

Digital Transformation of the Financial Services Market in Russia



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Abstract The effectiveness of the digital transformation of the Russian economy is largely determined by its financial sector. In turn, in modern research, the issue of the influence of digitalization of the financial system on the entire value chain of financial services remains insufficiently studied, while at the same time facilitating the intensification and deepening of relations with customers. The article explores the features of digitalization of financial services associated with its intangible nature, heterogeneity of estimates. The methodological base of the study includes the theoretical principles of the digital economy and the concept of business models taking into account the specifics of the activities of financial organizations. Retrospective and prognostic research methods made it possible to identify the main tools for digital transformation of the financial services market: virtual banks; financial and technical companies; international and national electronic money systems; digital currency; online loans; payment services of IT platforms; crowdfunding and crowdinvesting; “End-to-end” digital technologies”; external electronic document management services. Based on the results of the study, a generalized conclusion was made about the existence of serious problems of a technical, economic and social nature, their dominance in the financial services market was noted along with existing economic problems. Recommendations have been developed to improve the regulatory framework that protects the interests of agents involved in creating the value of financial services. Scientific novelty is reflected by the proposed conceptual business model of digitalization of financial and credit institutions, the management areas of which may include: improving operational efficiency, introducing innovations (smart technologies), managing customer relationships, and ensuring structural flexibility (“bank as a network”). The theoretical and practical significance of the study lies in the fact

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that the results of the study can serve as the basis for solving persistent problems associated with the digitalization of financial services, changing business models in the financial sector of a market economy.

Keywords Digital transformation · Banks · Financial sector of the economy

JEL Codes G20 · O16 · O33

1 Introduction

Today, the formation of a new social order is associated with the development of the digital economy, which in the context of globalization of socio-economic processes contributes to the competitiveness of the country. This is one of the most important tasks of any state [1].

The digital economy, based on the digitization of information and the corresponding information and communication infrastructure, implies the emergence of not only technological, but also structural and process challenges and opportunities. This new type of economic relationship implies the emergence of technological, structural and process challenges and opportunities. Thus, the digital transformation of society is a complex process, one of the elements of which is the digitalization of the financial services market.

The digital transformation should be seen as...: "...something much more than just understanding and implementing new technologies. It stimulates a wave of innovations in business models, products, services and internal business processes that can threaten the survival of an organization. In addition to the use of new technologies, this requires new ways of thinking and doing business, new roles and skills, new organizational structures and operating models, and adapting to the much faster pace of change" [2].

The effectiveness of the functioning of digitalization processes, as well as of all sectors of the Russian economy and society, depends on the state of the financial system. The market of financial services promotes economic growth and innovation, and stimulates the introduction of science and technology to accelerate social reproduction.

Digitalization [3–6] of the financial system affects the entire value chain of goods, works and services, and the competitive position of the company [7]. This is confirmed by the data on revenue per employee (RPE) of such companies as Visa, Mastercard, PayPal (Fig. 1), where it is \$1062 million, \$906 million, \$599 million respectively.

The importance of digital transformation of the financial sector is also demonstrated by the documents adopted by the Central Bank of Russia, in particular, "Action plan (road map) for implementing the Guidelines for the Development of the Russian Financial Market in 2019-2021" (approved by the Bank of Russia Board of Directors on 26 May 2018). According to analysts of the Accounts Chamber, the action

