The European Proceedings of
Social & Behavioural Sciences
EpSBS

Future Academy

ISSN: 2357-1330

https://dx.doi.org/10.15405/epsbs.2019.03.35

GCPMED 2018
International Scientific Conference "Global Challenges and Prospects of the Modern Economic Development"

FINTECH IN THE BANKING SYSTEM OF RUSSIA: PROBLEMS AND PROSPECTS

S.S. Matveevskii (a)*, A.V. Berdyshev (b), M.N. Prokofiev (c), L.I. Ryabchenko (d)
*Corresponding author

(a) Department of financial markets and banks, Financial University under the Government of Russian Federation,Russian Federation, 125993 (GSP-3), Leningradsky Prospect, 49, Moscow, Russia, SSMatveevskii@fa.ru
(b) Department of financial markets and banks, Financial University under the Government of Russian Federation,Russian Federation, 125993 (GSP-3), Leningradsky Prospect, 49, Moscow, Russia, AVBerdyshev@fa.ru
(c) Department of public finance, Financial University under the Government of Russian Federation, Russian Federation,125993 (GSP-3), Leningradsky Prospect, 49, Moscow, Russia, MiNProkofev@fa.ru
(d) Department of financial markets and banks, Financial University under the Government of Russian Federation, Russian Federation, 125993 (GSP-3), Leningradsky Prospect, 49, Moscow, Russia, LRyabchenko@fa.ru

Abstract

In this paper, the authors analyzed the current state, problems, prospects for the development of Fintech in the Russian banking system. It has been established that at present in the Russian banking system there are both competition and cooperation between traditional banks and Fintech companies in such areas as payments, lending to P2P, P2B, other areas of production and sale of banking services. The low level of financial literacy of the majority of the population is considered as a factor hindering the development of Fintech. The fact that there is already a Fintech ecosystem in Russia currently stands out. The authors identified a number of circumstances characterizing the current state of development of the Fintech in the banking system: an increase in the flow of venture financing of Fintech companies, relevant start-ups, the creation of research groups uniting the Government, private business, the creation of the Fintech Association, the Masterchain project, the rapid growth in Russia of users of Fintech. It is concluded that the active promotion of digital services by traditional banks and their symbiosis with Fintech companies create the conditions for the formation of a positive "image" of modern financial services. It is emphasized that the program of development of financial technologies of the Bank of Russia, in combination with the program of the Government of the Russian Federation “Digital Economy of the Russian Federation”, creates the legal and organizational basis for the successful development of financial technology in the future, including in the Russian banking system.

Keywords: Fintech, technology, banks, ecosystem, lending, payments.

https://dx.doi.org/10.15405/epsbs.2019.03.35
Corresponding Author: S.S. Matveevskii
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

1. Introduction

Fintech is a new financial technology based on the use of IT, the Internet, gadgets and devices. These technologies led to the creation of Fintech-company, which began to compete with traditional banks in Russia. The largest Russian banks began to develop Fintech independently. The advantages of this technology are obvious, but its use entails new risks associated with the dissemination and use of data. Features of the Russian banking system directly affect the development of Fintech. In this regard, the Bank of Russia, as a megaregulator, supports Fintech and plans to gradually adapt regulatory requirements to new conditions.

2. Problem Statement

The development problems of Fintech in the Russian banking system are related to the specifics of the banking system and the main consumers of banking services: the banking system is highly polarized (about 66 percent of all assets belong to the 15 largest banks), the financial literacy of the population is low, especially on the periphery.

3. Research Questions

To present the general state of Fintech in the Russian banking system, to identify the main problems and opportunities for further development.

4. Purpose of the Study

To study the features of Fintech in the Russian banking system, to characterize the position of the regulator for Fintech, to assess the factors hindering the development of Fintech in the banking system of Russia.

5. Research Methods

Qualitative and quantitative analysis of the use of Fintech in the Russian banking system.

