

Digital transformation of the banking system in the context of sustainable development

Transformation
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Abstract

Purpose – The purpose of this paper is to study the current state of the Russian banking system in the context of digital economy development, to establish and identify the benchmarks and needs of legal regulation, to study the potential possibilities of digitalization of relations in the banking sector in the mechanism of implementing prudential rules.

Design/methodology/approach – Using the method of political and legal analysis used in this study, the legal guidelines for the digitalization of the banking sector and the financial services market have been determined, which in the Russian legal system are strategic planning documents.

Findings – International research in the field of banking indicates that digitalization and globalization of the economy stimulate the processes of international regulatory cooperation and harmonization of legislation, the use of new approaches in the development and adoption of regulations in the financial market. The growth of digitalization of relations in the banking sector will contribute to the effective implementation of prudential rules, including those related to the need to protect public interests.

Originality/value – The study revealed a number of issues related to the digitalization of the activities of credit institutions that are professional participants in the securities market and the central bank as a financial mega-regulator, requiring a legal solution. Measures aimed at improving the current legislation and procedures of state regulation and supervision are proposed.

Keywords Banking regulation and supervision, Digital technologies, Financial services market, Financial stability, Financial technology

Paper type Research paper

Introduction

The transition to a new stage of the industrial revolution encourages states to develop and implement new policies that aim to transform many social institutions and processes. The development of information technology has led to such a phenomenon as the “digital economy”, a radical transformation of the financial sector, covering the activities of banks, insurers and other financial organizations.

The 2008 global financial crisis exposed systemic vulnerabilities in the banking system that are unfavorable for the economy as a whole. In the aftermath of this peak financial crisis, a number of regulatory initiatives have been initiated internationally to change the



rules governing the financial system and major institutions. Regulatory changes and de-regulation are part of broader policies aimed at improving financial stability. The stability of the banking system is integral to future growth and sustainability. The role of the banking system in the economy and society as a whole is to ensure a stable and sustainable economy (Ntarmah *et al.*, 2019). Technological progress in the field of banking services, the development of the financial technology industry have served as a powerful impetus for financial systems to enhance their stability, adaptability to external influences, without slowing down the process of structural transformations and the development of competition.

The pre-requisites for the stimulation and development of financial technologies were the following factors:

- low margins of banking services;
- transformation by financial market participants of their business models and the desire to create ecosystems;
- increasing the penetration of financial services because of their digitalization;
- the loss by banks of the monopoly on the provision of traditional (payment and other) services;
- the acquisition by non-financial organizations of a significant role in the financial market;
- the imposition of quasi-state control functions on banks; and
- banks' desire for partnerships with startups and tech companies.

Observed global trends indicate great potential for growth in the share of digital financial services.

The purpose of this study of the current state of the banking system in the context of economic digitalization is to establish and identify the benchmarks and needs of legal regulation, to analyze the potential possibilities of digitalization of relations in the banking sector in the mechanism of prudential rules implementation. The results of the study will make it possible to identify a range of issues requiring a legal solution and propose measures aimed at improving the current legislation and procedures of state regulation and supervision.

Despite numerous scientific studies, there is no generally accepted approach to defining the term “financial sustainability” in the academic literature. Most often, financial sustainability is considered from the standpoint of the ability of the banking system to effectively resist negative factors of the external and internal environment and perform its main functions – solvency, effective distribution, use and redistribution of financial flows (Carson, 2003).

There is also no legal definition of financial stability. The term “financial stability”, which is used by the World Bank, the International Monetary Fund and the European Central Bank to characterize the stability of the financial system at the macro level, differs significantly from the interpretation of financial stability as a characteristic of the financial position of an organization accepted in the scientific literature (Puchkova *et al.*, 2020).

Financial sustainability today should be a strategy for the development of banks and not just their short-term achievement. The use of advanced financial technologies to promote economic growth, the use of modern banking technologies, effective and rational development of the banking system, ensuring economic stability, are necessary to implement and maintain the sustainability of the banking sector (Shubbar and Girinskiy, 2019).

Various innovations, including in the service sector, are the most important factor in the growth of social welfare, the key role in the regulation of which traditionally belongs to the state (Meissner *et al.*, 2013; Mention, 2019; Miles, 2016). Today, many countries are pursuing targeted policies to expand people's access to financial services (financial inclusion) both at the national and international levels (Belozyorov *et al.*, 2020).