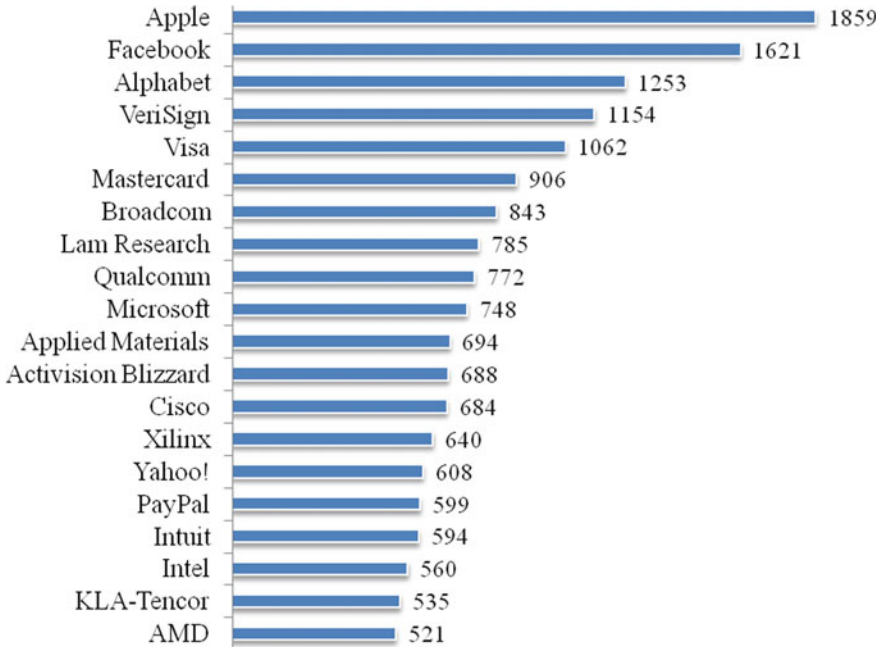


Fig. 1 Revenue per employee, in million USD. *Source* Compiled by the authors based on data [8]

plan (“road map”) for the period 2016-2018 is fulfilled by 97.8% (Sawatjgin 2020). In addition, experts point to the subjective nature of a number of key performance indicators of measures set by the Central Bank of Russia (Sawatjgin 2020).

In this regard, the study of the specifics of digital transformation of the financial services market is an urgent task. The findings will help to formulate more clearly the problems of the process of digitalization of the financial sector and adjust, if necessary, the key performance indicators of measures to develop the financial market of Russia. In addition, this will provide the basis for monitoring the development of digital transformation of the financial sector, improving the management system of structural-digital institutions [1].

Besides, there are no assessment indicators specific to this sphere in the world practice. There are a number of international indices existing at the moment (Digital Opportunity Index, DOI; ICT Development Index; Networked Readiness Index, NRI; The UN Global E-Government Development Index; The Web Index (Internet Development); The Global Innovation Index; Information and communication technologies Development Index, IDI), which are primarily aimed at assessing the degree of digitalization of the economy as a whole [9].

The purpose of this study is to study the features of digitalization of financial services. The complexity of evaluation of digital transformation of financial market is connected with the peculiarities of financial service: intangible nature, heterogeneity

of evaluation, inseparable nature of production and consumption process, perishable nature. This is the concept of IHIP (intangibility, heterogeneity, inseparability, perishability), which is used in the sphere of services marketing [10–12].

2 Background and Methodology

The research methodology is based on classical methods of analysis and synthesis, induction and deduction, which allowed to reveal features and trends of financial services market development, to generalize empirical data on the state of development of the Russian financial market in the epoch of digital transformation.

The information base of the research was provided by the primary sources: statistical data of the World Bank and the Central Bank of the Russian Federation for the period from 2015 to 2019, materials of the Federal State Statistics Service (Rosstat), specialized reference legal system (database “ConsultantPlus”), official Internet resources of the state authorities (gov.ru). These sources were correlated with secondary information resources: case studies of leading scientists, materials from symposiums and scientific conferences. It allowed to increase completeness and representativeness of the data used for analysis, as well as to formulate problems of digital transformation of financial system.

3 Discussion and Results

Modern digital technologies allow to qualitatively increase realization of financial services among all subjects of financial sector.

