

# Digital Format of Lending to Real Estate in the Region in Post-pandemic Conditions

Irina Tretyakova

*Department of Finance and Credit*  
*FSBOU VO "Southwestern State University,"*  
 Kursk, Russia  
 iren\_sin@list.ru

Snezhana Klykova

*Department of Finance and Credit*  
*FSBOU VO "Southwestern State University,"*  
 Kursk, Russia  
 kgtu\_fk@list.ru

Elvira Sitnikova

*Department of Finance and Credit*  
*FSBOU VO "Southwestern State University,"*  
 Kursk, Russia  
[0209elvira@mail.ru](mailto:0209elvira@mail.ru)

Muslim Ibrahimov Azad oglu,

*University of Siegen,*  
 Siegen, Germany  
 m.ibrahimzade@gmail.com

**Abstract**—Digital transformation is currently the main trend of the global economy. It affects all areas and requires an indispensable adaptation. Real estate acts as the main element of the modern economy and is considered as the main means of production and an object or object of consumption. Real estate is the basis of personal existence for citizens and the basis for economic activity, the development of organizations and enterprises of various forms of ownership. The real estate market plays a crucial role in the economy of any state. With its help, the state fulfills its social obligations to provide housing to citizens and all necessary infrastructure. This market is also important because it provides employment for the population. Note that in the conditions of digital transformation one of the important issues is the active formation and development of modern real estate market, which allows a large number of citizens, businesses and organizations to participate in real estate transactions, namely the privatization of state and municipal property, if renting, buying and selling real estate. At the same time, it is worth noting that it is the mortgage that acts as the main tool that makes real estate available to various categories of citizens. Mortgage lending is not so much a tool for increasing effective demand and boosting housing construction, but rather a mechanism for accelerating socio-economic development, both in the region and in Russia as a whole. Therefore, in the modern conditions of the post-pandemic, it is very important and relevant to study and identify the features of the transition of mortgage lending to the digital format.

**Keywords**—*digital economy, region, real estate market, construction, credit, mortgage lending, marketplace, post-pandemic.*

## I. INTRODUCTION

The spread of digital technologies over a long period determines the trajectories of the development of the economy and society and has repeatedly led to fundamental changes in people's lives. Digitalization is one of the priorities for most countries. Not an exception is Russia, where in the face of a global pandemic, the construction of information and

communication infrastructure has affected all sectors of the economy [6, p.57]. The transformation of the business model affected the banking sector. The transition to new financial technologies for the Russian banking system is a breakthrough and determines new relationships between its main participants, which contributes to increasing competitiveness, including at the international level [13, p.71].

At the same time, commercial banks, as the main deposit institution, traditionally providing the transformation of savings into investments and credit, are currently experiencing serious competition in the context of the development and penetration of new digital technologies into the market [1, p.951]. In this regard, we believe that the study of the digital format of lending, in particular mortgage, in modern conditions of post-standard, seems relevant and requires detailed study.

The purpose of this article is on the basis of a comprehensive study of mortgage lending as the main driver of the real estate market, to identify the features of its transition to digital format in modern post-pandemic conditions.

The issues of introducing digital technologies into the economy are given special attention not only in the works of foreign, but also Russian scientists. The national and foreign scientific literature presents numerous approaches to interpreting and revealing the nature of the digital economy: its content, identifying characteristic features and predicting development prospects.

In response to technological challenges affecting all aspects of public life, the Program "Digital Economy of the Russian Federation" was developed and implemented in Russia, approved by order of the Government of the Russian Federation dated 28.07.2017 No. 1632-r. This program develops key provisions of the Strategy for the Development of the Information Society in the Russian Federation for 2017-2030, approved by Decree of the President of the Russian Federation dated 09.05.2017 No. 203. Its goal is to create conditions for the development of a knowledge society in the Russian Federation, to increase the well-being and quality of life of citizens by improving the accessibility and quality of goods and services

produced in the digital economy using modern digital technologies.

We also note that the study of the main problems associated with determining the place of traditional credit organizations in the provision of credit in the context of the transition to a digital economy is the subject of constant discussion.

