

THE MODERN MARKET OF NEO BANKS AND THEIR ROLE OF FINTECH COMPANIES' FINANCING

O MERCADO MODERNO DE NEO BANCOS E SEU PAPEL NO FINANCIAMENTO DAS EMPRESAS FINTECH

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Resumo: Este estudo analisa o mercado moderno de neobancos em diferentes países, a fim de determinar seu papel no financiamento de empresas fintech. Acredita-se que o moderno mercado neo-bancário exige uma correção do desenvolvimento estratégico, nomeadamente o crescimento das operações de financiamento (incluindo empréstimos a empresas fintech de pequenas e médias empresas), que contribuem para a rotação de activos financeiros intelectuais e digitais como garantia. O objetivo do estudo é fundamentar a viabilidade de financiamento garantido por ativos financeiros intelectuais e digitais de empresas fintech russas e moscovitas. Com base na análise do mercado neo-bancário no mercado mundial e na Federação Russa, os autores desenvolveram recomendações para melhorar o mecanismo de financiamento, incluindo empréstimos, garantidos por ativos financeiros intelectuais e digitais, tendo em conta o possível apoio regional (Moscou). Análise teórica de métodos científicos envolvendo análise, síntese e generalização da literatura existente são utilizadas para atender ao objetivo do estudo. O artigo apresenta recomendações para melhorar o sistema existente de financiamento de empresas fintech com base nas ferramentas e mecanismos desenvolvidos para atrair recursos financeiros usando ativos financeiros intelectuais e digitais (DFA) para aprimorar as atividades das empresas fintech na Rússia em geral e na cidade de Moscou em particular.

Palavras-chave: neobanco, empresa fintech, pequena e média empresa, ativo intelectual, ativo financeiro digital (DFA).

Abstract: This study analyzes the modern market of neo banks in different countries in order to determine their role in financing fintech companies. It is believed that the modern neo bank market requires a correction of strategic development, namely the growth of financing transactions (including lending to fintech companies from small and medium-sized businesses), which contribute to the turnover of intellectual and digital financial assets as collateral. The purpose of the study is to substantiate the feasibility of financing secured by intellectual and digital financial assets of Russian and Moscow fintech companies. Based on the analysis of the neo bank market in the world market and in the Russian Federation, the authors developed recommendations for improving the financing mechanism, including lending, secured by intellectual and digital financial assets, taking into account possible regional (Moscow) support. Theoretical analysis of scientific methods involving analysis, synthesis, and generalization of existing literature are utilized to meet the aim of the study. The article presents recommendations for improving the existing system of fintech companies' financing based on the developed tools and mechanisms for attracting financial resources using intellectual and digital financial assets (DFA) to enhance the activities of fintech companies in Russia in general and the city of Moscow in particular.

Keywords: neo bank, fintech company, small and medium business, intellectual asset, digital financial asset (DFA).

INTRODUCTION

There is a trend in the world towards the digitalization of large traditional banks, that is, in fact, this is the creation of a digital copy, and there are few of "Full-featured" digital "banks (licensed)" / neo-banks (Vaganova et al., 2021; Boustani, 2020). There are neobanks on the Russian market, which mainly provide a still traditional set of banking and financial products and services, but in digital form, without the need for clients to be present in the office. Support is actively developing through



a mixed form: frequently encountered questions are regulated by a chatbot, and to solve complex issues, customers are recommended to contact a manager (specialist), but nevertheless, the remote form of the channel remains (Imerman & Fabozzi, 2020). If we analyze the segment of the provision of banking products and services to customers, then almost all Russian neobanks have identified fintech companies as a separate vector of work, in most cases (according to information from neobank websites) this is due to the support of the Digital Economy national project, and fintech companies are also provided with grants support (Bradford, 2020; Anna Gustina Zainal et al., 2022).

In addition, open banking removes friction in banking services because banking APIs have an ocean of possibilities and enable the path of new ideas. They maximize the best customer experience. Due to the advent of fintech and startups that added innovation to financial services, this trend has made many people turn to fintech startups even for the services that banks provide, because they provide better and more specialized services. So, the barrage of startups and fintechs and the formation of fintech start-ups were very threatening for banks. Therefore, in order to maintain their position, banks are forced to cooperate with fintechs, and this cooperation with banks entering open banking and providing OPEN API to these businesses is a suitable approach for the growth and excellence of banks.