The digital transformation of the financial services market is primarily manifested in such mechanisms and instruments as:

- virtual banks (Internet banking, E—banking);
- FinTech companies (FinTex);
- international and national electronic money systems (PayPal, M-Pesa);
- digital currency market (Bitcoin, Namecoin, PPCoin);
- online loans (Smartcredit, Moneza);
- payment services of IT platforms (X-Plat, PayU);
- crowdfunding and crowd investing (AngelList, EquityNet);
- end-to-end digital technologies;
- services of external electronic document circulation.

The intensity of digital transformation of the financial services market depends on the necessary and sufficient conditions of this process [9]. Consider some of these conditions in more detail.

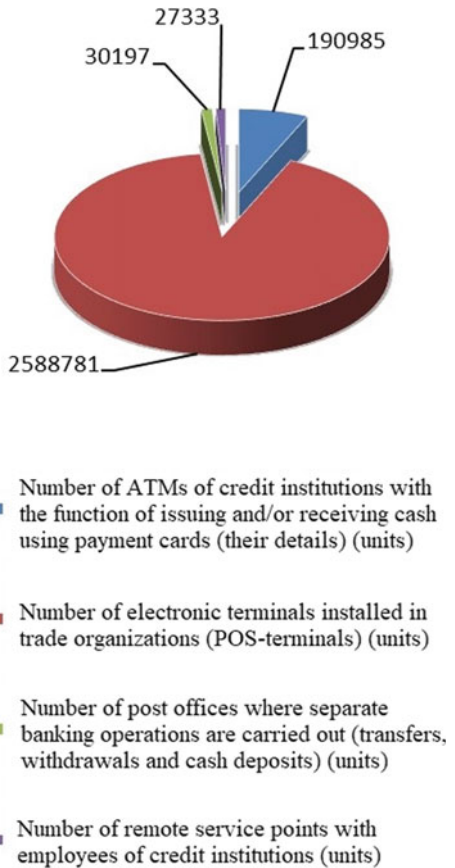
Digitalization of financial services concerns forms of interaction of market participants with each other: personal contact gives way to remote electronic interaction.

For example, despite the reduction in the number of credit and insurance institutions in the market, they actively use the capabilities of the Internet to provide various services.

As can be seen from Fig. 2, post offices were actively involved in a number of banking operations, the growth rate of which was 103.9% compared to 2017. This success is primarily due to the introduction of modern IT systems [13]. In 2018, compared to 2017, the number of ATMs with the function of cash acceptance using payment cards (their details) increased by 1.4%; the number of electronic terminals (POS-terminals) increased by 18.3% (Fig. 3).

As for the subjects of insurance business (insurance organizations, insurance brokers), according to Expert RA rating agency, only 5% of respondents do not use Internet solutions when concluding insurance contracts (Skuratova and Yanin 2019). The types of insurance services provided in digital form are shown in Fig. 4.

Fig. 2 Financial services availability indicators as of 1.01.2019. *Source* Compiled by the authors based on data from the Central Bank of Russia



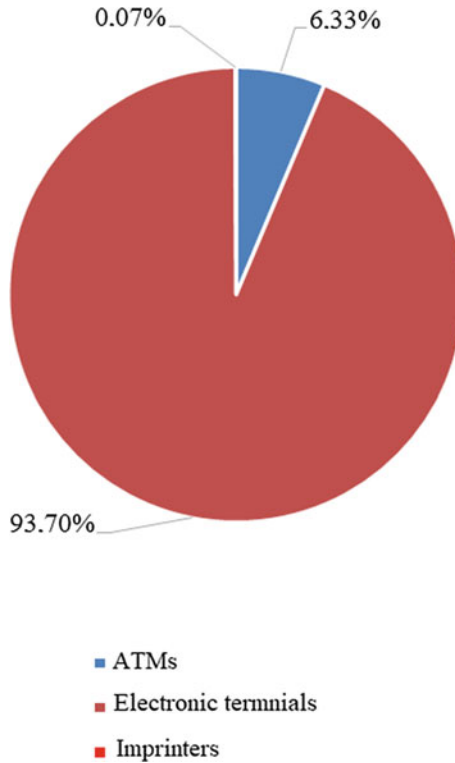


Fig. 3 Payment card reception equipment structure, 2018. *Source* Compiled by the authors based on data from the Central Bank of Russia

The infrastructure of the financial services market consists also of hardware and software. Figure 5 shows data on the use of ICT technologies in organizations by type of economic activity.