6. Findings

Currently there are many definitions of Fintech for example: a concatenation of “finance” and “technology” (Hill, 2018). In our opinion, we can assume that Fintech is a complex of technologies based on the use of the Internet, computing equipment, gadgets and providing the production and sale of financial services 24x7x365. The most obvious Fintech "manifests" in payments and lending, in particular, in lending mode P2P. Features of such lending can be seen for example, in China (Stern, Makinen, & Qian, 2017). Cryptocurrencies (Bitcoin and others) use distributed registries that allow you to automatically control the fulfillment of obligations, allow you to inform all members of the network about the new changes (Presthus & O'Malley, 2017). Due to the fact that traditional banks have been successfully producing and selling financial services for a long time, the emergency of financial and

https://dx.doi.org/10.15405/epsbs.2019.03.35
Corresponding Author: S.S. Matveevskii
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

technical companies has led to a sharp competition between banks and financial and technical companies (Hill, 2018). Under these conditions, traditional banks were forced to change their business models (Yip & Bocken, 2018), invest large amounts of money in new financial technologies to maintain their market position (Lee & Shin, 2018). In developed countries, an increase in so-called, shadow banking is noted: various types of loans are issued, including mortgage, Fintech-companies, which may not have the appropriate licenses of regulators (Buchak, Matvos, Piskorski, & Seru, 2018). Various types of cooperation of traditional banks (first of all, the largest ones) with financial and technical companies have emerged (Benedict, Drasch, Schweizer, & Urbach, 2018). Fintech-companies have natural advantages in comparison with banks related to efficiency and individual approach to customers, but banks have customer confidence. But both those and others understand that the issue of cooperation and cooperation is essential for "survival" in the market (Hill, 2018). Under these conditions, banks are forced to respond to "challenges", they develop Fintech in their own "inside", create various kinds of collaboration with Fintech companies, including their use as contractors (Stephen, 2016).

Of course, radical changes in the banking services market, which have arisen due to the rapid use of Fintech, are of great concern to market regulators. This is due to the fact that, in addition to the obvious advantages that Fintech provides, its use both by banks and Fintech companies, leads to the emergency of fundamentally new risks, both for bank customers and for the banks themselves. This causes regulators to act cautiously, in steps (Anagnostopoulos, 2018).

At present, according to the Bank of Russia (2018), there are tendencies on the financial markets of Russia that contribute to the further development of modern financial technologies:

- small margin of banking services;
- transformation of participants of the financial market of their business models and the transition to the creation of ecosystems;
- rapid growth in the penetration of financial services (digitalization);
- loss of traditional monopoly by the commercial banks for the production and sale of financial services, as well as the emergence of new competitors in the financial services market (non-financial organizations);
- interaction of traditional commercial banks with financial start-ups, technology companies.

According to experts, based on the results of research (RBC, 2018), the most promising financial technologies are: big data and data analysis; mobile technologies; Artificial Intelligence; robotics; biometrics; distributed registries; cloud technologies. The peculiarity of big data and their analytics is that the existing tools, sensors, video information, results of physical and legal entities' requests using the Internet and gadgets created the conditions for the appearance of very large amounts of personalized data. Processing them provides significant commercial advantages, but also creates risks of unauthorized dissemination of information (Dula, Lee, & Chuen, 2018). Distributed registries allow you to solve problems of performance of obligations under contracts, allow you to inform all members of the network of the changes (Efanov & Roshin, 2018). Russian experts (Pertseva, 2017) discuss the functioning of Fintech, its influence on the global financial system, the development process of Fintech by the largest Russian banks.

https://dx.doi.org/10.15405/epsbs.2019.03.35
Corresponding Author: S.S. Matveevskii
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

The development of financial technologies provides an opportunity to modernize the main types of financial services, to produce innovative products and services for end users.

This trend is particularly evident in the following areas:

- payments and transfers,
- P2P exchange of currencies, services of B2B payments and transfers, cloud cash desks and smart terminals, mass payment services;
- financing: P2P consumer crediting, P2P business-crediting, crowd-funding;
- capital management: robot-advising, programs and applications for financial planning, social trading, algorithmic exchange trade, targeted savings services and others.

At the same time, the world is marked by the following main trends that determine the potential for further growth in the volume of digital financial services (PricewaterhouseCoopers, 2018):

- by 2020, 35 - 50% of bank customers will use, including online banking (mobile bank);
- 82% of financial organizations expect an increase in the number of partnerships with Fintech companies in the next 3 to 5 years;
- 56% of financial organizations consider digital transformation the basis of their business development strategy;
- investments in the Fintech company in 2016 amounted to 24.7 billion US dollars (for first-the first half of 2017 - 11.6 billion US dollars), which is twice higher than the level of 2013 and indicates a high growth rate of the Fintech industry.

