Innovation in the national digital financial services market

Loginov M.P.  
Ural State University of Economics  
Yekaterinburg, Russian Federation  
port-all@mail.ru

Usova N.V.  
Ural State University of Economics  
Yekaterinburg, Russian Federation  
nata-ekb-777@yandex.ru

Abstract — Subject of research. Innovation policy in the market of digital financial services.  
Purpose of research. Studying the theoretical foundations of the digital financial market development on the basis of state innovation policy and introducing a system for ensuring the innovative development of service enterprises in the face of increased competition and the national economy digitalization.  
Research methods. The study of a sources of information variety, analysis, comparison, grouping and synthesis.  
Results:  
1. The necessity of the financial market innovative development and the introduction of advanced technologies in the process of providing services is substantiated.  
2. The system of ensuring the innovative development of the country is disclosed.  
3. The author’s approach to the category of digital financial market is presented.  
4. The characteristic of digitalization of the financial market is given.  
Scientific novelty. The specifics of state regulation of innovation in the field of financial services in the context of the economy digitalization is revealed.  

Keywords — digital financial market, innovation policy, services, digital economy.

I. INTRODUCTION

The development of the national economy requires a qualitative improvement of all economy sectors, including the financial one, which is due, first of all, to the latest global trends. High-quality improvement of the financial sector means not only a change in the number of market participants, but also an improvement in the quality component of the services provided. In modern conditions, improving the competitiveness of financial institutions is impossible without the digitalization of technological processes. So in 2017, such documents as the "Strategy for the Development of the Information Society in the Russian Federation for 2017-2030" and the program "Data Economy of the Russian Federation" were adopted, which served as a starting point in the process of the national economy digitalization.

The aim of the research is to study the theoretical foundations of the digital financial market development on the basis of the state innovative policy and to present a system for ensuring the innovative development of enterprises in the service sector in the face of increased competition and digitalization of the national economy.

II. RESEARCH METHODOLOGY

The classical and modern approaches to working with information sources, analysis, comparison, grouping and synthesis was the theoretical and methodological basis of the research.

The theoretical foundations of the digital financial market are at the stage of formation and close attention, both from the authorities and the scientific world. The issues of the formation and development of the digital financial market are reflected in the scientific works of the following authors: Zverev A.V. [2], Mandron V.V. [2], Maramygin M.S. [3], Mishina M.Yu. [2], Reshetnikova L.G. [3], Smirnov S.A. [11], Sukhov S.N. [11], Chernova G.V. [3].

III. RESULTS

The digital financial market is one of the sub-segments of the electronic financial market, along with online banking, online trading and online insurance.

In our opinion, the digital financial market is a sub-segment of the financial market consisting of specialized financial institutions, the subject of relations between which are digital financial instruments and electronic money, as well as digital financial services.

At the same time, the features of the digital financial market are both the expansion of the range of financial services provided in real-time and the reduction of the branch network of banks and the number of employees in the field of financial services.

Digital financial services in the narrow sense are services in relation to digital financial assets, electronic money, in the broad sense they are services in the financial market using the Internet, mobile applications, etc. The types of digital financial services include information, communication, cybersecurity, services, financial products, and others.

The main reasons for the development of the digital financial market are as follows.

First, the general trends in the development of the world economy are two processes, on the one hand globalization is observed, and on the other, integration economic processes.

Secondly, the presence of crisis phenomena in various countries and a high degree of polarization of the financial market.

Thirdly, the influence of the consumer factor, namely, the complication of the financial needs of customers, which stimulates an increase in the level of innovative activity of financial organizations.

Fourthly, most digital financial services are transnational in nature.
Before considering the priority areas of the national financial market development in the context of the transition to a digital economy, it is necessary to characterize the state’s innovation policy as a tool for state regulation of innovation.

In the domestic and foreign scientific literature it is generally accepted that a low level of innovation is one of the main reasons for the low level of competitiveness of the Russian services sector.