Analysis of the data in Fig. 5 shows that the share of companies in financial, insurance and educational activities is quite high in terms of usage: website on the Internet—66.7% and 87.9%; cloud services—30.1% and 43.8%; LAN (local area networks)—73.8% and 90.6%; personal computers—94.9% and 98.4% respectively.

It should be emphasized that sufficient conditions for digital transformation of the financial services market ensure their effective provision.

For example, the use of modern software by financial market companies increases the quality of provided services and expands their diversity. In 2012, the crowdfunding platforms Planeta.ru and Boomstarter were created in Russia.

In 2018, Planeta.ru implemented 2985 projects, 33% of which were successful, and the average check was 1.2 thousand rubles. In the same period, 787 projects were implemented on the Boomstarter platform, 49% of which are successful, and the average check amounted to 2000 rubles.

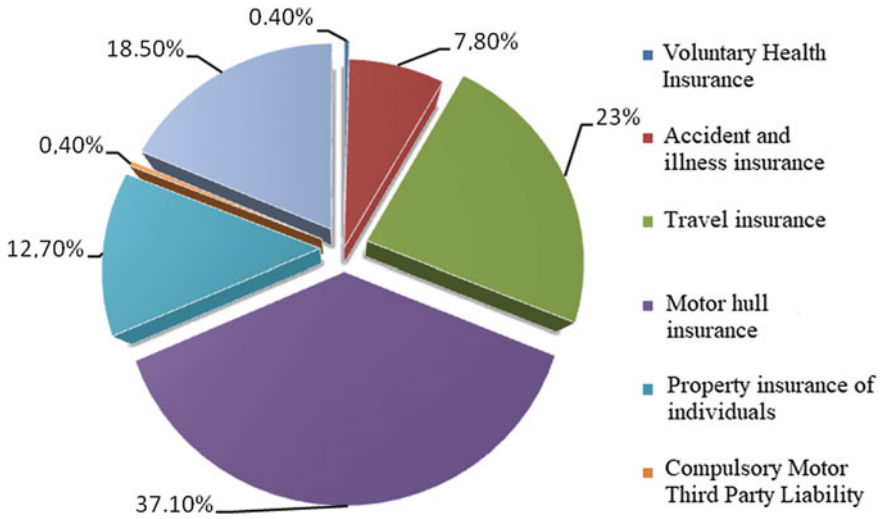


Fig. 4 Structure of electronic insurance by types without CMTPL insurance, 2018. *Source* Expert RA, according to the data of companies

In Russia, the mechanism of biometric remote identification has been used since June 2018. Registration in the Unified Biometric System allows for the storage and processing of biometric data for the implementation of remote identification of citizens, which is now available at 3,250 points of banking services in 61 banks and outside offices in all regions of the Russian Federation (courier model).

Development of the Russian financial services market is characterized by strengthening of supervising functions of the Bank of Russia, high competition in the relevant market segments and consolidation of participants. These factors change the number of participants in the financial and microfinance market.

From 2015 to 2020, there has been a decrease in the number of all categories of participants in the financial market: by 53.5%—credit organizations; 45.1%—insurance entities (insurers, insurance brokers). The number of consumer credit cooperatives and microfinance organizations dominating the market also decreased: from 3,226 to 1,525 credit unions and from 3,992 to 1,774 microfinance organizations. Non-State pension funds, the number of which stood at 120 in 2015, reached 47 in 2020. An exception to this trend is collection agencies, the number of which increased from 177 to 294 in the period from 2018-2020.