Bank of Russia special regulatory platform will be created to test innovative technology, products and services. In the opinion of the Bank of Russia, this site will allow rapid testing of hypotheses about the positive effects for the financial market and consumers on the introduction of innovative financial technologies and services, analyze the risks arising from their use, and prepare proposals for changing existing regulations (Bank of Russia, 2018). The implementation of this mechanism is provided for by the list of instructions of the President of the Russian Federation No. Pr-2132 of October 21, 2017.

The Bank of Russia, together with other state organizations, takes part in the implementation of measures aimed at introducing the following changes before July 1, 2018 into Russian legislation:

- definition of concepts and status of digital technologies used in the financial sphere;
- establishment of requirements for the organization and implementation of mining;
- regulation of public funds attraction and crypto currency by placing tokens.

The development of new financial services, as well as the tightening of regulatory requirements, increased the expenses of financial organizations for compliance with all necessary standards, which led to the emergency of a new and dynamically developing direction in the world - RegTech (regulatory technology) (RBC, 2018).

RegTech assumes the use of innovative technologies by financial institutions to improve the efficiency of regulatory compliance and risk management.

Examples of applications for RegTech tools:

- customer identification (KYC procedures - Know your customer);
- detection of suspicious activity and prevention of fraud;
- automation of procedures for preparing and submitting reports;

https://dx.doi.org/10.15405/epsbs.2019.03.35
Corresponding Author: S.S. Matveevskii
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

- compliance control.

The Bank of Russia (Bank of Russia, 2018) plans to develop SupTech (supervision technology). SupTech is the use of innovative technologies by regulators (Big Data, machine learning, artificial intelligence, cloud technologies, etc.) to improve the efficiency of regulatory processes and supervision of financial market participants.

Platforms and IT solutions that are elements of the financial infrastructure will be implemented by participants in the financial market in conjunction with the Bank of Russia and interested government agencies as part of the Digital Economy of the Russian Federation program (Digital Economy of the Russian Federation, 2017).

The introduction of a rapid payment platform involves the creation of a payment infrastructure for the financial market for the purpose of online transfers in real time (365/24/7), through various channels, with transparent tariffs and rules, using a mobile phone number and other identifiers, and QR code.

The creation of a platform based on the technology of distributed registries (blockchain) is aimed at the formation of a promising financial infrastructure for creating and launching financial services on the basis of distributed register technology together with financial market participants: for example, "Masterchane" - the first legally clean blockchain in Russia (Central Bank of the Russian Federation, 2018). The platform based on distributed registry technology is a distributed system for storing and exchanging financial information and a trusted environment for its participants that involves the use of certified Russian cryptography, identification of system users (KYC procedures), and support for various network configurations (closed, open, hybrid) .

Thus, according to the Bank of Russia, the new digital financial infrastructure of Russia will consist of the following main elements (Bank of Russia, 2018):

1. The platform-marketplace for financial services and products will allow the convenience, transparency and efficiency of receiving services by customers in the "Single window", as well as remove barriers to access to financial services and products for customers.

2. The platform for registration of financial transactions will ensure the registration of transactions on the financial market in a single register, to which access will be granted for all participants, and obtaining information on transactions in the "single window" mode.

3. The rapid payment platform will provide an opportunity to conduct online-transfers in the financial market in real time (365/24/7) using smart phones, instant messengers, QR code and so on.

4. The Bank of Russia's promising payment system (PPP) will provide an opportunity for financial market participants to effectively manage liquidity, to make urgent and non-urgent payments using specialized settlement services on the basis of a single centralized infrastructure.

5. National payment card system - national infrastructure banking card operations, which ensures the development of the Russian payment system ("Mir" payment system), uninterrupted transit transactions on the cards of international payment systems in the territory Russia and the introduction of innovative services on the basis of the map "Mir".

6. The financial message transfer system will provide assurance and failure in the transmission of financial messages using new technologies.

https://dx.doi.org/10.15405/epsbs.2019.03.35
Corresponding Author: S.S. Matveevskii
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

7. Unified identification and authentication system and biometric system are the infrastructure that provides a multifactorial remote service identification on the basis of information from the state information system and biometric data to provide remote financial services.