Banks that use open APIs can reduce the threat of fintech presence to some extent, and by cooperating with Start, they can not only make their position stronger, but also stronger. In Iran, the movement towards open banking has also started, and Fintech is one of the subsidiaries of Farda Communication Company, which has designed and provided the open banking platform to banks and fintech businesses.

Fintech companies, also known as neobanks precisely because of their functionality, have been competing with traditional banks in the United States for more than a decade, and according to the global business consulting company Simon-Kucher, there are about 400 neobanks in the world as of 2022, and of them only 5% show a positive stable financial performance (16 Neobanks or Banking Fintech Firms and What They Offer) (Mareyuu, 2020; Melnychenko et al., 2020).

According to NerdWallet's 2021 report (Web Searches Reveal Shifts in Banking as Upstarts Surge), they also played a key role in the COVID-19 pandemic (Buchi et al., 2019; Khurana, 2022).

According to a report by Statista (Neobanking – Worldwide), the number of neobank users worldwide will reach 394 million by the end of 2023, up from 39 million in 2018 (Jha et al., 2022).

In this article, we take a closer look at the impact of fintech on banks, the banking industry and financial services. Also, by reading this article, you can find out how fintech affects the financial system.

The development of technologies can be seen as an engine for great transformations at macroeconomic levels. An important and key part in the development of financial markets is the introduction of new financial technologies that emerge with innovation and the addition of creativity in financial management styles and the use of digital infrastructure.

Over the past few years, the financial technology industry, or fintech, has developed at a significant pace, but despite this, it has not yet been defined precisely. It can be said that fintech is a business activity that uses new technologies and innovations in the financial services market, which includes advanced areas such as internet payments, mobile transactions, electronic wallets, online lending, crowdfunding, etc.

Fintech businesses are changing the way the traditional financial market works; The fastest growing place at the intersection of financial services and innovative technologies. In this sector, technology startups and new market players with innovative approaches to products and services provide new prerequisites for a better and more beneficial development of the fintech industry.

How does fintech affect the financial system?

The global financial crisis revealed serious problems and weaknesses in financial regulations and laws. One of the weak points identified in the crisis was the poor collection and reporting of the amount of risk in banks (Tightiz & Yoo 2022a, b). This led to the modification of banking supervision standards and the addition of items such as continuous and scheduled reporting as well

as heavy fines for neglecting supervision to banks' supervisory frameworks. The new standards were very popular among large and international banks that have many customers.

The concept of "financial innovation" is much broader than fintech, and accordingly, not all financial innovation is financial technology. At the same time, the concept of financial innovation can be seen as the same as the concept of digital economy.

Fintech today is often considered a unique segment of financial services along with information technology. On the other hand, as mentioned earlier, the global financial crisis of 2008 was a turning point and a reason for turning fintech into a new model.

Currently, fintech includes technology-driven startups as well as large organizations that are trying to improve and optimize financial services. At the end of 2014, investment in this sector reached 157 billion dollars. After that, the term fintech started to catch on and it grew rapidly with the prospect of becoming a huge industry.

The new wave of fintech has been developed from the bottom up in the last 10 years; That is, it is mainly born in agile startups that seek to break traditional rules, do business, compete or take over a share of the market of financial institutions. This new startup trend has a lot of benefits, coupled with regulatory reforms and structural changes in the industry, leading financial institutions to increasingly focus on technologies and pay more attention to fintech startups.

LITERATURE REVIEW

Consider the foreign understanding of the concept and essence of the presence of neobanks in the market.

US neobanks stand out from the financial and credit system by working with the target audience, satisfying its needs, focusing on specific products, for example, loans and savings are handled by HMBradley and Oportun, it is better to turn to M1, Stash, Acorns and Albert for investments, travelers will Monzo products are interesting, Greenlight and Step are working with teenagers, it is more comfortable for migrants to apply for service at Majority and Comun (Bradford, 2020; Melnychenko et al., 2020; Martinčević et al., 2020).

Few neobanks that emerged first on the market are expanding their services to new markets, both at home and abroad. For example, the British neobank Revolut, a financial technology company founded in the UK in 2015, has expanded its services to the US markets, it is active in a number of countries around the world, including the UK, European Union countries, Switzerland, Australia, Canada, Japan, Singapore. The company offers a wide range of conventionally classic financial services such as current accounts, debit cards, foreign exchange, cryptocurrency exchange, savings accounts and insurance (Jha et al., 2022; Tightiz & Yoo 2023). In addition to its traditional banking services, the company also recently launched a range of premium subscription plans that offer additional features such as travel insurance, increased cashback and access to airport lounges (Buchi et al., 2019; Virdi & Mer 2023; Glushchenko et al., 2019).

