market and the creation of a legal framework for their activities.

At the same time, the introduction of a new NPS entity should not lead to regulatory arbitrage with other market participants.

Determining the procedure for monitoring the activities of payment agents

Payment agents' activities are concentrated in socially important segments of the payment services market. At the legislative level, it is planned to establish mechanisms for their admission to the market, collection of reporting and supervision of payment acceptance services. In addition, given the considerable number of the existing payment agents (over 5,000), it is advisable to envisage the creation of a SRO in the area of payment acceptance.

It is planned to empower the Bank of Russia to supervise the activities of payment agents in cooperation with the SRO.

In order to improve the transparency of information on payment agent market participants, it is advisable to authorise the Bank of Russia to maintain a register of payment acceptance operators.

3.1.2. Creating a legal framework for the implementation of payment standards and technologies

In order to create conditions for the transition to the implementation of national and international standards in the payment industry, the Bank of Russia plans to continue developing the legal framework for standardisation.

Legal basis of implementing payment standards

To provide new possibilities for establishing universal payment details, the Bank of Russia will assess the feasibility and, if necessary, create legal conditions for the use of international payment standards, such as IBAN,² etc. The regulator will also discuss with market participants possible approaches to introducing a universal standard of payment QR codes.

The transition to using open APIs will require establishing a legal framework for the use of this mechanism, the definition of roles, rights and obligations of NPS entities when working with open APIs. The Bank of Russia plans to discuss approaches to the regulation of open banking interfaces with payment market participants and, if necessary, initiate amendments to the NPS legislation.

Legal framework for the use of new payment technologies

In order to promote the widespread use of new payment initiation and confirmation methods, the Bank of Russia will provide the necessary regulatory framework for the use of digital payment initiation and acceptance technologies.

Subject to demand from payment market participants, it is planned to address the issues of forming and transferring payment orders using wearable and other smart devices (including voice assistants, chat bots, and other automatic intermediaries).

Creating conditions for the introduction of electronic invoices

In order to promote the development of B2B payment services, it is planned to establish a legal framework for the introduction of an instrument to process electronic invoices (e-invoices),

² IBAN, ISO 13616, is the international standard for the representation of a bank account, which also includes the identifiers of the country and the bank where the account is opened.

enabling the transfer of e-invoices and their conversion into payment orders. This instrument will create conditions for market participants to implement new solutions in the field of integration of electronic document workflow and settlement services, ensuring seamless billing, payments, and payment reconciliation procedures in the B2B segment.

Improving information security standards

Conditions for the introduction of innovative products and services will be created taking into account the maintenance of trust between payment industry participants through establishing information security standards that reduce losses of financial market participants from fraud, including social engineering.

3.1.3. Legal basis of new participants' access to the national payment infrastructure

It is planned to establish a legal framework for providing access to the BRPS and FPS services not only to banks but also to non-bank payment service providers. The Bank of Russia will explore the possibilities of expanding the forms of participation in the BRPS, as well as the conditions for access and use of national payment infrastructure services by non-bank organisations.

3.2. DEVELOPMENT OF THE NATIONAL PAYMENT INFRASTRUCTURE

A stable and open national payment infrastructure that is widely accessible and features in-demand innovative services is the foundation for ensuring payment independence and the development of the Russian payment market. The Bank of Russia creates and develops an equally accessible payment infrastructure, ensuring that banks are connected pursuant to uniform rules and standards, on equal fee terms. This enables banks to implement new services for their customers and promotes competition in the financial market.

The national payment infrastructure uses software developed in Russia, including information security systems. As part of its efforts to promote import substitution and reduce technological dependence on external suppliers, the Bank of Russia, together with market participants, will implement the requirements of Federal Law No. 187-FZ, dated 26 July 2017, 'On the Security of Critical Information Infrastructure of the Russian Federation'.

3.2.1. Bank of Russia Payment System

Organisation of technological access of non-bank organisations to the BRPS

It is planned to establish a technological framework for providing access to BRPS services not only to banks but also to non-bank payment service providers. This will help maintain competition in the payment market and mitigate the risks associated with the expansion of the role of such institutions in the provision of payment services.

Organisation of technological access of non-residents to the BRPS

In order to develop cross-border payments in the national currency, enhance the role of the Russian ruble and promote it abroad, as well as support the export of payment services to other countries, the Bank of Russia plans to ensure the possibility of access to BRPS services for banks of the EAEU countries and other non-residents. In addition to the technological capacities, it is crucial to establish the criteria and legal basis for the provision of BRPS services to non-residents, taking into account legislation on anti-money laundering and countering the financing of terrorism and the proliferation of weapons of mass destruction.