8. The end-to-end customer ID can be used for various data sources stored in the place of their creation, and will provide an opportunity to predelivery of various types of information about the client to the authorities concerned and organizations, including for the provision of financial services.

9. The platform for cloud services will be an infrastructure solution financial market participants to cloud resources external providers (for example, networks, storage systems, applications and services) and allowing financial market participants to place their own application services with the necessary requirements and conditions for information security on their basis.

10. The platform based on distributed registry technology is financial information and trusted environment for its participants to implement financial services using Russian cryptography.

Analysis of data presented in Association of Russian banks (2018) allowed the authors to establish that, in the fall of 2017, about 250 organizations operating in the financial technology sector (Fintech), were registered in Russia. The distribution of these organizations in the main areas of activity was: crypto-currency - 15%, crowdfunding - 5%, management of personal finances - 6%, financial management of the enterprise - 13%, payments - 11%, digital banking - 1%, comparison of financial products - 14%, crediting - 10%, P2P crediting - 5%, management of capital, investing - 5%, block chain - 5%, scoring - 4%.

The leading directions of Fintech in Russia in 2017 were:

- lending, which includes the activities of microfinance organizations, accounted for 10.3% of the market, with the inclusion of P2R lending - 15.7%
- sector crypto-currencies - 15,1% (digital wallets, exchange offices, exchanges, etc., connected with the production and movement of crypto currency),
- comparison of financial products and / or their purchase -14,1%,
- financial management of the enterprise - 13.2%,
- payment sector - 11.2%.

The increased competition between Fintech companies and traditional banks in the Russian banking system is reflected in the analysis of Fintech startups (Bryanov and Morozov, 2017), attempts to classify them.

In 2017, 71.4% of the existing microfinance companies (MFIs) have their own license of the Bank of Russia, 28.6% work under a partner's license or are separate branches of a credit institution. P2P platforms begin their development from 2011, one of the first became Bezbanka.ru.

Features of this sector are:

- absence of an intermediary, financial body, financing is directly from the interested person / investor to the borrower,
- process of applying for and issuing a loan takes place 24 hours/7 days a week.

In percentage terms, the offered credit services for legal entities and companies without legal entity formation are slightly dominated by the financing of individuals - 58.3% and 41.7%, respectively.

https://dx.doi.org/10.15405/epsbs.2019.03.35
Corresponding Author: S.S. Matveevskii
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

As lending develops without intermediaries, the technical side of the borrower's assessment becomes more complicated: new variables are introduced, Big Data analytics methods are applied, and there is an opportunity to reduce risks for creditors (investors).

Examples include the following Russian companies:

- loans to individuals.: MoneyMan, Mili, WebBankir, Olbey, Fingooroo, Loanberry, Zaymigo и др.,
- loans to companies.: EcomBank, City of money, Fundico.

Cryptocurrency segment. The main activity - exchange offices and electronic wallets, 90% of which were opened during the second half of 2016.

Examples of companies working with cryptonyms in Russia: New line - e-currency exchange office, Prostocash - exchange point Bitcoin, Ethereum, Lightcoin and others, Buy-Bitcoins - exchange office Bitcoin.

The Russian government has set up research groups to develop and implement blockchain technology in the following areas: real estate sector, registration of transactions with real estate, a digital signature for the provision of public services, smart contracts, registration of transactions with property. In addition, the Center for Digital Transformations of Vnesheconombank (Center for digital transformations Vnesheconombank, 2018), which specializes in blockchain projects in various business and technology areas, operates.

Russian private companies working with technology, for the most part, offer the development of decentralized applications and smart contracts, for example: WavesPlatform, DcoinClub, Bitaps и др.

The comparison segment (intermediation) of financial products is on the third place - 14.1% of the market.

44.8% of companies specialize in the insurance market, 37.9% of companies specialize in banking products, comparison of exchange rates, mortgages, car loans, deposits, debit cards, credit cards.

Financial supermarkets, as standard, occupy a smaller market volume, due to a wide range of services - 28% of the financial products comparison segment.

One of the most actively developing areas of the Russian financial technology sector is payments.

Conditionally, it can be divided into two groups:

- electronic purses, money transfers, services that provide the ability to pay online by tying their bank cards,
- payments related to offline / online commerce and mobile payment points.

The largest organizations that have the appropriate licenses for banking operations: Yandex Money, «Qiwi purse », Cloud Payments, PAYQR, Piggy Bank and others.