However, the main reason for the low competitiveness of domestic service industries in world markets is not the lack of innovation, but the general macroeconomic background, determined by monetary, tax and regional government policies. The state is moving towards increasing research and development costs without a qualitative change in its other policies, which ultimately only leads to a decrease in the innovative activity of the business.

It should be noted that the domestic national innovation system has been institutionally created, but has not yet functionally developed, because its main components: the innovation infrastructure, enterprises and the scientific and technical sphere function separately from each other; there are no strong relations between science and business.

The system for ensuring innovative development includes scientific, methodological, organizational, legal and resource support, as well as state support for the results of intellectual activity commercialization as well as innovative goods and services.

At the legislative level, innovation is understood to mean the introduction of a new or significantly improved product (product, service) or process, a new sales method or a new organizational method in business practice, organization of jobs or in external relations [13].

We have to admit that the legislator reduced all marketing methods only to a new sales method, which significantly limited the development and accounting of marketing innovations.

The formation and development of the innovative potential of the services sector is based, first of all, on state support in such areas as:

- Sectoral strategic management of the service sector;
- Direct financing of innovative projects;
- Leasing (formation and expansion of networks of leasing companies);
- Financial and credit support based on regional and municipal funds and a system of mutual lending and insurance;
- Staffing of innovative enterprises;
- Providing consulting and design services;
- Territorial development through the development and implementation of programs to improve the competitiveness of the local territory, as well as improve the quality of life and conduct business on it;
- Providing opportunities for innovative enterprises to rent premises on preferential terms.

The tools of the system for ensuring the innovative development of service industries include:

- contract, which is usually concluded at the end of the competition. Moreover, in the process of performing work on a contract, the state has the right to monitor the progress of work and adjust them. As for the results of scientific research, they directly bring or benefit the state.
- municipal order, which is a set of municipal contracts for the supply of goods, works or services at the expense of the local budget.
- a grant aimed at supporting and stimulating research and development on the part of the state. Unlike the first instrument, the state does not monitor the progress of work, and the results of the work cannot bring benefits in the short term and are uncertain.
- a cooperative agreement aimed at organizing interaction between the state and business, including the resolution of investment issues and the division of the result. The specificity of this tool is that the control over the work is carried out by the state, and the rights and contributions of the parties to the agreement have a clear distribution.
- rent, temporary gratuitous use of equipment and premises owned by authorities
- standardization - refers to various areas of service provision
- system of budgetary, extrabudgetary and venture funds
- comprehensive tax incentives
- institutes of innovative development
- and other tools.

The system for ensuring the innovative development of the service sector is multilevel. The authors identified five levels, each of which is characterized by its subjects, goals and support mechanisms (Table 1).
According to the use of market instruments, as well as the use of public innovative activities in such forms as subsidies, guarantees, grants, loans, as well as contributions to the technical market relations in such areas as the scientific and industrial complex, the service sector, as well as Table 2, the authors summarize various approaches to the implementation at the federal and regional (sectoral) levels. In Table 2, the authors summarize various approaches to the content and structure of the national innovation policy of the state.

### Table 1. System for ensuring innovative development of the service sector

<table>
<thead>
<tr>
<th>Level</th>
<th>Subjects</th>
<th>Goals</th>
<th>Security mechanisms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interregional</td>
<td>International markets, foreign markets, transnational corporations, international economic institutions</td>
<td>Cooperation, increased competition, globalization, accelerated scientific and technical progress</td>
<td>Financing the use of national innovation potential and the latest technological developments for the export of innovations abroad with subsequent commercialization, international treaties and agreements</td>
</tr>
<tr>
<td>National or federal</td>
<td>State, national markets, national innovation infrastructure</td>
<td>Ensuring national security increasing the competitiveness of the national economy</td>
<td>Methods and instruments of state regulation of innovative development of service industries, federal legislation</td>
</tr>
<tr>
<td>Regional or industry</td>
<td>A diversified system consisting of many entities, regional innovation infrastructure</td>
<td>Formation of technological, political, regulatory, economic, social and other conditions and factors at the regional or industry levels</td>
<td>Mechanisms for regional and sectoral support for the innovative development of service industries, regional regulatory acts, methods and tools for regional support for innovative activities</td>
</tr>
<tr>
<td>Immediate surroundings</td>
<td>Microenvironment: partners, investors, competitors, recruitment agencies, employment services, educational institutions, banks, etc.</td>
<td>Profit, benefit, social development of the territory</td>
<td>Legal, informational, financial and other resource mechanisms</td>
</tr>
<tr>
<td>Corporate</td>
<td>Organization structural units</td>
<td>Making a profit, improving the quality of services, increasing the competitive ability of the organization</td>
<td>Provision of resources (financial, labor, etc.), information (knowledge management), organizational, etc.</td>
</tr>
</tbody>
</table>