Lithuania sees the development of this industry in the near future, the number of neobank users is predicted to reach 394 million by 2023 (Top Neobanks of 2023: Revolutionizing the Banking Industry) (MareyIII, 2020). The current state of the client base of neobanks in different countries is presented as follows: the maximum number of clients with a neobank account according to 2022 data is undoubtedly Brasioia (43% of the population), just over a quarter of the population have such an account in India (26%), in Ireland, Singapore and Hong Kong, this value ranges from 22 to 20% of the population (Finder's latest international neobank adoption statistics from 2022) (Imerman & Fabozzi, 2020; Kokh & Kokh, 2020).

The neobanking market has grown significantly in size, with a 36% year-on-year growth between 2020 and 2021, indicating a growing demand for digital banking solutions, and more than \$7.5 trillion will be spent using neobanks by 2026 (Industry analysis of the neobanking market) (Khurana, 2022).

There is the forecast for the development of neobank activities in the period up to 2027 (Figure 1).

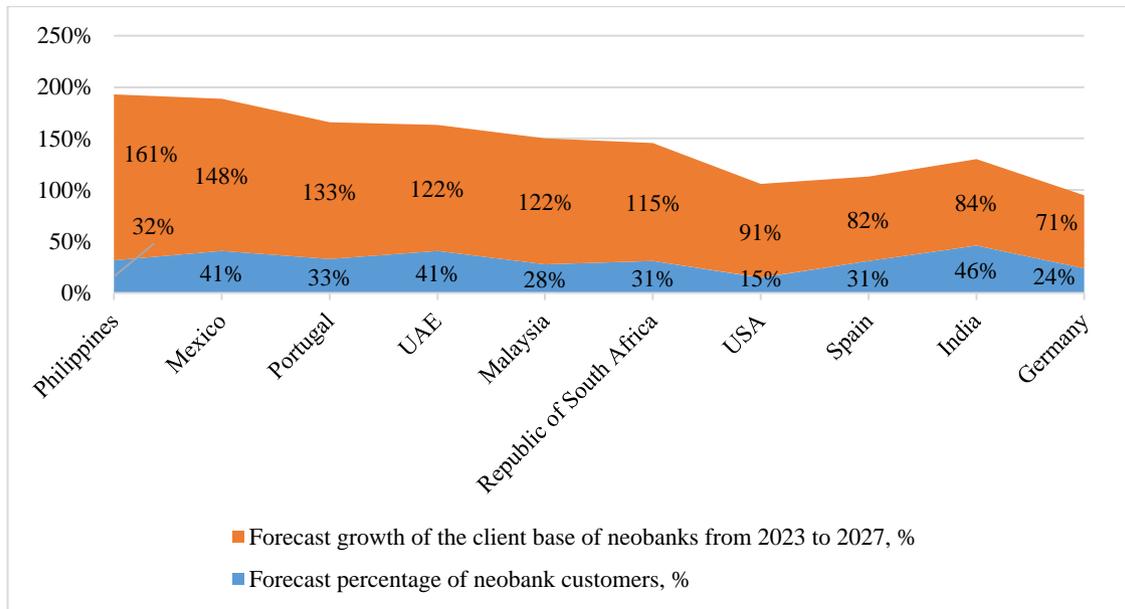


Figure 1. Forecast of the dynamics of development of the client base of neobanks

Source: (Buchi et al., 2019; Virdi & Mer 2023).

In order to be profitable, neobanks often partner with traditional banks and fintech companies to expand their offerings and attract new customers. For example, the German neobank N26, founded in 2013, operates in many countries such as Austria, Estonia, France, Germany, Latvia, the Netherlands, Poland, Spain, Switzerland, the United Kingdom, became a partner of TransferWise and launched its own investment platform (Top Neobanks of 2023: Revolutionizing the Banking Industry; Dráb & Kočíšová, 2018).

The example of India shows that even with a ban on the presence of only digital neobanks, as the Reserve Bank of India (RBI) does, by not allowing the creation of fully digital banking institutions, neobanks in the country use partnerships with physical banks to provide their key products and services (What Is Neobanking And How Does It Work?).