As they develop, companies add new user services, such as checking and paying fines. Significant influence on the development and distribution of companies specializing in online acquiring, mPOS offline and online was provided by the Federal Law No. 290 of Russia on online cash desks, adopted in July 2016. As of October 2017, the market share occupied by mPOS reaches 61%.

Interaction with mobile operators allows you to make money transfers within the bank by SMS, specifying only the recipient's phone number and amount. Examples: sense from AO ALFA-BANK is a free mobile bank and financial assistant from Alfa Bank, chat bot, payments, one-click transfers from

https://dx.doi.org/10.15405/epsbs.2019.03.35
Corresponding Author: S.S. Matveevskii
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

your mobile phone. Free debit card issue. Panda Money is an application that allows you to save in a game form.

Capital management - development occurs in equal proportions in the directions:

- B2B solutions: development of robot consultants, software complexes and solutions for trading on the exchange based on machine learning. It was with them that the development of the sector began, one of the first on the market was the company from St. Petersburg CoFiTe,
- platform for the sale of securities and training in trading on exchanges (for example, Freedom24.ru).

"Digital" banks, it should be noted that, despite the fact that the sector occupies only 3.9% of all Fintech enterprises, this sector can be considered the most interesting. The essential difference between "digital" banks and traditional banks is that they initially built their activities using the most modern technological solutions. Examples of Russian "digital" banks include: POINT, TalkBank, ROCKET, Modulbank, Tinkoff Bank.

Artem Arkhangelsky, partner of Oliver Wyman and Evgenia Krasilnikova, associate of Oliver Wyman (Newspaper Vedomosti, 2018), believe that the significant difference between the Russian market and other developing countries is in the high activity of large state and private banks (for example, Sberbank, Tinkoff Bank, Alfa Bank, etc.). The slowdown in Russia's economic growth has led to a reduction in foreign investment and free domestic financial resources for the development of Fintech companies. As a result, banks with large assets gained an advantage over Fintech startups. According to Oliver Wyman experts, the FINTECH market in Russia has good prospects: a high level of mobile Internet penetration is complemented by a gradual recovery of economic growth, support for the regulator.

The prospects for the development of Fintech in the state are directly related to the creation of the ecosystem Fintech (Leong, Tan, Xiao, Tan, & Sun, 2017). At present, we can talk about creating the ecosystem of Fintech in Russia (Bryanov and Morozov, 2017), which includes venture funds (for example, Inventure Partners, etc.), incubators and accelerators (FRII, FINTECH ACCELERATOR, GenerationS, etc.), development institutions (VEB Innovations Fund, etc.), higher educational institutions (Innopolis, Financial University under the Government of the Russian Federation, etc.).

According to Sergei Solonin, the head of the Association "Fintech", currently, the payment space is being transformed (Newspaper Vedomosti, 2018). Technology blockchain is increasingly used in retail payments, in cross-border payments, in financial instruments. A remote authentication procedure is implemented. Rapid payments, including contactless ones, are developing, QR codes are developing. There is a problem of opening the API. It is expected that banks will open portals for developers who will use open APIs to create their own digital banking platforms.

The volume of the payments market will reach $ 692 billion by 2025. According to the ISACA polls, in 2018, 62 percent of consumers see obvious advantages when using AR and IoT devices for shopping, IoT will take a large share of the payment market. IDC forecasts $ 14 billion in revenue from payments globally by 2020. Cognizant predicts the growth of M2M-connections (machine to machine) to 18 billion dollars by 2022 (from 2 billion in 2011). The number of connected devices will grow to $ 50 billion by 2020. On average, there are 7 connected devices in American and British families (in 2015).

https://dx.doi.org/10.15405/epsbs.2019.03.35
Corresponding Author: S.S. Matveevskii
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

The development of partnerships: traditional banks have the opportunity, neobanki have the flexibility, the development of transformation - traditional banking will remain and is transformed with neobanki. IT companies can start creating neobanki for their expansion and attracting a new audience.

One of the CEO of PJSC "MTS-Bank, O.M. Smirnova-Krell (MTS-bank, 2018), believes that the best form of cooperation between financial companies and banks is cooperation.

An ecosystem is developing: the system of interaction between companies - service providers, regulators and consumers, which includes both competition and cooperation, in order to provide the user with a particular service. Banks now compete not only for the client, but also for partnerships with non-financial market players, creating an ecosystem of the daily life of the client.