In the Russian Federation, state innovation policy is implemented at the federal and regional (sectoral) levels. In

### Table 2. Features of state innovation policy

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goals</td>
<td>− modernization of the Russian Federation economy;</td>
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<tr>
<td></td>
<td>− increasing and ensuring a high level of competitiveness of Russian goods, works and services in the national and world markets;</td>
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<td></td>
<td>− improving the quality of life of the Russian Federation population;</td>
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<td></td>
<td>− creating the necessary conditions of a legal, economic and organizational nature, as well as certain incentives for legal entities and individuals who carry out innovative activities;</td>
</tr>
<tr>
<td>Tasks</td>
<td>− creation of favorable conditions aimed at increasing innovative activity in the business sector;</td>
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<td></td>
<td>− development of science with a focus on the innovative development of the state;</td>
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<td></td>
<td>− financing the training of highly qualified personnel in the field of innovation management;</td>
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<tr>
<td></td>
<td>− improving the mechanisms of diffusion and transfer of knowledge, as well as the development of cooperation between the research and business sectors;</td>
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<tr>
<td></td>
<td>− support breakthrough areas of technological development;</td>
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<td></td>
<td>− creation of mechanisms to stimulate the launch of competitive innovative products and services on the market;</td>
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<td></td>
<td>− creation of an effective innovation infrastructure;</td>
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<tr>
<td></td>
<td>− direct financing of individual R&amp;D programs, as well as attracting investment from the business.</td>
</tr>
<tr>
<td>Principles</td>
<td>− application of a program approach and ensuring measurability of goals in the planning and implementation of government support measures;</td>
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<td></td>
<td>− ensuring the availability of state support at all stages of the implementation of innovation;</td>
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<td></td>
<td>− accelerated development of innovative infrastructure;</td>
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<td></td>
<td>− publicity of state support for innovation;</td>
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<td></td>
<td>− protection of private interests and promotion of private initiative;</td>
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<td></td>
<td>− in the process of stimulating innovation, priority is given to the use of market instruments, as well as the use of public-private partnerships;</td>
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<td></td>
<td>− targeted use of budget funds for state support of innovation.</td>
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<td></td>
<td>− ensuring investment and personnel attractiveness of innovative activity;</td>
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<td></td>
<td>− coordination and connection of the socio-economic policy of the state main directions (budget, tax, regional, etc.) as a necessary condition for solving the key tasks of innovative development;</td>
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<td></td>
<td>− freedom of creativity, both scientific and scientific-technical;</td>
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<td></td>
<td>− legal protection of intellectual property rights;</td>
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<td></td>
<td>− integration of scientific and scientific-technical activity and education;</td>
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<td></td>
<td>− support and development of a competitive environment in the field of science and technology;</td>
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<td></td>
<td>− ensuring the concentration of resources in priority areas of scientific development;</td>
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<td></td>
<td>− stimulation of business activity in innovative, scientific scientific-technical activities;</td>
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<tr>
<td></td>
<td>− development of international cooperation in the field of science and innovation.</td>
</tr>
<tr>
<td>Directions</td>
<td>− formation and implementation of a measures set to reorient production to resource-saving technologies and the production of environmentally friendly products;</td>
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<td></td>
<td>− the formation of an effective system for managing scientific and innovative activities;</td>
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<td></td>
<td>− development of innovative infrastructure and the formation of an attractive investment environment;</td>
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<td></td>
<td>− assistance to increase the level of employment of highly qualified personnel involved in scientific and/or scientific and technical activities;</td>
</tr>
<tr>
<td></td>
<td>− assistance in developing market relations in such areas as the scientific and industrial complex, the service sector, as well as expanding the network of small and medium high-tech firms of various legal forms;</td>
</tr>
<tr>
<td>Forms of state support for innovation</td>
<td>− the provision of benefits for the payment of taxes, fees and customs payments;</td>
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<td></td>
<td>− the provision of educational services;</td>
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<td></td>
<td>− provision of information and consulting support;</td>
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<td></td>
<td>− assistance in the formation of project documentation;</td>
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<td></td>
<td>− formation of demand for innovative products;</td>
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<tr>
<td></td>
<td>− financial support of innovative activities in such forms as subsidies, guarantees, grants, loans, as well as contributions to the</td>
</tr>
</tbody>
</table>
## Priorities for innovative development
- Human capital development;
- Increasing business innovation activity;
- Promoting innovation in the public sector;
- Creating a high-quality institutional environment;
- High intensity of creation and exchange of knowledge;
- High-quality mobile workforce;
- Cooperation between business, government and local governments, non-profit organizations, as well as universities and research centers;
- Availability of information, production and financial infrastructure;
- Presence of personnel with certain competencies;
- Availability of tax preferences and other incentives for the implementation of innovative activities;
- High level of trust in government bodies;
- High level of competition and quality of competition;
- Increase incentives for cooperation and the creation of cooperation networks.