At the same time, gaps in the regulation of the creation and use of financial technologies create legal uncertainty that impedes the growth of the financial sector. Typically, countries have traditional financial sector regulations. Nevertheless, new financial technologies are transforming the relationships that develop in the provision of financial services, and therefore, require special regulation or amendments to existing legislation. Despite the fact that in many countries, the foundations for regulating digital financial services are being developed and most countries already have laws regulating the issuance of electronic money, progress in other areas of fintech regulation is not so significant (Ruchkina and Shaydullina, 2018).

In modern studies of banking systems in the context of digital economy development in conjunction with sustainable development factors, such issues are considered as the factor of the influence of banking system sustainability on the stability of developing countries (Ntarmah *et al.*, 2019), the impact of digitalization on banking services (Garg, 2020), impact of digitalization on banking and financial markets in India (Kapadia, 2020), factors influencing the spread of mobile banking (Shankar *et al.*, 2020), the impact of digital technologies on the availability of financial services and the stability of the financial system (Carbó-Valverde, 2017; Ozili, 2018), digital transformation of the banking sector (Kozak and Golnik, 2020).

In Russia, at the moment, there are not so many studies on the legal aspects of the informatization of the financial market (Tsindeliani *et al.*, 2019a). In particular, in Russian science, there are no full-fledged comprehensive fundamental studies in this area with the study of interdisciplinary relations, which might form a full-fledged scientific school (Ruchkina, 2020). This factor, in turn, justifies the motivation for this research and defines the theoretical gap that this research is intended to fill. Many researchers have already prepared a number of large-scale studies on the problems of artificial intelligence (Calo *et al.*, 2016; Cath *et al.*, 2018; Russel and Norvig, 2010; Yao *et al.*, 2018). Such work should be carried out in the Russian Federation as well. Thus, to ensure the sustainable development of the banking system and the financial services market, modern research of advanced financial technologies is needed, including an analysis of benchmarks, needs and potential opportunities for the legal regulation of their implementation.

Materials and methods

This study is based on the analysis of acts of international organizations (EC Fiscal Sustainability Report, 2012, [G20 Financial Inclusion Action Plan, Recommendations of the Basel Committee on Banking Supervision, 2017](#)) and the following Russian legislative acts:

- Federal Law of July 31, 2020, No. 258-FZ “On Experimental Legal regimes in the field of digital innovations in the Russian Federation”;
- Federal Law of July 10, 2002, No. 86-FZ “On the Central Bank of the Russian Federation”;
- Decree of the President of the Russian Federation of May 9, 2017, No. 203 “On the strategy of development of the information society in the Russian Federation on 2017–2030”;

- Decree of the President of the Russian Federation dated May 7, 2018, No. 204 “On national goals and strategic objectives of the development of the Russian Federation for the period up to 2024”; and
- Order of the Government of the Russian Federation of July 28, 2017, No. 1632-r “On approval of the program Digital Economy of the Russian Federation.”

Using the method of political and legal analysis used in this study, a review of modern international legal initiatives in the field of financial technologies in their relationship with the concept of financial sustainability was carried out. In particular, initiatives to expand access to financial services for residents of developing countries, Russian legislative acts and related government initiatives to expand the role of digital technologies in the financial sector as a driver of sustainable development were considered. Legal guidelines for the digitalization of the banking sector and the financial services market were determined, which in the context of the Russian legal system are strategic planning documents.

Results and discussion

The concept of financial sustainability and the role of digital technologies in the financial sector: an international aspect

As the emergence of financial sustainability concept in the everyday life of international organizations, the main way to get a broad idea of the financial sustainability of the state, as follows from the [European Commission's \(2012\)](#) Fiscal Sustainability Report, would be to consider it from the point of view of the conditions of public administration sector's solvency, taking into account intertemporal budgetary constraints of the government. In doing so, it is necessary to take into account the government's ability to cover the cost of its current and future debt at the expense of future revenues. This means that governments must ensure financial independence, defined as the ability of an organization to generate sufficient non-financial income to meet its non-financial budget obligations to generate future income to pay off current and future debt ([Rodríguez Bolívar, 2016](#)). Subsequently, at the level of international statements, the United States Agency for International Development and the European Union agreed to view this concept as the ability of the government to continue the current political course in the future without causing a permanent increase in debt ([Rodríguez Bolívar, 2016](#)).

Despite the doctrinal vagueness of this concept, the quality, efficiency and complexity of legal regulation are important in determining the financial stability of the banking system. Analysis of legal factors of the banking system's sustainable development is becoming especially relevant in the context of large-scale digitalization of the banking sector and the financial services market.