A good example of the use of Fintech in the field of microfinance (MFI) WEBBANKIR (Webbankir, 2018): more than 1 500 000 unique customers, loyalty of the clinics - 80%, the volume of issued loans in 2017 - more than 2 billion rubles, about 600,000 loans were issued, there are 8 loans per customer per year.

In 2017, WEBBANKIR abandoned the traditional call center "8-800" and implemented chat bots in popular messengers and online chat on the site.

In October 2017, WEBBANKIR for the first time in Russia began issuing loans completely through messengers, without the help of the site and the application.

WEBBANKIR is a dynamically growing online MFI in the PDL segment in Russia. According to the data of Expert RA JSC (Official website of RBC) for the second half of the year 2017 130% - the rate of increase in issuance for 6 months.

WEBBANKIR uses the following elements of the Fintech in its activity:

- pattern recognition: when applying for an application, you use face recognition (passport, photo), text passport data,
- BI system from Microsoft, realizes Big Data processing in real time (access, analysis, report generation), more than 2 million events per day (site),
- New CRM, customizable, for collection and underwriting,
- voice recognition and synthesis, identification of the borrower according to the announced birth date and auto-information: when incoming calls to the call center, when working in the collection,
- AI, the construction of a neural network, fully automatic decision-making system, based on neural networks,
- on the basis of neural network technologies (96% of all decisions), more than 800 parameters of the borrower are analyzed,
- machine learning, the technology of machine learning in the scoring analysis of borrower applications. Continuous optimization of scoring, instant response to changes in the quality of incoming customer flow, decision-making on the issuance of a loan for the main LTV model, management of the level of default, depending on the "appetite" for risk.

The company uses a progressive online instant loan system, the company's website is visited by more than 1.8 million visitors a month, the leader of the Russian microfinance market in terms of the number of participants in social networks (about 150,000), 25x7 customer support by chat bots, 200,000

https://dx.doi.org/10.15405/epsbs.2019.03.35
Corresponding Author: S.S. Matveevskii
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

users mobile application, the definition of client location for any client actions (geolocation), application through massagers using chat-bot, the data of mobile communication operators are used.

The company PENENZA (Penenza, 2018) realizes kraudlending, carries out "people's" lending to small and medium-sized enterprises (SMEs), using this: online - platform, BigData - 400+ parameters for 10 million organizations and individual entrepreneurs, machine Learning - a separate model for calculating risks, for each type of loans.

The main results of the company: 2 000 investors, 14 000 borrowers, 26 000 loans for 18 billion rubles, 0,4% - overdue debts, 0.2% - defaults, 20% per annum - the average yield, 10 people in the operating process.

Director of the Department of Financial Technologies of the Bank of Russia A.V. Melnikova, spoke April 25, 2018 at the conference "Fintech" (Newspaper Vedomosti, 2018) highlighted the following world trends and challenges of the digital economy:

- $ 28.5 billion accounted for world investments in the Fintech company in 2017,
- 52% of financial organizations invest in solutions based on artificial intelligence,
- 54% of financial organizations consider the requirements for data storage and protection as the main regulatory barrier for innovation,
- 77% of financial organizations plan to introduce distributed registry technology into business processes by 2020,
- 78% of financial organizations are striving to implement open APIs to improve customer experience,
- 58% of financial organizations are investing in technologies for reducing cyberries.

Analysis of data conducted by experts of the Department of Financial Technologies of the Bank of Russia made it possible to identify the following important tasks at present (the opinion of financial market participants, in percent):

- use of flexible and adaptive business models (91%),
- use of an expanded client experience (91%),
- creation of innovative financial products and services (76%),
- cost reduction (67%),
- effective management and use of data (56%).

The program of development of financial technologies of the Bank of Russia for the period 2018-2020. synchronized with the program "Digital Economy of the Russian Federation" (Digital Economy of the Russian Federation, 2017). A.V. Melnikova noted that as of April 2018:

- developed a technological infrastructure of a single biometric system,
- the regulatory "sandbox" of the Bank of Russia was launched, applications for piloting innovative financial services and technologies,
- prepared and submitted to the State Duma on 20.03.2018 draft federal law of Russia No. 419059-7 "On digital financial assets",
- the concept of a rapid payment system has been prepared and the implementation of a prototype,

https://dx.doi.org/10.15405/epsbs.2019.03.35
Corresponding Author: S.S. Matveevskii
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

- the concept of a system for the transmission of financial messages and payments in the EAE area,
- a roadmap for creating legal grounds and technological conditions for archival storage and use of electronic documents with the provision of their legal force has been developed.