At the same time, new participants appear on the financial services market: investment advisors, forex dealers and operators of investment platforms. As of 10.01.2020, the unified register of the Bank of Russia includes 69 investment advisors, 4 companies have a license of a forex dealer.

Thus, it’s unlikely that any other industry will encounter such persistent digitalization challenges as the financial industry. The model presented in Fig. 6 is proposed

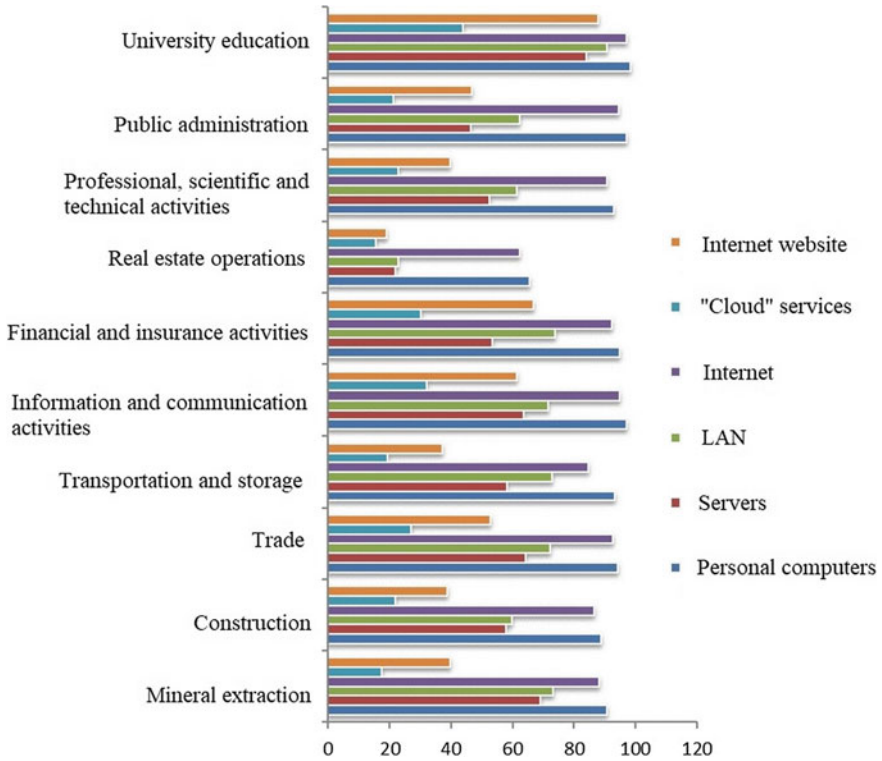


Fig. 5 Share of ICT companies (as of 2017). Source Compiled by the authors on the basis of data from the Federal State Statistics Service

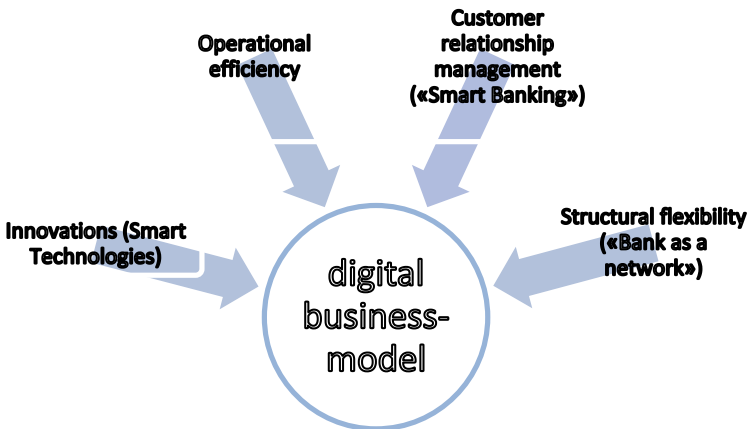


Fig. 6 Model of a financial institution standard 4.0. Source Compiled By the authors

to adapt existing business models to the requirements of the digital transformation of the financial services market.