Most scholars define financial technologies as an industry made up of companies that provide financial services based on modern, innovative technologies. For example, Professor Schueffel from the Fribourg School of Management deduced the following definition: “Fintech is a new financial industry that applies technology to improve financial activities.” I. Aldridge and S. Krawciw note several areas of the spread of fintech, for example, automation of insurance, trade and risk management ([Schueffel, 2016](#)).

Fintech is a complex system that unites sectors of new technologies, banking, financial and other services, new business projects using technical innovations (startups) and the corresponding infrastructure ([Maslennikov and Fedotova, 2017](#)). A significant part of new technologies is directly addressed to the financial and banking sector of the economy ([Matianova, 2018](#)).

[FinTech \(2015\)](#) at the European Union and international levels is defined as technology-driven financial innovation that can lead to new business models, applications, processes or products with concomitant material impact on financial markets and institutions and the provision of financial services.

The [Basel Committee on Banking Supervision \(2017\)](#) in an advisory document defines financial technology as technology-driven financial innovation that can lead to the creation of new business models, applications, processes or products that will subsequently affect financial markets, institutions or the production of financial services (Sound Practices). In a February 2017 report by the International Organization of Securities Commissions, the term financial technology is used to describe various innovative business models and emerging technologies that can transform the financial services industry ([IOSCO, 2017](#)).

Concerning national legal regulation, the term “fintech” appears in the legislation of a number of countries (for example, Germany, Canada, Ireland, China, etc.), but its concept is not fixed there. In Russia, the concept of “financial technology” is not disclosed in the legislation.

In many countries, government programs, initiatives, strategies have been developed and are being implemented, including the possibility of obtaining financing for fintech companies. The regulators of most countries have issued clarifications and other explanatory documents regarding the legal regulation of the creation and use of the latest financial technologies. Regulation of the creation and use of financial technologies is based on current legislation without amendments (for example, in Australia, China, Spain, USA, Canada, Japan, Singapore, Malaysia, Russia, Germany, Estonia, Isle of Man, New Zealand, etc.) or with amendments (for example, in Hong Kong, Japan, Singapore, United Arab Emirates, The Netherlands, Great Britain, Korea, Australia, Canada, Switzerland, Malaysia, etc.). Only in certain countries, the creation and use of financial technologies are accompanied by the introduction of new regulation of certain types of financial technologies (for example, Great Britain, Hong Kong, the United Arab Emirates, etc.) ([Ruchkina and Shaydullina, 2018](#)).

Legal guidelines for digitalization as a factor in the sustainable development of the Russian banking system

The current position and place of information technology (IT) technologies in the activities of states testify to their increasing influence on the economies of countries. The use of conventional methods in the modern economy does not contribute to its rapid growth, unlike the digital economy, which enables a country to change its position in the world. The banking sector, which is one of the most important institutions of the global financial system, has undergone significant changes mainly because of the processes of universal economic digitalization.

In 2010, the G20 and the World Bank spearheaded an initiative to expand access to financial services in developing countries to help reduce poverty in developing and transition countries, which is reflected in the G20 Principles for innovative financial inclusion underpinning Financial Inclusion Action Plan (approved at the South Korea Summit in November 2010). Today, the importance of digital finance and financial inclusion for poverty reduction and economic growth is attracting the attention of policymakers and academics, largely because of the large number of persistent challenges that, if addressed, could improve digital finance for individuals, businesses, governments and the economy. Digital finance and financial inclusion have a number of benefits for financial service users, digital financial service providers, governments and the economy, such as increased access

to finance for poor people, reduced financial intermediation costs for banks, fintech providers and increased aggregate government spending (Ozili, 2018).

The evolutionary processes that have taken place in society, associated with the introduction of the internet into almost all spheres of human activity, are forcing banks to automate and digitize all processes and products offered. To meet growing customer expectations, banks are using digitalization to implement customer-centric and out-of-the-box marketing strategies. For this reason, activities aimed at supporting sales through multiple affiliates are becoming increasingly ineffective. At the same time, the development of online banking is an indispensable tool for banks in the struggle to maintain their market positions.

The use of remote sales and customer service processes has accelerated significantly with the proliferation of access to mobile devices. Their role has become important in the distribution of products in most sectors of the economy, including banking. Today, mobile devices are used to shop, pay or save. Banks, noticing the potential that exists in digital distribution channels for their services, are trying to use it to build new strategies for attracting customers. At the same time, they are taking advantage of the fact that consumer interest is shifting from purchases in stationary stores to purchases via the internet and mobile phones. Another effect of digitalization in the banking sector is increased competition and improved quality of services provided by banks.