Until the end of 2018, the Department of Financial Technologies of the Bank of Russia faces the following main tasks:

- introduce a mechanism for remote identification in the financial market,
- to pilot a new platform of fast payments,
- to pilot the system of transfer of financial messages using the technology of distributed registries,
- to launch the Fintech Hub Bank of Russia on the basis of the Sirius Educational Center for conducting pilot projects in the field of financial technologies by students of leading Russian universities.

According to the experts of the KIWI group (RBC, 2018), the problems hampering the development of Fintech include financial illiteracy, certain isolation of Fintech companies and traditional banks, blind copying. The importance of personnel, "teams", who will implement a specific Fintech project, is noted.

Financial University experts believe (Eskindarov et al., 2018) that in order to accelerate the development of financial technology in Russia, including in the banking system, it is advisable to create a single consulting center, there is a need to improve antitrust laws, legal conditions governing the national payment system, ensuring information security and protecting results of intellectual technology. The pace of development of Fintech in Russia depends on the financial literacy of the population.

7. Conclusion

For Fintech in the Russian banking system is typical:

- the need to obtain licenses Fintech companies for financial and banking activities,
- strong dependence of the market on decisions of state and financial bodies, authorities,
- continuous development and practical use of technologies such as machine learning, big data, AI, etc., which allows you to create personalized communication and to reduce risks in financial and banking activities, increase productivity by automating and optimizing processes,
- high rates of “digitization” of traditional, first of all, large banks (new business models are being created), which creates competition with Fintech companies, but also a favorable atmosphere and consumer loyalty to financial services of a new type,
- the development of Russian “digital” banks indicates that Fintech companies, under certain conditions, can “turn” into “digital” banks,
- significant growth in the payments sector, together with a small demand of mass consumers in the field of P2P lending, cryptocurrency,
- an increase in the flows of venture financing of Fintech companies and their respective start-ups, which indicates the creation of the “ecosystem” of Fintech in Russia,

- greater use of blockchain technology, the creation of research groups that unite the government, private business; for example, the creation of the Fintech Association (Official website Association "Fintech"), the Masterchain project (Central Bank of the Russian Federation, 2018), i.e. actual support by the Government of Russia, the Bank of Russia for the development of Fintech in Russia,

the rapid growth in the number of users of Fintech services in Russia, which is determined not only by convenience and cheapness, but also by the growing number of young users of banking products.- the program for the development of financial technologies of the Bank of Russia for the period 2018-2020, the program "Digital Economy of the Russian Federation" (Digital Economy of the Russian Federation, 2017) will be of decisive importance on the market of financial institutions in Russia.

References

Anagnostopoulos, I. (2018). Fintech and regtech: Impact on regulators and banks. *Journal of Economics and Business, 100,* 7-25. https://dx.doi.org/10.1016/j.jeconbus.2018.07.003.

Association of Russian banks. (2018). URL: http://arb.ru. Accessed: 1/08/2018. [in Rus.].

Bank of Russia. (2018). URL: http://www.cbr.ru. Accessed: 1/08/2018. [in Rus.].

Banki.ru. (2018). URL: http://banki.ru. Accessed: 1/08/2018. [in Rus.].

Benedict, J., Drasch, B.J., Schweizer, A., & Urbach, N. (2018). Integrating the 'Troublemakers': A taxonomy for cooperation between banks and Fintechs. *Journal of Economics and Business, 100,* 26-42. https://dx.doi.org/10.1016/j.jeconbus.2018.04.002.

Bryanov, G.A., & Morozov, S.V. (2017). Development of Fintech startups in the Russian Federation. Globalnye Rynki i Finansovyy Inzhiniring, 4(1), 57-64. https://dx.doi.org/10.18334/grfi .4.1.38026. [in Rus.].

Buchak, G., Matvos, T., Piskorski, T., & Seru, A. (2017). Fintech, regulatory arbitrage, and the rise of shadow banks. *Journal of Financial Economics*, .URL: https://www.gsb.stanford.edu/faculty-research/working-papers/fintech-regulatory-arbitrage-rise-shadow-banks.