This will also require the improvement of information security methods to be implemented in accordance with the Guidelines for Financial Sector Information Security Development.

Expanding BRPS interaction with other financial market infrastructures

To ensure a high level of uninterrupted provision of payment services in the Russian payment space, it is planned to develop the interaction between the BRPS and financial market infrastructure organisations. The Bank of Russia will also consider the possibility of implementing a service within the BRPS to execute interbank settlements for other payment systems, primarily important ones.

The BRPS accessibility ratio is planned to be 99.99%.

3.2.2. Faster Payments System

Development of FPS services

In order to promote competition and improve the quality and accessibility of payment services within the FPS, special attention will be paid to the scaling of C2B and B2C services, including for the small- and medium-sized businesses. This will enable retailers to significantly reduce their transaction costs.

In addition, in order to facilitate the connection of companies, especially small- and medium-sized enterprises, to the FPS, it is planned to develop new technological schemes of interaction between RSOs, banks and the OPCC FPS.

Furthermore, in order to develop the FPS and maintain competition in the payment market, it is planned to establish approaches for the participation of non-bank organisations in the FPS.

SBPay mobile application

In order to facilitate integration with the FPS, it is planned to launch the SBPay mobile application, which will implement various payment scenarios, such as funds transfers, payments for goods and services, electronic invoice issuance and payment, etc. This will enable customers to use the FPS as an independent payment tool, which will make payments simpler and more convenient, and will increase the share of cashless payments in the retail trade.

At the same time, operations via the FPS will also be available in other applications, for example in banks' mobile applications.

Launch of C2G and G2C services

It is planned to enable individuals to make payments to government authorities within the FPS (C2G service), including taxes, fines, fees and duties based on the State Information System on State and Municipal Payments In 2022–2023, as well as to implement the service for making payments to individuals from the budgets of the budget system of the Russian Federation (G2C service), which will increase the speed of receiving funds and the availability of payment services across Russia, including its geographically remote areas.

Possibility to deposit funds to accounts with cash through FPS and other services

In order to improve the convenience and accessibility of payment services for individuals, it is planned to support the possibility of depositing funds to accounts opened with any FPS member bank with cash through the FPS using a broad banking cash acceptance infrastructure.

The Bank of Russia is ready to work with the market to assess the feasibility of implementing other services in the FPS, for example, salary payments.

3.2.3. NSPK and Mir PS

Development of platform payment services

Financial and technological products and services will continue to be developed within the NSPK and Mir PS using innovative digital solutions aimed at enabling customers to make convenient and secure payments, promoting the targeted and transparent nature of payments for the state and effectively addressing the partners' business objectives. The development will be based on the NSPK platform services available to all payment market participants both in the Russian Federation and internationally, where Mir cards are being promoted.

In order to develop the loyalty programme of the Mir PS, it is planned to expand the list of promotional mechanics and RSOs participating in the programme and implement targeted campaigns aimed at activating and retaining consumer transactional behaviour. It is also planned to expand the functionality of the RSOs' personal accounts, and introduce personal accounts for banks to improve the client experience of the programme's partners – banks and RSOs.

The Mir PS operator will continue to develop a universal platform and its own application for mobile contactless Mir card payments using Mir Pay mobile devices.

The development of Mir PS products and services will be based on advanced tools and technologies ensuring the support, security and protection of cardholders and users of the system's services 24/7/365.

Digital payment and non-financial services for interaction between the government agencies and households

In order to support the processes implemented by the government to provide targeted and transparent support to various segments of the population, it is planned to expand the geography and the list of payments provided through the Russian Federal Treasury using the NSPK and Mir cards and render the necessary technological support to similar initiatives and decisions at the level of regional and municipal authorities.

It is planned to continue the development of a technological platform that provides non-financial functions when issuing campus, student and other cards, as well as the possibility to receive a wide range of services via a single medium, the Unified Resident Card.

It's expected that NSPK will participate in the development of mechanisms for the provision of state, municipal, social and other services to simplify the interaction of households with the government agencies, including the creation of a unified system for the payment of transportation fares in the Russian Federation.

International promotion of national payment instruments

The promotion of Mir cards abroad is planned to be performed primarily through expansion and development of the partnership with payment systems operating in the EAEU/CIS countries. This will enable Mir card holders not only to withdraw funds from ATMs and pay for goods and services at RSOs, but also to make P2P transfers to relatives and acquaintances in the EAEU/CIS countries.