In general, we can talk about the presence of neobank services for customer service of individuals and/or for small businesses. And as it was already emphasized above, the problem is connected precisely with the fact that large businesses use complex structured products, which often require a financial institution to have a banking license to conduct such operations (Korableva et al., 2020a, 2020b; Pogosyan, 2021; Saleem et al., 2021).

The authors' analysis of the specifics of the activities of neobanks allows us to speak of three types of neobanks according to the degree of their autonomy and independence:

- Partner neobank (does not have its own banking license, works in partnership with traditional financial institutions, providing services to its customers; is forced to adapt to the needs of customers and the requirements of partner banks);
- Digital banking business units are digital business units of an already existing classic bank; they are digital twins of a completely separate unit or part of its functionality;
- Full-featured "digital" banks (licensed) have the necessary approvals from banking regulators and independently provide a wide range of products and services, as they have the appropriate license (deposits, loans), maintain their independent brand. In an increasingly digital environment, they are not burdened with expensive physical branch networks).

The areas that neobanks and Russian fintech companies are working on are similar to global ones: these are traditional banking services, which in the ecosystem have additional options for customers to choose services to support their business. The most promising segments for development are payments and transfers (\$8.8 trillion in 2025; Zainal et al., 2022); financing (\$84.3

billion in 2025 - the largest segment); wealth management (\$2.6 billion in 2025) and insurance (\$1.5 billion in 2025). When calculating the indicators, the potential of fintech startups, Russian technology banks and other traditional financial institutions was taken into account. (Razvitie fintekh-rynka v Rossii - neobanki i startapy)

MATERIALS AND METHODS

In this article, the authors substantiate the feasibility of financing secured by intellectual and digital financial assets of Russian and Moscow fintech companies. Theoretical analysis of scientific methods involving analysis, synthesis, and generalization of existing literature are utilized to meet the aim of the study.

An analysis of existing offers of financial and administrative support for fintech companies showed that the list of services provided by neobanks in the Russian Federation (and commercial banks in general) to fintech companies is limited to traditional lending, account management, consulting. It means that innovative products taking into account the activities of such fintech companies are not presented, but in reality rather often fintech companies do not have any property, equipment, because their priority activity is intellectual. It is important for them to receive a targeted product related to obtaining financial services (for example, loans) secured by rights on intellectual property. Today the financing system for fintech companies based on the developed tools and mechanisms for attracting financial resources using intellectual and digital financial assets is only being built. For example actively using of intellectual property in Russian Federation is dated by 2020 year, and using of collateral of the DFA s dated by 2022 year.

For Russian entrepreneurs, as well as for credit institutions, the problem and difficulty of obtaining financing secured by intellectual and digital financial assets is primarily related to the assessment of this type of collateral. Therefore, we believe it is necessary to take into account the following recommendations on changing the calculation scheme in order to increase the number of loan financing transactions) secured by intellectual and digital financial assets.

Recommendation 1

Current component: discounted cash flow approach. Problem: technical advantages, novelty or uniqueness of the protected result of intellectual activity are not taken into account. Proposed component: adjustment of the projected cash flow taking into account the ownership of the exclusive right.

Recommendation 2

Current component: sales figures are taken into account, calculated by the unit price and the number of units of products (goods) produced or services rendered. Issue: Does not take into account the possibility of obtaining income from licensing. Proposed component: take into account sales figures, taking into account the costs of developing new versions of ownership of an exclusive right and increasing the value of an intellectual property object.

Fintech is a complex system that includes new technologies and related financial services, startups and infrastructure. The financial services sector is increasingly using new technologies and tools to perform its tasks and implement new fundamental solutions of consumer interest. On the other hand, today Fintech has entered sectors such as insurance, lending, accounting services, mass assessment of assets, capital and investment management, tax affairs, etc. Also, the creation of emerging legal issues, innovation and diversity in products, comprehensive solutions for security issues, increasing the financial literacy of people and the availability of financial services can be considered among the advantages of fintech.

The impact of fintech on banking and financial services gives banks an incentive to develop. The existence of a website, mobile application and personal account of the user has now become a minimum standard for a modern bank, but over time these services lose their appeal and no longer delight customers.

Fintech helps the bank to deliver its programs more agile and faster. Of course, in order to survive and be stable in this competition, banks must rebuild their structure or look for areas that cooperate with financial technology.