## Conditions for the development of innovation
- Providing conditions for the creation and development of a competitive environment, as well as the formation of the personnel potential of the innovation sphere;
- Use of advanced foreign experience in the field of ensuring interaction between the state, business and science in the field of innovative development;
- Improving the financing of the innovation process;
- Assisting in the process of forming technological strategic alliances at the regional and international levels.

## State role
- Innovation Act;
- Normative legal acts regulating the creation and functioning of innovation infrastructure facilities;
- Regulations governing the provision of financial support to innovative enterprises;
- Normative legal acts regulating the functioning of advisory bodies on state regulation of the development of the innovation system;
- Innovative programs;
- Innovative strategies.

The legal regulation of innovation involves a certain hierarchy: interstate, federal, regional, municipal, sectoral and corporate.

Considering the service sector as a whole, here we can highlight a number of reasons for the need for state regulation of innovative development.

Firstly, ensuring concentration, for large-scale innovations, of the required amount of resources, including during basic research.

Secondly, the state should support a certain level of demand for products and innovative services that are significant for economic development.

Thirdly, the provision of certain guarantees or preferences for entrepreneurs choosing innovative projects with a sufficiently high level of risk.

Within the framework of state innovation policy, the innovation strategy plays a key role.

Innovative strategies are implemented through programs. The basis of state programs in the innovation sphere are the concepts of long-term socio-economic development, priority areas of activity of the Government of the Russian Federation, federal regulatory legal acts, as well as decisions of the President of the Russian Federation and the Government of the Russian Federation.

At the same time, it is possible to solve the problems of increasing innovative activity in the Russian Federation through the digitalization of the state’s economy. In particular, the following areas have been identified as the main areas of activity of the Government of the Russian Federation for the period until 2024.

Firstly, the creation of a global competitive infrastructure for the transfer, processing and storage of data mainly based on domestic developments;

Secondly, ensuring the training of highly qualified personnel;

Thirdly, ensuring of information security based on national developments in the transfer, processing and storage of data, guaranteeing the protection of the interests of the individual, business and government;

Fourthly, creation of end-to-end digital technologies mainly based on national developments;

Fifthly, in the field of science and technology, a unified digital platform for scientific and scientific-technical interaction, organization and conduct of joint research in remote access and a digital system for managing shared research infrastructure services, including digitized collections and data banks of organizations, will be created, performing research and development.