The Bank of Russia will also continue to develop relations with leading banks of tourist destinations popular with Russian citizens, including Turkey, the UAE, Vietnam, Bulgaria, Thailand, South Korea and others. The expansion of Mir card acceptance geography and network will enable transactions with national payment system cards in popular non-CIS countries.

In addition, the involvement of partners by Mir PS, i.e. of foreign banks and large payment aggregators, should enable payments with Mir cards on foreign websites popular with Russian citizens.³

³ Currently, Mir cards are accepted on three foreign websites: *asos.com*, *netflix.com*, and *victoriassecret.com*.

3.2.4. The Bank of Russia Financial Messaging System (SPFS)

Development of the service bureau institute

In order to increase the number of the SPFS users, the Bank of Russia plans to continue the development of the SPFS service bureau mechanism, as well as to reduce new users' costs of connecting to the SPFS, including through the use of APIs.

This will also make it possible to simplify the processing of transferred financial information by users and expand possibilities for the interaction of the SPFS with other financial information exchange systems, ensuring their interoperability.

Expansion of non-residents' participation

The promotion of SPFS services abroad continues to be the most important development objective for the system. In order to expand foreign participation in the SPFS, it is planned to streamline the procedure for SPFS connection and usage for non-residents through the introduction of a 'box' solution.

Internet access to the SPFS

One of the areas of optimising access to the SPFS is enabling connection to the system via the internet, as well as implementing new interfaces for users, including the introduction of web technologies and APIs.

This will require additional implementation of information security protocols in the SPFS services.

3.3. DEVELOPMENT OF COMPETITION AND TECHNOLOGIES IN THE PAYMENT MARKET

In order to develop a competitive and high-tech payment space, the Bank of Russia will create conditions for providing all categories of consumers with a wide range of affordable, high-quality and secure payment services.

This will take into account the analysis of regional differences in the availability of payment infrastructure and services. If necessary, additional measures will be determined and implemented to improve financial inclusion and the share of cashless settlements at the regional level.

The regulator's activities will be aimed at promoting competition and expanding opportunities for individuals, businesses and the state to use modern technological solutions for cashless settlements.

3.3.1. Digital ruble platform

Given the public interest in digital instruments, the expansion of the use of digital technologies by businesses and the state, as well as high consumer demand for increased accessibility, speed, convenience and security of settlements while reducing costs, we are considering the possibility of building a new payment infrastructure and introducing a third form of money, a digital ruble.

Digital ruble will be able to combine the advantages of both cash and non-cash money. As with cashless payments, it will not be necessary to carry digital rubles around, and they will also be easy and convenient to pay with at points of sale accepting cashless payment instruments. As with cash, it will be possible to pay with digital rubles even if there is no access to the internet or a mobile network. Unlike cashless payment instruments that are offered by commercial organisations under the terms and conditions they establish and modify, a digital ruble will be provided by the state (the Central Bank) on unified terms and will be available 24/7 throughout the country via the applications of all banks connected to the digital ruble platform.

Taking into account the results of public discussions of the Digital Ruble consultation paper, the Bank of Russia has published the Digital Ruble Concept, on the basis of which it is planned to

develop a description of the technological solution. After it has been analysed in collaboration with financial market participants, it is planned to build a prototype of the digital ruble platform and pilot it with a limited range of participants. Based on the results of the pilot test, the decision will be made on the launch of the digital ruble and on the stages of its scaling.

At the same time, it could be possible to integrate the digital ruble platform with the existing payment infrastructure for seamless and transparent integration of the digital ruble into the cashless settlement system. In addition, it is assumed that the digital ruble platform may be open for connection and interaction using modern technological solutions, including for cross-system interaction with the infrastructure of other countries for making cross-border payments in digital rubles.

3.3.2 Implementation of ISO 20022 standard

ISO 20022 support within the BRPS

In order to reduce the costs for payment market participants through seamless and structured processing of payment information and expansion of payment data collected, it is planned to ensure a transition to the global international standard ISO 20022. Over a three-year horizon, as the basic stage, the Bank of Russia will implement support for payment messages within the BRPS based on the international standard ISO 20022.