In Poland in 2017–2018, the share of the population using the internet reached 77% and this significantly influenced the increase in the number of users of online and mobile banking. As of the end of 2019, 82% of mobile banking users used the services of at least five of the largest banks in Poland. The digitalization of banking operations leads to a reduction in the network of bank branches and the number of employees. In 2016–2019 in Poland, the development of internet and mobile banking contributed to a decrease in the number of branches by 700 branches and a decrease in the share of employees of branches by 49% (Kozak and Golnik, 2020).

The speed of technological change requires the active participation of the state in the development of financial technologies, timely regulation, which will, on the one hand, maintain the stability and sustainable development of the banking system, protect consumer rights, and on the other hand, promote the development and implementation of digital innovations. The legal guidelines for the digitalization of the Russian banking system are strategic planning documents, the purpose of which, among other things, is to contribute to the sustainable development of the banking system. A special place among the strategic planning documents is occupied by the messages and decrees of the head of state. Thus, back in 2016, the President of the Russian Federation in his address to the Federal Assembly set the task of launching a large-scale systemic program for the development of the economy of a new technological generation, the so-called digital economy. To implement this task, two basic documents were approved:

- (1) Decree of the President of the Russian Federation of May 9, 2017, No. 203 “On the strategy of development of the information society in the Russian Federation on 2017-2030” (the need to restructure the regulatory framework for the development of digital technologies was noted);
- (2) Order of the Government of the Russian Federation of July 28, 2017, No. 1632-r “On approval of the program Digital Economy of the Russian Federation.”

The task of creating a system of legal regulation of the digital economy and the introduction of civil turnover based on digital technologies is set in the Decree of May 7, 2018, No. 204 “On national goals and strategic objectives of the development of the Russian Federation for

the period up to 2024.” The Presidium of the Council under the President of the Russian Federation for Strategic Development and National Projects approved the Passport of the national project “National Program” “Digital Economy of the Russian Federation” (contains Section 4.1 of the Federal project “Normative regulation of the digital environment”).

In the Main Directions of the Government of the Russian Federation for the period up to 2024, it is noted that the existing regulatory and legal environment does not meet the tasks of giving flexibility to the regulation of public relations, their readiness to perceive the constantly changing technological context. Despite the systemic steps to improve the business climate, the legislation still contains a large number of gaps and administrative obstacles that hinder the development of business based on the use of information technologies and work with data. In general, it is required to develop a mechanism for managing changes in the regulation of the digital economy, which would make it possible to promptly adapt legal regulation to the tasks of digital development. According to the Unified Plan to Achieve National Development Goals, to create a system of legal regulation of the digital economy, it is necessary to implement such measures as:

- the creation of a legislative basis for the formation of a single digital environment of trust and electronic civil turnover; and
- ensuring favorable legal conditions for the collection, storage and processing of data, as well as for the introduction and use of innovative technologies in the financial market.

Acts in the field of artificial intelligence deserve special attention. The main directions for creating an integrated system for regulating public relations arising in connection with the development and implementation of artificial intelligence technologies are outlined in the National Strategy for the Development of Artificial Intelligence for the Period up to 2030 (approved by Decree of the President of the Russian Federation of October 10, 2019, No. 490 “On the Development of Artificial Intelligence”). It is planned that by 2024 the necessary legal conditions must be created to achieve the goals, solve problems and implement the measures provided for in the Strategy; by 2030, Russia should have a flexible system of legal regulation in the field of artificial intelligence, including guaranteeing the safety of the population and aimed at stimulating the development of artificial intelligence technologies.

The need to create the foundations of legal regulation of new social relations that are formed in connection with the use of artificial intelligence systems and robotics are stated in the Concept for the development of regulation of relations in the field of artificial intelligence and robotics until 2024 (approved by the order of the Government of the Russian Federation of August 19, 2020, No. 2129-r). To implement the National Strategy for the Development of Artificial Intelligence, a specialized federal project was developed (passport of the draft Federal Law No. 896438–7 “On conducting an experiment to establish special regulation to create the necessary conditions for the development and implementation of artificial intelligence technologies in the constituent entity of the Russian Federation” – the city of federal significance Moscow and amendments to Articles 6 and 10 of the Federal Law “On Personal Data”). At the same time, according to experts, the connection between research on the legal essence of artificial intelligence and rule-making activity is at an insufficient level in the Russian Federation (the level of elaboration of strategic and framework documents), in contrast to the rule-making activity of developed countries (for example, the USA, Germany, Great Britain) ([Ruchkina, 2020](#)).