Center for digital transformations. Vnesheconombank. (2018). URL: http://commune.digital. Accessed: 1/08/2018. [in Rus.].

Central Bank of the Russian Federation. (2018). URL: http://www.cbr.ru. Accessed: 1/08/2018. [in Rus.].

Digital Economy of the Russian Federation. (2017). Order of the government of the Russian Federation (1632-p) from the 28th July 2017. URL: http://static.government.ru/media/files/9gFM4FHj4PsB79I5v7yLVuPgu4bvR7M0.pdf. [in Rus.].

Dula, Ch., Lee, D., & Chuen, K. (2018). Reshaping the financial order. In D. Lee, K. Chuen & R. Deng (Eds.), *Handbook of Blockchain, digital finance, and inclusion* (pp. 1-18). New York, N.Y.: Academic Press.

Efanov, D., & Roshin, P. (2018). The all-pervasiveness of the blockchain technology. *Procedia Computer Science, 123,* 116–121. https://dx.doi.org/10.1016/j.procs.2018.01.019.

Eskindarov, M.A., Abramova, M.A., Maslennikov, V.V., Amosova, N.A., Varnavskii, A.V., Dubova, S.E., …, & Fedotova, M.A. (2018). Directions of Fintech development in Russia: Expert opinion of the Financial University. *Mir Novoi Ekonomiki, 12*(2), 6-23. https://dx.doi.org/10.26794/2220-6469-2018-12-2-6-23. [in Rus.].

Hill, J. (2018). Fintech and the Remaking of Financial Institutions. New York, N.Y.: Academic Press. https://dx.doi.org/10.1016/C2016-0-03863-9.

Lee, I., & Shin, Y.J. (2018). Fintech: ecosystem, business models, investment decisions, and challenges. *Business Horizons, 61*(1), 35-46. https://dx.doi.org/10.1016/j.bushor.2017.09.003.

Leong, C., Tan, B., Xiao, X., Tan, F.T.C., & Sun, Y. (2017). Nurturing a Fintech ecosystem: The case of a youth microloan startup in China. *International Journal of Information Management, 37*(2), 92-97, https://dx.doi.org/10.1016/j.ijinfomgt.2016.11.006.

MTS-bank. (2018). URL: http://mtsbank.ru. Accessed: 1/08/2018. [in Rus.].

News agency bankir.ru. (2018). URL: http://bankir.ru. Accessed: 1/08/2018. [in Rus.].

Newspaper Vedomosti. (2018). URL: http://vedomosti.ru. Accessed: 1/08/2018. [in Rus.].

Penenza. (2018). URL: http://penenza.ru. Accessed: 1/08/2018. [in Rus.].

Pertseva, S.Yu. (2017). Fintech: mechanism of functioning. *Innovatsii v Menedzhmente*, *2(*12), 50-53. URL: http://innmanagement.ru/?page_id=1498#open1. [in Rus.].

Presthus, W., & O'Malley, N.O. (2017). Motivations and barriers for end-user adoption of Bitcoin as digital currency. *Procedia Computer Science*, *121*, 89–97. URL: https://cdecker.github.io/btcresearch/#2017.

PricewaterhouseCoopers. (2018). URL: http://www.pwc.com. Accessed: 1/08/2018.

RBC. (2018). URL: http://rbc.ru. Accessed: 1/08/2018. [in Rus.].

Stephen, G. (2016). Here's how citigroup is embracing the «Fintech» revolution. *Fortune*. June 27, 2016. URL: http://fortune.com/citigroup-fintech/.

Stern, C., Makinen, M., & Qian, Z. (2017). Fintech in China – with a special focus on peer to peer lending. *Journal of Chinese Economic and Foreign Trade Studies*, *10*(3), 215-228. https://dx.doi.org/10.1108/JCEFTS-06-2017-0015.

Webbankir. (2018). URL: http://webbankir.com. Accessed: 1/08/2018. [in Rus.].

Yip, A.W.H., & Bocken, N.M.P. (2018). Sustainable business model archetypes for the banking industry, *Journal of Cleaner Production, 174*, 150-169. https://dx.doi.org/10.1016/j.jclepro.2017.10.190.