This will enable to considerably unify the processing of both domestic and cross-border payments of credit institutions and their clients participating in foreign economic activities and create conditions for the broad implementation of ISO 20022 in the NPS. The introduction of ISO 20022 will improve the accuracy of transmitted information and reduce its processing costs due to a single detailed meta-model of payment processes. At the same time, this will create conditions for wider use of Big Data technologies with regard to transactional data by payment market participants.

The use of ISO 20022 should also improve the settlement services of global companies, since this standard is already used or is being implemented in more than 60 countries.

Support for ISO 20022 formats in the SPFS

In order to ensure that both banks and businesses build interoperable interaction processes, the possibility of transmitting financial messages in ISO 20022 formats will be implemented in the SPFS.

Expanding the use of ISO 20022 in the NPS

Concurrently with the introduction of ISO 20022 in the BRPS, the Bank of Russia, in close cooperation with federal executive authorities, will encourage market participants to support this standard in the NPS. The Bank of Russia plans to prepare a roadmap for the transition of the Russian jurisdiction to the ISO 20022 standard, taking into account the timeframe for its international implementation, in order to unify interaction as well as reduce costs and operational risks when using different payment message formats.

Harmonisation of the application of ISO 20022 in the EAEU

In order to harmonise approaches to the application of ISO 20022, the EAEU countries will develop a cross-country classifier of ISO 20022 financial message details. Based on this classifier, an album of ISO 20022 electronic messages will be developed for cross-border operations in the EAEU.

It is also planned to develop common standards and recommendations for the EAEU on the application of the ISO 20022 data model.

3.3.3 Migration to open APIs

The introduction of open application programming interface technology can significantly boost the development of innovations and competition in the Russian payment market. The use of open APIs will ensure efficient interaction between the payment infrastructure, banks, non-bank payment service providers and consumers.

The Bank of Russia, in close cooperation with market participants, will continue to develop and implement mandatory and recommended payment API standards in the NPS. At the same time, the necessary regulatory and technological conditions will be created for a wide application of these standards, primarily by the Bank of Russia itself and important participants in the payment services market.

Building the technical infrastructure of open APIs

The use of open APIs will require building a technical infrastructure ensuring a reliable and secure trusted environment for the interaction between NPS entities, as well as providing convenient mechanisms for managing the lifecycle of applied open API standards and certification of software tools of payment service providers using these standards.

The creation of such infrastructure will be an important stage of preparation for the large-scale use of open APIs in the NPS.

Implementation of open API standards in the NPS

The readiness of the necessary technical infrastructure will ensure the broad implementation of open API standards in the NPS, which will be carried out in stages, taking into account the definition of mandatory and recommended standards.

3.3.4 Supporting competition on the payment market

Promoting the development of the institution of non-bank payment service providers

One of the most important areas for promoting competition in the Russian payment market is the growing role of non-bank organisations that are capable of adapting to changes faster and are actively implementing innovative technologies and new business models.

In order to develop a competitive environment, the Bank of Russia plans to support the entry into the market of non-bank organisations as independent payment service providers, including through the establishment of criteria and procedure for the admission of such organisations to the market, the procedures for their activities, and the framework for collecting information and conducting risk-based supervision over their operations.

Establishing standards for disclosing information on payment services

In order to improve transparency and simplify the choice of optimal payment services provided by suppliers to consumers, the Bank of Russia plans to introduce a standard for disclosing information on the terms and conditions for the provision of basic payment services. The key criterion of such a standard will be a simple and comprehensible form that will make it possible to quickly determine the main parameters of the service on offer and easily compare options offered by different suppliers.

The provision of non-discriminatory access to the terms and parameters of basic payment services will stimulate the development of information systems used to search for the best payment service provider.

Simplification of bank switching process

Competition in the payment market will be promoted by simplifying the process of switching to another bank for customers.

In case of demand, the Bank of Russia plans to work out a mechanism for a ‘transferable bank account’ that would ensure the crediting of funds to the recipient even if their bank details change upon switching to another bank.

3.3.5 Creating conditions for the use of RegTech and SupTech technologies

Identification of approaches to using SupTech for supervision in the NPS

As part of the improvement of the Bank of Russia’s supervisory tools, conditions for the use of SupTech technologies will be created. This will help improve the speed and accuracy of obtaining information to assess the level of the continuity of functioning of a significant payment infrastructure and the provision of payment services.

Creating conditions for the use of RegTech technologies to reduce the burden on market participants

In order to reduce the regulatory burden and related costs of payment market participants, the Bank of Russia will create conditions for the use of RegTech technologies to automate compliance with regulatory requirements.