A separate group is made up of documents developed by the Central Bank of the Russian Federation (the Bank of Russia), in particular:

- The main directions of the unified state monetary policy for 2020, 2021 and 2022; and

- The main directions of the development of the Russian financial market for the period 2019–2021; the Action Plan (“road map”) for their implementation.

The Bank of Russia has also developed the Main Directions for the Development of Financial Technologies for 2018–2020, aimed at supporting innovation and creating a favorable environment for financial technologies in the financial market and the strategy for increasing financial inclusion in the Russian Federation for the period 2018–2020, containing measures to increase physical availability and expanding the range of financial digital services, increasing their user-friendliness.

It is the Bank of Russia, as in most countries of the world, that is responsible for ensuring the stability of the financial system as a whole and creating conditions for the development of all sectors of the financial market. In accordance with Part 2 of Art. 56 of the Federal Law of July 10, 2002, No. 86-FZ “On the Central Bank of the Russian Federation”, the main objectives of banking regulation and banking supervision are to maintain the stability of the banking system of the Russian Federation and protect the interests of depositors and creditors.

The Bank of Russia uses international standards and practices in its activities, including the Recommendations of the [Basel Committee on Banking Supervision \(2017\)](#). By 2022, the Central Bank of the Russian Federation plans to introduce all requirements for banks, including changes to Basel III. Within the framework of ensuring financial stability, the Bank actively cooperates with the following international organizations: G20, Financial Stability Board, International Association of Insurance Supervisors, The Legal Entity Identifier Regulatory Oversight Committee, The Network of Central Banks and Supervisors for Greening the Financial System.

The modern Russian banking sector is a group of high-tech banks (such as Tinkoff Bank, Sberbank, MKB and Renaissance Credit) that actively use the capabilities of artificial intelligence on common IT platforms, which makes it possible to synchronize digital solutions and contribute to the emergence of associations interested in qualitatively new technological solutions. The FinTech Association has been created, the main task of which is the development and implementation of innovations in the financial technology system.

The coronavirus infection (COVID-19) has become a factor that has one of the key influences in addition to digitalization, development of remote banking services and cost optimization. During the period of COVID-19, the Russian banking system demonstrated the greatest readiness to transfer business processes to digital format, which made the country a leader in the development of cashless payments. According to BCG estimates, in 2019, Russia ranked first in the world in terms of penetration of contactless payments using Apple Pay, Samsung Pay, etc., and also took the third position in terms of penetration of fintech services. Sberbank has demonstrated the development of a fairly large volume of security control tools and control over the effectiveness of employees working remotely and plans to use a mixed mode of work in the future.

Experts record the annual growth of the customer base using remote services. Research by McKinsey for 2016 showed that the number of customers in Russia who wanted to be served via mobile and internet banking was growing and amounted to 65% in 2016. This level is also typical for European countries (60%–70%) and North America (55%) ([Aptekman et al., 2017](#)). The study also revealed that the leading banks of Russia, when providing mobile applications to a client, make 1.5–2 times more transactions than the largest European banks. Depending on the method of service, 58% of customers use remote banking (of which 15% use only the internet bank, 10% only use the mobile bank and 32% use both platforms) ([Shaikh and Karjaluoto, 2019](#)).

Over the past two years, Russian banks have closed almost 3,200 branches, additional offices and other divisions or approximately 10% of the total. However, banks do not completely abandon existing branches, as it is the developed branch network that is the indicator of the availability of bank services. The functioning of a large number of representative offices and branches is dictated, among other things, by a client's desire to contact a bank employee in person. An excellent replacement for a personal appeal to a client can be the provision of information services through social networks, Web chats and various instant messengers. Thus, out of 142 banks, 12 banks use chatbots; the most popular digital channel for consulting clients is the social networks VKontakte and Facebook. Citizens are served through these platforms by 44% and 35% of financial organizations, respectively.