The presented business model includes the key factors affecting digitalization in the banking business of the future and the requirements arising from these processes for the technological infrastructure of the financial sector.

The digital model of a financial institution includes the following areas of management:

- operational efficiency (digitization of work processes; acceleration of key processes through the use of Front office/back office; automation of functional efficiency (Controlling, Reporting, Risk Management), to increase which there are provide a flexible and scalable IT infrastructure, replacing obsolete systems with modular basic banking systems; use of cloud architectures, SaaS, PaaS; integration of ERP, BPM, DMS through standardized APIs; use of DLT (Distributed ledger technology)/Blockchain;
- customer relationship management (development of Omni-channel concepts and individual products; Customer Profiling und Tracking; Customer Life Cycle Management; Corporate & Investment Banking), the effectiveness of which provides for a service-oriented architecture (SOA), solutions for mobile banking (applications for wallets, personal finance tools, Robo Advisors), predictive analytics/business analytics (social networking tools, artificial intelligence, data science, virtual/augmented reality), use of DLT/Blockchain;
- innovations (innovative products/services, for example, instant payments, Robo Advisory, Smart Securities, Smart Credit; applications for Trade Finance, syndicated loans; reducing the time to market for new financial products; simple integration of third-party applications), the implementation of which involves the using of the platform for blockchain solutions/distributed registries; smart contracts; solutions for high-performance computing (LDCs), the using of data science, artificial intelligence, machine learning for new investment strategies, loan portfolio management, market risk management;
- structural flexibility (reduction of value added by focusing on core activities (outsourcing, offshoring), the using of networks with partners in sales and production to create value), which can be achieved through a flexible, scalable, open system architecture to unite new customers, service providers (Fintechs), improved regulatory compliance (RegTech), simplified networking and cloud-based networking, and the using of DLT/Blockchain.

The discussion on digitalization in banks often comes down to automating processes and the associated cost reduction or efficiency gains. The real challenges for digital banks will be to provide customers with innovative, personalized and intelligent services and, thus, transform traditional customer relationship management into an intelligent banking approach in the medium and long term.

The successful implementation of digitalization processes in Russian society depends not least of all on legislative and regulatory aspects of this issue. In the program “Digital Economy of the Russian Federation” approved by the Order of the Government of the Russian Federation from 28.07.2017 No. 1632-r for the period up

to 2025, special attention is paid, inter alia, to legal issues of digital transformation as a necessary condition for digitalization of the financial services market.

Introduction of innovative financial technologies and services is ahead of the system of their legal regulation, in particular, protection of rights of people developing and using digital technologies is not effective. According to experts, “in 2014–2018 the courts considered 148 such cases. Of those, 45% were related to the performance of obligations under smart contracts, as well as the recognition of the cryptocurrency as an object of civil circulation. At the same time, not a single case was resolved in favor of the plaintiff.” [14]

From a legal point of view, it’s necessary to revise those legislative norms that currently regulate the circulation of digital contributions. A detailed study of all aspects of the currently relevant movement of finance from the sponsor to the author, developer or initiator is required.

4 Conclusions

Necessary and sufficient conditions should be taken into account in indicators for monitoring the process of digitalization of the financial sector and also in the construction of a system for managing structural and digital institutions [15]. An analysis of national and foreign experience has shown that the creation of digital innovations is stimulated by the banking sector and its development trends. In particular, the main trend in the development of the financial sector today is the creation of virtual banks and the Internet banking service.

It should be noted that digitalization processes in many areas of financial services aren’t optimal. The legal framework often can’t provide a solid foundation for the full functioning of the digitalization of financial services.

In this context, the restructuring of the business model is an excellent opportunity to ensure the effective transformation of not only the business of a single company, but the entire financial industry as a whole, and also to open up completely new areas of growth and sources of income.

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