As part of the Bank of Russia’s application of the data-centric approach to the collection and processing of reporting, the Bank of Russia will explore the possibility of shifting from regular (calendar-based) collection of reporting forms from NPS entities to event-oriented provision of information based on machine-readable descriptions.

Such approach will enable the regulator to conduct current monitoring in the event of significant changes in the nature or indicators of activity of NPS participants and will create conditions for NPS entities to use new technologies for preparing and transmitting reporting information.

In order to reduce the burden on payment market participants, the Bank of Russia plans to optimise the reporting forms and eliminate duplicate indicators, including by combining certain reporting forms.

3.4. DEVELOPMENT OF INTERNATIONAL COOPERATION IN THE PAYMENT SECTOR

In order to strengthen the trade and economic cooperation between the Russian Federation and foreign states, eliminate barriers to the international activities of NPS entities and harmonise various countries’ regulatory approaches to global challenges for the development of the payment industry, the Bank of Russia will continue to develop international cooperation in the payment sector.

3.4.1. Cooperation development in the EAEU

The main activities with regard to promoting the EAEU common payment space will be carried out under the Working Group on Coordination of National Payment Systems Development (EAEU WG) established by the central (national) banks of the EAEU countries.

Development of interaction between payment card systems

In order to expand the use of national payment instruments of the EAEU countries, with the technical support of the NSPK, it is planned to switch from bilateral cooperation to the general cross-system interaction of the national payment card systems of the EAEU member states. This will enable the acceptance of national payment cards in the payment infrastructure of any EAEU member state.

Besides, it is planned to open the payment infrastructure of the EAEU WG countries completely for the acceptance of Mir cards, as well as expand the possibilities for cross-border transfers to the EAEU by using payment cards.

Integration of national faster payment systems

In order to improve the accessibility of payment services for individuals and promote the development of cross-border trade, the cooperation of the EAEU countries in the faster payments segment will expand.

One of the key steps for the integration of operating faster payment systems (if any) will be the description of the role model and business processes of fast cross-border transfers, the settlement mechanism, and the coordination of charging principles.

Within the EAEU WG, approaches to organising cross-border information exchange and ensuring information security in cross-border payments in the EAEU will be determined.

3.4.2. Development of payment areas within integration associations

The Bank of Russia will continue to develop approaches to building cross-border payment infrastructure, in particular by using up-to-date financial technologies, within integration associations (such as BRICS, the SCO and others).

3.4.3. Expansion of the Bank of Russia's work with international organisations in the field of payments and payment technologies

Cooperation with the BIS Committee on Payments and Market Infrastructures

The Bank of Russia will continue participating in the activities of BIS CPMI, given its leading role as a body that sets international payment standards and at the same time serves as a platform for the exchange of experience and best practices in the activities of central banks.

The Bank of Russia will take part in the elaboration of the methodology and common approaches of the CPMI member countries on the issues of access of non-bank payment service providers to RTGS systems, stablecoins regulation, study of the feasibility and challenges of organising the issuance and turnover of central bank digital currencies, the implementation of the strategy for the security of large-value payments and other work of the CPMI in the payment sector.

The Bank of Russia will actively participate in the implementation of the roadmap to improve the efficiency of cross-border funds transfers developed and approved by the G20 and implemented under the auspices of the CPMI and the Financial Stability Board.

It is also planned to ensure that the CPMI, together with the IOSCO, conducts the second stage of the assessment of the implementation of the Principles for Financial Market Infrastructures⁴ in the Russian Federation.

Cooperation with the Alliance for Financial Inclusion

As part of the activities of the Alliance for Financial Inclusion (AFI), including at the initiative of ECAPI,⁵ in the payment sector, the Bank of Russia plans to actively participate in measures to improve the inclusion and the protection of payment service consumers' rights, as well as to improve the interoperability of payment systems in Eastern Europe and Central Asia.

⁴ The Principles for Financial Market Infrastructures are an international standard for financial infrastructures developed by the CPMI and the IOSCO.

⁵ ECAPI is an initiative to improve financial literacy, inclusion and consumer protection in Eastern Europe and Central Asia, adopted at the 2018 AFI Global Forum in Sochi.

3.4.4. Cooperation with certain countries in the payment sector

One of the priority areas of international cooperation is the supervision and oversight of payment market participants interacting with countries generating a significant amount of cross-border transfers.

The Bank of Russia will continue to interact and exchange information under previously concluded agreements on supervision and oversight with the national (central) banks of the republics of Armenia, Belarus, Kazakhstan, Kyrgyzstan, and other CIS countries.