Experimental legal regime in the field of financial markets and the need for other legal innovations

To provide legislative support for the further development of the digital economy in Russia, it is necessary to develop and adopt about 70 bills aimed at ensuring digitalization of various spheres of life, of which about 30 relate to the financial sector. Some of them have already been adopted:

- Federal Law of March 18, 2019, No. 34-FZ “On Amendments to Parts One, Two and Article 1124 of Part Three of the Civil Code of the Russian Federation”;
- Federal Law of August 2, 2019, No. 259-FZ “On attracting investments using investment platforms and on amendments to certain legislative acts of the Russian Federation”; and
- Federal Law dated July 31, 2020, No. 259-FZ “On digital financial assets, digital currency and on amendments to certain legislative acts of the Russian Federation.”

At the same time, it should be recognized that in the unfolding race of regulators and legislators, any traditional regulation is objectively conservative. It does not work for the future, as the legislator, as a rule, does not have high expertise in the field of modern digital technologies and is focused on responding only to their negative manifestations. Nevertheless, today, legislation has come close to the need not only for adequate regulation of new technologies and public relations, which are fundamentally different from existing ones but also for the development of new approaches to the regulation process itself (Pripachkin, 2019).

In this regard, Federal Law of July 31, 2020, No. 258-FZ “On Experimental Legal Regimes in the Field of Digital Innovations in the Russian Federation” deserves special attention, which can be described as the first attempt to comprehensively regulate legal experiments in the country. The law is intended to institutionalize the conduct of experiments in the field of digital innovation by creating a general mechanism for establishing experimental legal regimes in this area:

- the procedure for initiating, implementing, monitoring implementation, determining the results of the implementation of experimental legal regimes;
- determining the requirements for participants in the experimental legal regime; and
- determining principles and criteria for the admissibility of establishing experimental legal regimes in eight areas in which it is proposed to apply digital innovation, including the financial market.

Besides, Article 13 appeared (“Experimental legal regime”) in the Federal Law of July 31, 2020, No. 247-FZ “On mandatory requirements in the Russian Federation”, adopted simultaneously with the Federal Law of July 31, 2020, No. 248-FZ “On State Control (Supervision) and Municipal Control in the Russian Federation.”

The implementation of the mechanism of experimental legal regimes is carried out within the framework of regulatory sandboxes. The first regulatory sandbox was created in the UK in 2016. Afterward, regulatory sandboxes were successfully implemented in the USA, Australia, Singapore, UAE, China (Hong Kong), Malaysia, Thailand, Indonesia, Bahrain, Switzerland and Canada. The possibility of establishing a regulatory sandbox regime is being studied in Brunei, China (in addition to Hong Kong), India, Kenya, Mexico, Mozambique, Nigeria, Pakistan. Initially, experimental legal regimes were established in the area of digital innovation in the financial sector. Afterward, experiments began to be carried out in other areas, but most of them still concern the financial sector.

The Bank of Russia, as part of the implementation of the Main Directions for the Development of Financial Technologies for the period 2018–2020, launched a regulatory sandbox in April 2018, which provides an opportunity to pilot innovative financial technologies and services in the financial market. The priority areas for piloting are big data and machine learning technologies, mobile technologies, artificial intelligence, biometric technologies, distributed ledger technologies, open interfaces, digital profile technologies, etc. In August, Sberbank launched a pilot project on it – a service for credit institutions that allows integrating a platform for remote management of corporate clients’ accounts with the authority to perform transactions on their behalf in bank branches. The purpose of such a mechanism is to reduce the costs of consumers of banking services. To date, more than 30 applications for participation in the regulatory platform have been submitted, mainly from credit institutions and technology companies. Among the areas are distributed ledger technology, big data and machine learning, digital profile (user identification and collection of data about individuals and legal entities from government databases) (Belozyorov *et al.*, 2020).

An equally important issue for both the Russian and foreign stock markets is client cross-identification. Taking into account Russian legislative innovations in terms of biometric customer identification, it should be noted that at present Russian legislation does not contain a legal institution for delegating public powers to identify customers, customer representatives, beneficiaries and beneficial owners.

As part of the consideration of credit institutions activities digitalization in the securities market, it is impossible not to point out the existence of a number of issues in the supervisory and control area, which is part of the public law component of the financial activities of the state, in particular the Bank of Russia. The proposed approach corresponds to the position of a team of authors who consider the issues of the public law component in the financial activities of the state (Tsendeliani *et al.*, 2019a, 2019b). At the same time, the control itself in the securities market should be considered as an independent type of state financial control (Proshunin, 2018, 2019). Digitalization should become the same direction of development for stock control as for the very commercial activities of credit institutions.