In Russia, all elements of the system for ensuring innovative development have been created, but they do not have a significant impact on the implementation of innovations in enterprises and organizations in the service sector. It is necessary to adjust the state approach to the requirements of innovative enterprises, it is necessary to ensure the movement of innovations from the bottom up, when enterprises will independently seek and introduce innovations to increase their profits, enter new markets, and the state should support their interest with an appropriate monetary policy.

Through state programs, the general innovation policy is associated with solving the problems of innovative development in various sectors of the economy. Among the
current state programs regulating certain issues of the development of the financial market, it should be noted:

- The program "Data Economy of the Russian Federation."
- "The main directions of financial technologies development for the period 2018-2020"
- "Economic development and innovative economy"
- “Information Society (2011 - 2020)”
- "The strategy for the development of the information technology industry in the Russian Federation for 2014 - 2020 and for the future until 2025"
- Strategy for increasing financial literacy in the Russian Federation for 2017 - 2023
- Strategy for increasing financial affordability in the Russian Federation for the period 2018 - 2020

The implementation of the main directions of financial technologies development for the period 2018-2020 is aimed at the development of innovative technologies in the financial market of the Russian Federation and the Bank of Russia, which will help to increase both the level of availability of financial products and services for the private and corporate sectors, and the competitiveness of the financial sector of the Russian Federation.

The introduction of digital innovation is one of the areas of innovative development of the financial market.

The Bank of Russia for the period until 2021 sets the following goals in the field of financial market development [5]:

- promotion of competition in the financial market;
- increasing the availability, quality and range of financial services;
- reduction of risks and costs in the financial sector;
- increasing the competitiveness of Russian technologies.

Moreover, the achievement of goals is based on the following tasks:

- in the field of legal regulation and development of digital technologies in the financial market (RegTech, SupTech, Big Data and Smart Data, mobile and cloud technologies, etc.);
- transition to electronic interaction between market participants, including between the Bank of Russia and other market participants;
- staff development in the field of financial technologies based on permanent training in modern financial instruments,
- improving technological security and sustainability when using financial technologies, as well as operational interaction with financial market participants for timely response and prevention of cyber attacks;
- interaction within the framework of the Eurasian Economic Union on the harmonization and unification of technological standards and the formation of a single payment space using new financial technologies;
- the creation of a regulatory mechanism for the Bank of Russia contributing to the development of innovative financial technologies and services, as well as minimizing the time and other costs of their implementation.

IV. CONCLUSIONS

The system of ensuring the innovative development of the country is disclosed, author’s proposals for the formation of a system for ensuring the innovative development of the services sector at five levels are presented, and the characteristic of digitalization of the financial market is presented. The specifics of state regulation of innovation in the field of financial services in the context of the digitalization of the economy

V. DISCUSSION OF RESULTS

The innovative development of digital financial services of national market will allow, on the one hand, to increase the level of competition in the financial market, and on the other, to change the quantitative and qualitative characteristics of the range of financial services, which will also minimize risks associated with the use of Internet space as a platform for interaction between market participants and reduce the level of distrust of the population in innovative digital financial products.

References

[6] Pasport national'nogo proektu "Natsional'naya programma "Tsifrovoaya ekonomika Rossisskoy Federatsiy" (utv. prezidiumom Soveta pri Prezidente RF po strategicheskamu razvitiyu i natsional'nym proektam, protokol ot 04.06.2019 N 7) [elektronnyy resurs] // Dostup iz sprav.-pravovoy sistemy «Konsul'tantPlyus»
информационных технологий в Российской Федерации на 2014 - 2020 годы и на перспективу до 2025 года» [электронный ресурс] // Доступ из справ.-правовой системы «КонсультантПлюс»


[12] Указ Президента РФ от 09.05.2017 N 203 «О Стратегии развития информационного общества в Российской Федерации на 2017 - 2030 годы» [электронный ресурс] // Доступ из справ.-правовой системы «КонсультантПлюс»