Cooperation in the payment sector will develop with regulators of other countries where Russian NPS entities carry out or plan to carry out their activities (e.g. Vietnam).

Another key area of bilateral cooperation will be interaction with the financial market regulators of Russia's main trading partners.

Under the auspices of intergovernmental commissions, the Bank of Russia will take active part in the work aimed at the convergence of approaches in order to ensure uninterrupted and secure as well as faster and more reliable cross-border transfers.

4. EXPECTED RESULTS OF THE NPS DEVELOPMENT STRATEGY FOR 2021–2023

The Bank of Russia promotes creation of conditions aimed at developing a stable, competitive and innovative Russian payment market and providing consumers with convenient, safe and accessible payment services. At the same time, ensuring the balance of interests of individuals, businesses and the state is an important component in the implementation of the strategy.

As a result of the implementation of the strategy, **individuals** will be provided with fast, convenient, safe and accessible payment instruments on transparent and comparable terms.

Companies will be able to launch new business models and introduce seamless and innovative payment instruments that will enhance their qualitative and quantitative indicators. In addition, it is planned to develop payment solutions that will reduce the transaction costs, including in the small and medium-sized business segment.

Increasing the transparency of the economy by increasing the share of cashless payments and digitalisation of the payment market will play an important role for the state and society as a whole.

Currently	In the future
Individuals	
<ul style="list-style-type: none"> • Payment services are available 24/7/365 only to customers of certain banks • Terms and rates of various suppliers' payment services are not transparent and difficult to compare • Cashless payments are mostly made using a bank card 	<ul style="list-style-type: none"> • Payment services are available 24/7/365 to customers of all banks • Terms and rates of various suppliers' payment services can be easily accessed and are easy to compare • Higher share of cashless payments made using other payment instruments
Currently	In the future
Business	
<ul style="list-style-type: none"> • RSOs incur costs when accepting bankcard payments for goods, works and services (average acquiring fee is 2.2–2.5%) • Legal entities use multiple forms and channels to invoice counterparties; invoice payment is a separate activity 	<ul style="list-style-type: none"> • RSOs can receive payment for goods, works and services using the FPS (the fee does not exceed 0.7%) • Legal entities can issue invoices to counterparties and pay them under uniform standards and in a single environment
Currently	In the future
State	
<ul style="list-style-type: none"> • Up-to-date products and services are provided to payment market participants through the key elements of the national infrastructure (BRPS, FPS, SPFS and NSPK) • The Bank of Russia serves approximately 46,000 accounts of the Federal Treasury and its regional bodies within the BRPS • Transfers of mandatory payments to the budget require one business day or longer 	<ul style="list-style-type: none"> • Based on the key elements of the national infrastructure (BRPS, FPS, SPFS and NSPK), payment market participants are provided with at least ten new products and services • The Bank of Russia serves the single account of the Federal Treasury and its regional bodies within the BRPS • Mandatory payments can be made using the FPS with funds transferred to the budget in real time

5. RISKS RELATED TO THE IMPLEMENTATION OF THE NPS DEVELOPMENT STRATEGY FOR 2021–2023

In preparing the NPS Development Strategy for 2021–2023, the Bank of Russia took into account potential risks that may hinder its implementation.

Implementation of the Strategy is carried out by the Bank of Russia together with interested federal executive authorities, payment services market participants and financial market regulators of other countries; therefore, many measures cannot be carried out exclusively by the Bank of Russia.

The Bank of Russia identifies the following most important risk factors.

Interdepartmental interaction

The NPS Development Strategy for 2021–2023 is comprehensive, and the maximum effect of its implementation can be achieved only when all parties involved implement required measures. Extended actual timeframes for the adoption of legislative amendments and other initiatives, as well as possible delays in ensuring technical readiness on the part of various government bodies may affect the effectiveness of implementing the Strategy.

In order to minimise this risk, it is important to ensure coordinated cross-agency interactions, as well as to apply project-based approaches to the implementation of the Strategy's measures.

Macroeconomic situation

It is also important to point out the risks of a deteriorated financial standing of a significant portion of NPS entities leading to significant changes in the payment market, as well as the risks of authorities making macroeconomic and strategic decisions that would significantly change the operating conditions of NPS entities and their clients. All these can make it difficult or impossible to achieve the goals of the Strategy.