Possibilities of digitalization of relations in the banking sector in the mechanism of prudential rules implementation

The rapid digitalization of relations is becoming a global trend, which makes it possible, among other things, to increase business transparency, reduce the corruption component and bring banking regulation and supervision procedures to the next level. Digitalization

significantly expands the range of services offered by banks and introduces a number of additional functions that make cooperation between clients and the bank more flexible. The volume and quality of services offered digitally have become an important field for competition between banks and the reason why customers stay or leave a given bank. Banking recommendation is another area in which the internet and mobile telephony affect banks. Clients' recommendations for specific banking services are gradually shifting from the real world to the virtual one, which makes it the main source of consumer opinion formation (Shankar *et al.*, 2020). This fact forces banks to pay more attention to the quality of the services offered and maintaining customer satisfaction to receive recommendations from them in local communities (Kozak and Golnik, 2020).

At the same time, it should be understood that, in matters of so-called financial inclusion, the widespread introduction of digital finance technologies may have negative consequences. Digital finance providers are primarily profit-seeking corporations that use digital technology to maximize their profitability or to maximize the profitable opportunities of businesses associated with digital finance providers such as banks, financial and non-financial institutions. Bias in the provision of digital finance can be "geographic," as digital financial service providers, based on their own internal risk assessment, which may change from time to time, may refuse or discontinue the provision of specific e-finance services, for example, to villagers, residents of districts lacking the necessary infrastructure to support specific digital financial services, resulting in reduced financial inclusion (Ozili, 2018).

The World Bank is of the opinion that increased use of digital finance is driving greater financial inclusion. In practice, however, the increased use of digital finance may not lead to greater financial inclusion, but rather to the collection of financial data, given the fact that the concepts of financial inclusion and data collection are not identical. For example, collecting financial data involves combining biometric information from individuals' bank accounts to authorize financial transactions that can be verified and traced back to a person or firm while financial inclusion, on the other hand, implies an increase in the number of (mostly poor) persons with access to formal financial services, mainly through formal bank accounts (Ozili, 2018).

Supporters of digitalization of the banking sector highlight possible prospects for "digitized" relations, among them:

- the creation of a general register, in which banks will enter information about themselves and their customers;
- the ability to find out the price of clients' assets;
- the ability to check whether the property being pledged is not pledged in another bank;
- reducing risks in cooperation with a certain circle of people;
- reducing the cost of checking customer information;
- absence of duplicate records in the accounting of financial organizations; and
- registration of all transactions in the register and simplification of work with them.

After the digitalization of relations, both banks and their clients will not be able to participate in dubious illegal transactions and operations. New approaches will also contribute to the effective implementation of prudential rules, including those related to the need to protect public interests. For example, the implementation of the activities of credit

institutions to counter the legalization (laundering) of proceeds from crime and the financing of terrorism.

Thus, even in the Resolution of the Constitutional Court of the Russian Federation of May 19, 1998, No. 15 P, it was explained that the Constitution of the Russian Federation does not prohibit the state from transferring certain powers of the executive authorities to non-governmental organizations (Tsindeliani, 2016, 2019). Judge G.A. Gadzhiev, in his Special Opinion to the Resolution of the Constitutional Court of the Russian Federation of May 31, 2016, No. 14 P, noted that the imposition of public law functions on persons of private law was recognized by the Constitutional Court of the Russian Federation as permissible in principle (Decision of September 15, 2015, No. 1838 O).

The German researcher Blankenagel (2016) provided significant information: the Constitutional Court of the Federal Republic of Germany adopted a fundamental Decree, according to which those state functions, in the performance of which the use of physical violence is possible, should in no case be transferred to private individuals. All other state functions, apparently, can be performed by a private person, provided that legal regulation should be sufficiently specific and state supervision should be sufficiently extensive and strict.

Thus, modern legal regulation does not exclude the transfer of some public law functions to private individuals. An example that has already become commonplace is that when transferring taxes to the budget, banks actually perform a quasi-state function and are controlled by the state as much as possible (Popkova, 2019). From the point of view of Karaseva (2012), banking services at the stage of fulfillment of tax obligations are mandatory, as the state budget funds exist exclusively in non-cash form.