Neo Banks are digital fintech software solutions companies that work exclusively using money management applications. In simple words, Neobank is a type of digital bank without branches and offers innovative online payment solutions and digital wealth management solutions. Neobank is an independent digital fintech solutions company that offers digital payment processes without any physical branch. Zion market research data shows that since 2010, more than 300 neobanks have been launched internationally, offering a wide range of mobile and web wallet solutions. The intercontinental neobank solution market size was estimated at US\$ 18.604 million in 2018 (see the statistics in figure 2).

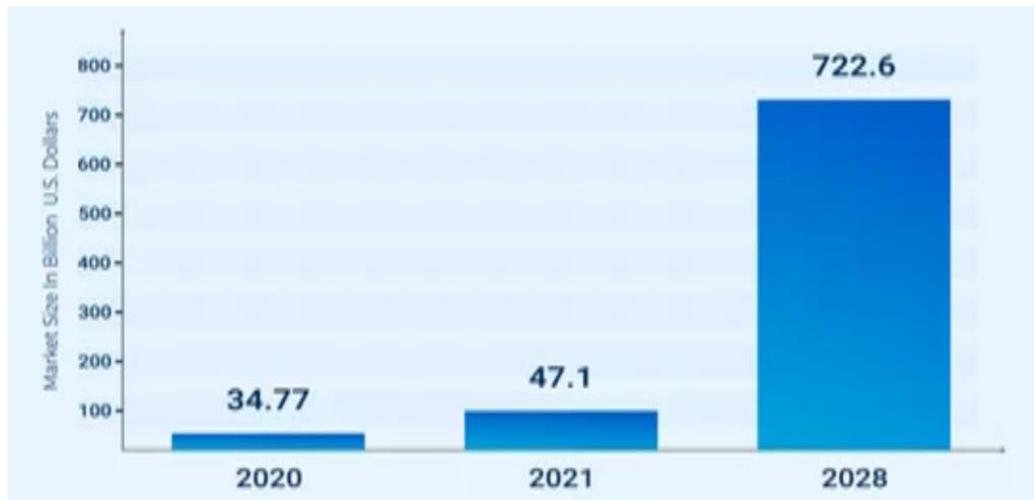


Figure 2. Trends of Neobanks development
Source: (Buchi et al., 2019; Viridi & Mer 2023).

RESULTS AND DISCUSSION

The impact of fintech technology on banks

Experts believe that banks see fintech startups as a big threat to the business models of companies and financial institutions. In this regard, the opinions of 600 representatives from the banking sector and financial institutions were asked, and the following results were obtained:

- 81% of the respondents believe that the quality of the services provided surpasses the customer's trust in a brand in the competition to attract and retain users.
- 79% of participants believe that fintech startups have the most attractive brand.
- 59% of people consider fintechs as a global competitor of banks that can replace the traditional model of providing financial services.
- 46% of the respondents see fintechs as a big threat; Because in order to compete with them, the business model must be optimized.
- 72% of the survey participants stated that banks are lower than fintechs in terms of service delivery speed, convenience and simplicity.
- 30% of the respondents believe that fintechs will run the banks.
- 31% also believe that fintechs will benefit traditional financial institutions.

As you know, new technologies are changing the way people use financial and banking services. Today, the trend of increasing the number of competitors in banking markets is evolving rapidly. In all these years, banks have always faced the competition of large commercial and industrial companies that provided some banking licenses and financial services in addition to their main activity. The impact of fintech on financial services

But what is happening now is different in terms of pace and global nature from periods of heightened financial market competition in recent years. Now the place of innovation has changed, it is developing at a faster pace and it is easily available all over the world. This will change not only the business models of banks, but also all the principles and frameworks of financial services.

The scale of innovations is unprecedented, they are introduced at an unprecedented speed and spread easily around the world, ignoring borders. This is changing not only banking business models, but also the fundamentals of financial services.

Taking into account that the maximum number of fintech companies is registered in Moscow (which was reflected in the 2022 report of the team of authors), as well as the geographical location of the legal addresses of operators of information systems for the release of DFA registered by the Central Bank of the Russian Federation, it is necessary to strengthen assistance primarily to Moscow residents of fintech (Dudukalov et al., 2022). Today seven operators of information systems for the release of digital financial statements have been registered in the Russian Federation (CB rasshiril reestr operatorsov CFA).

Further, the authors propose to dwell on the Moscow region, since it is here that the largest number of fintech companies and financial institutions are represented, they already have in their development strategy such a product as lending on the security of patents, which is provided by an appropriate program to support small and medium-sized businesses in Moscow.