To mitigate this risk, the Bank of Russia works with the Ministry of Finance of Russia to pursue balanced monetary and fiscal policies.

Geopolitical factors

International relations are increasingly influenced by geopolitical factors beyond the Bank of Russia's scope of influence. Economic methods are used increasingly often to achieve political goals.

This may complicate the implementation of a number of measures involving close international cooperation.

6. KEY INDICATORS RELATED TO THE IMPLEMENTATION OF THE NPS DEVELOPMENT STRATEGY FOR 2021–2023

QUANTITATIVE INDICATOR	VALUE			
	Now	2021	2022	2023
Aggregate indicator				
Share of cashless payments in the retail trade, %	70.3	72	73	75
Mir PS				
Share of payments with Mir Cards in the total amount of bank card payments in Russia, %	24	27–30		
FPS				
Share of C2C transactions via the FPS in the total number of interbank C2C transactions with bank cards processed by NSPK, %	15	18	22	25
Number of SME RSOs connected to the FPS to receive payments for goods, works and services, including by using QR codes, thousands of units	–	40	70	100
SPFS				
Share of the SPFS traffic in the aggregate traffic of domestic Russian transactions in SWIFT, %	20.6	23	26	30
QUALITATIVE INDICATOR	VALUE			
	Now	2021	2022	2023
ISO 2022 implementation within the BRPS	Draft ISO 2022 Album for the BRPS published	ISO 2022-based Bank of Russia standards adopted	ISO 2022 Album of messages for the BRPS published	The legal basis for the implementation of ISO 2022 Album developed in the Bank of Russia*
Assessment of the Russian jurisdiction for compliance with international standards for FMIs**	A self-assessment of the Russian jurisdiction conducted	The assessment by international CPMI experts at least as high as the self-assessment***	Execution of recommendations based on the assessment by international CPMI experts****	
Regulation of non-bank payment service providers	–		Regulation of non-bank payment service providers developed	
Regulation of payment services in ecosystems	–		Regulation of payment services in ecosystems developed	

* ISO 2022 standard will be implemented according to a separate plan taking into account the level of preparedness of government authorities and banks.

** The second stage of the assessment with respect to payment systems.

*** Deadlines may be extended subject to changes in the period of the assessment of the Russian jurisdiction by international CPMI experts.

**** Subject to comments or recommendations of CPMI experts.

GLOSSARY¹

Bank payment agent is a legal entity other than a credit institution or an individual entrepreneur that is engaged by a credit institution for the purpose of performing certain banking operations.

Biometrics is a system for recognising people based on (one or several) physical or behavioural features. In accordance with Federal Law, dated 27 July 2006, 'On Personal Data', biometric personal data include information that characterises a person's physiological and biological specifics and on the basis of which it is possible to establish his or her identity.

Global IT (BigTech) companies are technological giants in the Big Data sector that exert a great influence on their market, the economy as a whole and the development of consumer experience in their countries and sometimes worldwide.

Cashback is the refund of a small part of the purchase price under certain conditions. Funds are returned in cash equivalent or in other forms (bonuses, miles, etc.).

National payment infrastructure is part of the infrastructure of the national payment system established by the Bank of Russia to preserve the country's payment independence and ensure the accessibility of key payment services provided to financial market participants and consumers. It includes the Bank of Russia Payment System, the Faster Payments System, the Financial Messaging System and the National Payment Card System.

National Payment System is the combination of funds transfer operators (including e-money operators), bank payment agents (subagents), payment agents, federal post service organisations providing payment services in accordance with the legislation of the Russian Federation, payment system operators, payment infrastructure service operators, information exchange service operators, foreign payment service providers, foreign payment system operators, and payment application providers (national payment system members).

National payment instruments include payment cards and other electronic means of payment provided to customers by NSCI participants in accordance with the NSCI rules for making funds transfers within the NSCI.

Non-bank payment service provider is an organisation that is not a bank or any other credit institution providing remittance and payment services to retail and service outlets, banks and other payment market participants.

Payment acceptance operator is a payment agent engaged in the acceptance of cash from individuals on the basis of agreements concluded with service providers.

Open banking is a concept that involves combining products of various suppliers, as well as providing third parties with access to bank data without concluding special agreements based on general regulation and APIs.

TARGET Instant Payment Settlement (TIPS) is a market infrastructure service launched by the Eurosystem in November 2018. It allows payment service providers to make funds transfers to their customers in real time, 24/7.