Today, new control public powers of Russian banks in the field of taxation are gaining in importance based on some regulatory legal acts, for example, the Federal Law of August 7, 2001, No. 115 FZ "On Counteracting Legalization (Laundering) of Criminally Obtained Incomes and Financing of Terrorism," and relevant requirements (clarifications) of the Bank of Russia. A significant number of Methodological Recommendations of the Bank of Russia are devoted to these powers. A number of significant norms in this area are stipulated in the Bank of Russia's Regulation No. 375 P dated March 2, 2012 "On Requirements for the Internal Control Rules of a Credit Institution to counter legalization (laundering) of proceeds from crime and financing of terrorism."

Basically, the relevant provisions orient commercial banks to identify signs that indicate the "unusual" nature of transactions of bank customers. In appropriate cases, the conclusion about the "unusual" nature of the transaction allows, in particular to "block" funds in the clients' accounts. Often, the "unusualness" of transactions is a sign of customers using "tax schemes" aimed at minimizing taxes, although, other real purposes of such transactions (as a rule, illegal) are not excluded.

In particular, from the point of view of the Methodological Recommendations dated April 13, 2016, No. 10 MR, dated February 2, 2017, No. 4 MR and dated February 9, 2017, No. 5 MR, such a sign will be "suspicious" when payment of taxes or other obligatory payments to the budgetary system of the Russian Federation from a bank account are not made or are made in amounts not exceeding 0.5% of the debit turnover for such an account. The criteria of "unusual," "doubtful" transactions aimed mainly at minimizing tax liabilities follow not only from the above legal acts, especially as the powers of commercial banks under consideration do not reflect their main functions. One can recall the Order of the Federal Tax Service of Russia dated May 30, 2007, No. MM 3 06/333@, which approved the Public Criteria for Self-Assessment of Risks for Taxpayers, used by tax authorities in the process of selecting objects for conducting field tax audits. At the same time, a comparison of "suspicion" criteria from the Federal Tax Service of Russia and from the Bank of Russia reveals a lot in common.

However, are banks paid to perform the corresponding quasi-state control function? It seems that formally they are not, but in practice, they are often paid, and at very impressive rates, incl. through the collection by banks from clients of certain “commissions” for the “withdrawal” of funds from blocked accounts.

It is noteworthy that the Bank of Russia does not yet have direct instruction to controlled banks on the illegality of such commissions. It seems that a significant task of the state, including the Bank of Russia, is a clear and unambiguous settlement of the relevant legal relations; a complete ban on the collection of such fees by banks should be more reasonable. According to experts, the prospects for the adoption of the Federal Law “On Amendments to Art. 29” of the Federal Law “On Banks and Banking Activities” and Art. 4 of the Federal Law “On Counteracting Legalization (Laundering) of Criminally Obtained Incomes and Financing of Terrorism,” the draft of which is planned for consideration by the State Duma in the first reading in December 2020, are uncertain.

In the future, it will be more difficult for banks themselves and their clients to participate in dubious transactions after the increase in the degree of digitalization of their activities. If the legislator does not resolve the problem of essentially illegal fees charged by banks, then the growth of digitalization of relations will make it possible to more accurately establish the nature of the transactions performed, and, accordingly, reduce the number of controversial situations.

Conclusion

Despite the fact that the banking system is still associated with the banking services market, today it acquires completely new characteristics and elements. In the light of globalization and digitalization of the economy, the banking sector is dynamically developing, turning into infrastructure platforms, and therefore, the regulation and supervision in this area are changing. With the inevitable digitalization, government intervention in the banking sector remains a necessary phenomenon at all stages of financial relations. At the same time, this study shows that the legal guidelines for the digitalization of the Russian banking system are strategic planning documents, the purpose of which, among other things, is to contribute to the sustainable development of the banking system.

At the same time, taking into account the fact that the concept of financial sustainability is currently causing lively discussions, today this concept, based on its definition and the methodology for its assessment, can only be considered in a very vague perspective. This factor creates obstacles for a full and objective assessment of the effectiveness of the digital transformation of the banking system of Russia, considered in the context of sustainable development.

The speed of technological changes requires the prompt development of strategic development documents, target programs, comprehensive legal regulation of innovative financial products and services and the introduction of new mechanisms for the implementation of state powers. Under these conditions, the possibilities of international regulatory cooperation and the harmonization of legislation become important. Further digitalization of the financial services market will contribute to an increase in the degree of legal certainty in the banking sector of the economy.

The conducted research is of great practical importance for improving financial legislation. The results obtained are relevant for further studies of assessing the effectiveness of state financial regulation and the development of draft regulatory legal acts. To ensure sustainable development of the banking sector and the financial services market, further legal research is needed in the field of adapting legislation to the emergence of new tools for the digital transformation of banking services.

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