Recommendations for improving the financing mechanism for Moscow entrepreneurs secured by intellectual assets (patents) are proposed as follows:

1. Creation of a single database to solve the problem of searching for similar and borrowed fragments (description of properties, formulas of work, composition of components, etc.) in the aggregate unstructured information in the description of intellectual property for all already issued patents. In fact, it is necessary to conduct a global identification of intellectual property objects. This will reduce the risk of future legal costs and impairment of the added value of customer products/services when calculating discounted cash receipts.
2. Creation of a single database of already existing business problems to build full-fledged predictive models to solve them, thus forming a B-to-B request will increase the number of developments in new areas with a small number of patented developments, and will also give confidence in the growth of company income in future periods -developer when assessing their cash flows by credit scoring.
3. Development of a unified approach to the analysis of patent documents in terms of comparing the features of the mechanism for receiving and processing documents in different countries, if a joint application is filed for a patent with a non-resident of the Russian Federation. Artificial intelligence and big data technology should reduce the risk of information leakage to other countries, as well as minimize the possible Russian duplication of already registered intellectual property rights in foreign jurisdictions.

Recommendations are proposed to be made taking into account the real opportunities of the business, which have liquidity on average for a period of 90-365 days. And if we take into account the fact that the patent of a resident of the Russian Federation has a validity period of 5 years or more (it's possible to apply for an extension), it is necessary to introduce a repeated cycle of using collateral into the existing scheme, as well as to reduce the work of information system operators for the release of DFA into a single mechanism for the possible exchange of DFA between any platforms.

Such offers will help to use the same collateral without termination or interruption of financing, effectively providing the client with liquid funds for the required term, as well as managing collateral from the perspective of investors, transferring such collateral without interrupting the financial and production cycle.

The work of neobanks in the Russian Federation has some special points as the clients of this segment in the Russian Federation will include, first of all, companies that do not have fixed assets, the companies work in a distant way or with intellectual property. In addition, such transactions should initially be focused on small amounts of liquidity, so the client is clearly portrayed: a

representative of small and / or medium-sized businesses, the direction of its activity is fintech, and since most operators are present in Moscow, as well as a system of grant support for state programs described above is also implemented in Moscow, then the client must also be a resident of Moscow.

Taking into account these parameters, the following recommendations can be made to improve the existing system using smart and digital financial.

Market of Digital Financial Assets (DFA)

Since the platforms of operators of information systems for the release of DFA are autonomous, it is proposed to transfer DFA rights, which, according to the authors, should be carried out on all sites, harmoniously the emergence of DFA exchange operators between operators' sites. The proposed changes for the Russian Federation in the current mechanism are the emergence of a new infrastructural element for information systems for the release of DFAs on the principle of the exchange for the exchange or sale of DFAs).

Market of Intellectual Assets (IA)

Since the current financing system involves the analysis of an intellectual property object regulated by patent law, it is autonomous for each appraisal company and is not recognized by other appraisal companies. This often doubles the period of the evaluation procedure. The authors consider the emergence of a single electronic platform of accredited appraisal companies for clients of the Moscow Innovation Cluster with uniform parameters and algorithms for assessing the value of an asset to be harmonious.

CONCLUSION

Open banking creates opportunities to create and distribute a diverse set of financial and non-financial products and services; This is done by maintaining the relationship with the customer but widely developing the variety of services to improve the quality of life of the customers. In the open banking model, an unlimited number of partners can involve themselves in developing relationships. In this process, fintech companies and neo-banks look at traditional banks as the main channel for banking services.

The question is whether banks can effectively control innovation and even distribution. But what is certain, the movement of the banking network towards open banking and cooperation with fintechs can turn the threat of new actors into an opportunity for cooperation and partnership to provide more diverse services and so that banks can maintain their real position and that to promote. Thus, the proposal to allocate new infrastructure elements should be considered not as an additional intermediary in conducting operations, but as an already existing player with vast experience in working with operations similar in functionality.

The authors believe that such recommendations will be able to ensure a positive dynamics in the volume of financing and the number of transactions to raise financial resources using intellectual and digital financial assets to enhance the activities of fintech companies in Russia, in general, and in Moscow, in particular.

In the end, we can say that despite all the differences and problems, fintech companies and banks can benefit from mutual cooperation. Over the years, banks have gained a great deal of experience in interacting with customers, which can be helped by fintechs.

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