Payment agent is a legal entity (excluding credit institutions) or an individual entrepreneur engaged in the acceptance of payments of individuals in accordance with Federal Law No. 103-FZ, dated 3 June 2009, 'On Accepting Payments of Individuals by Payment Agents'.

Payment aggregator is a legal entity engaged by a funds transfer operator to ensure the acceptance of electronic means of payment by legal entities and individual entrepreneurs and to participate in the transfer of funds to the said persons in transactions using electronic means of payment.

¹ The terms in this document are used in accordance with their definitions below.

Self-regulatory organisations (SROs) are non-profit membership-based organisations uniting business entities sharing the sector of production of goods (works, services) or the market for produced goods (works, services), or professional entities of a certain type.

Application programming interface (API) is a technology ensuring automatic interaction of information systems.

Acquiring fee is the fee charged by the acquiring bank from trade and service enterprises on payments for goods (works, services) under the acquiring service agreement.

Ecosystem is a system of services, including platform services, of the same group of companies, or a company and its partners, enabling users to receive a wide range of products and services that satisfy the vast majority of a customer's daily needs within a single seamless integrated process. At the same time, product manufacturers and service providers are able to directly or indirectly use the aggregate data on customers and their consumer behaviour available in the ecosystem.

Electronic funds (electronic money) are funds provided in advance by one person to another person that records information on the amount of funds provided without opening a bank account (to the liable person) for fulfilling monetary obligations to third parties of the person who provided the funds.

Electronic means of payment (EMP) is a means or a method enabling the client of a funds transfer operator to prepare, certify and transfer instructions for the purpose of funds transfer within the applied forms of cashless payments using information and communication technologies, electronic media, including payment cards, and other technical devices.

Big Data is a collection of certain methods and systems for processing very large bodies of data. This analysis enables offering goods or services to customers in an as accurate and personalised manner as possible. Banks also use big data analysis to automatically detect fraudulent transactions, assess customers' creditworthiness, and improve risk management processes.

QR code (short for 'quick response') is a graphic image that can contain a large amount of data. By scanning a QR code, one can instantly access such data.

ABBREVIATIONS

BIS: the Bank for International Settlements

BRICS: a group comprising Brazil, Russia, India, China, and South Africa

GDP: gross domestic product

SIS SMP: the State Information System on State and Municipal Payments

RBS: remote banking service

EAEU: the Eurasian Economic Union

IE: an individual entrepreneur

CPMI: the Committee on Payments and Market Infrastructures

IMF: the International Monetary Fund

IOSCO: the International Organisation of Securities Commissions

NPS: the national payment system

NSD: the Non-bank Credit Institution Joint-stock Company National Settlement Depository

NSPK: the National Payment Card System

NCB: foreign national (central) banks

OPCC: operations payment clearing centre

Principles for FMIs: the international standard for financial infrastructures and their regulators developed by the Committee on Payments and Market Infrastructures of the Bank for International Settlements and the International Organisation of Securities Commissions

PS: a payment system

BRPS: the Bank of Russia Payment System

Mir PS: Mir Payment System

EAEU WG: the Working Group on Coordination of National Payment Systems established by the central (national) banks of the EAEU countries

FPS: the Faster Payments System of the Bank of Russia

2013 NPS Development Strategy: the NPS Development Strategy adopted by the Bank of Russia Board of Directors on 15 March 2013

RSO: a retail and service outlet

SCO: the Shanghai Cooperation Organisation

API: application programming interface, a way of interaction of information systems

B2B: payments and transfers between legal entities (business-to-business)

B2C: payments by legal entities in favour of individuals (business-to-consumer)

C2B: payments by individuals in favour of legal entities (consumer-to-business)

C2C: funds transfers between individuals (consumer-to-consumer)

C2G: payments in favour of government authorities (consumer-to-government)

FCA: the Financial Conduct Authority of the UK

FedNow: a faster payments service project by the US Federal Reserve

G2C: payments by government authorities in favour of consumers (government-to-consumer)

ISO 20022: an international standard for exchanging electronic messages in the financial sphere

IT: information technologies

ISO: the International Organization for Standardization

JCB: an international payment card system

Open API: open API technology

P2P: funds transfers between consumers (peer-to-peer), same as C2C

PSD2: the Revised Payment Service Directive (EU) 2015/2366

SPFS: the Financial Messaging System of the Bank of Russia

SWIFT: the Society for Worldwide Interbank Financial Telecommunications, an international financial messaging system

TIPS: TARGET Instant Payment Settlement, the pan-European instant payment service