The digital approach to the development of the economy, in particular credit channels, is considered in the works of such domestic authors as Babkin A.V., Khvatova T.Yu., Panshin B., Lunyakov O.V., Lunyakova N.A. and others.

The theoretical aspects of mortgage lending as the main mechanism for stimulating the development of the real estate market are considered in the works of Barkova O.I., Breslavtseva N.A., Maximova A.S., Pechatnikova S.M., Ryabokon S.V., Sternik G.M., Sternik S.G., etc.

Despite the available scientific study, the issues of the transition of mortgage lending in modern economic conditions to a digital format require additional research.

## II. METHODS

General scientific methods of cognition (comparison, abstraction, analysis, synthesis, observation, generalization, etc.), as well as methods of comparative, statistical and dynamic analysis were used as research tools.

## III. MAIN PART

In the current conditions of the epidemic, both in our country and throughout the world, numerous changes are taking place in all areas of the economy. The real estate market and the directly related mortgage lending market also affected the deformation.

Despite the pandemic that has swept the world, the real estate market cannot be stopped: there is still a need to sell and buy real estate, including apartments. People need to live somewhere, need money or there are other reasons for making transactions related to the purchase and sale of real estate. The temporary lull in the real estate market only caused delayed demand.

According to Rosstat, every year the main parameters of the real estate market in Russia change (Table 1).

TABLE 1. MAIN PARAMETERS OF THE REAL ESTATE MARKET IN RUSSIA FOR 2017-2019 [18; 2, P. 9]

Name	2017 г.	2018 г.	2019 г.
Population, million	146,8	146,9	146,7
Number of economically active population, million	75,8	74,9	71,4
Average per capita monetary income of the population per month, thousand rubles.	31,4	31,8	32,6
Average monthly nominal accrued salary of one employee, thousand rubles.	39,2	43,4	46,7
The number of buildings introduced is total, thousand, including	272,6	261,1	305,5
- residential purpose	253,8	242,4	285,8
- non-residential purpose	18,8	18,7	19,7
Total construction volume of buildings, total, million m, incl.	599,4	584,6	652,2
- residential purpose	401,3	375,3	418,1
- non-residential purpose	198,1	209,3	234,1
Total area of buildings, total, million m, incl.	137,3	132,7	146,7
- residential purpose	104,6	101,8	111,6
- non-residential purpose	32,7	30,9	32,1
The total area of residential premises, on average per resident, total, m	25,2	25,8	26,3

The world coronavirus pandemic in 2019 affected all sectors of the economy, including the construction one. Like any source

of the crisis, it gave an impetus to development: the transition to digital format, changing business tools, the emergence of a new audience. Rapid adaptation to the changing rules of the game, made it possible to maintain the priorities of the construction industry. According to the official statistics, the number of introduced buildings for both residential and non-residential purposes is increasing. The total number of buildings introduced in 2019 amounted to 305.5 thousand, which is 32.9 thousand units. more than 2017. At the same time, active growth is observed in the segment of commissioning of residential buildings. During the study period, their number increased by 32 thousand units and amounted to 285.7 thousand in 2019 [4].

Despite the declining number of economically active people who are able to work and have money to purchase real estate, the demand for residential buildings in post-pandemic conditions has remained. Note that over the past year in Russia, the number of Russians employed in the economy has noticeably decreased. In total, 71.4 million people were registered. Nevertheless, unemployment in the country remains at 4.7%. Among the unemployed aged 15 and over, the proportion of women in April was 46.7%, urban residents - 65.2%, youth under 25 - 19.4%, people without work experience - 23.5% [18].

However, the consumer demand for real estate present in modern conditions contributes to the growth of the total construction volume of buildings. In 2018-2019, the construction volume of buildings increased 1.1 times or by 67.3 million m and amounted to 652.2 million m. In general, we can talk about maintaining the development trajectory of the real estate market, but there is also the presence of overdue debts of companies involved in the construction of buildings and structures. According to statistics, the volume of debt in construction increased by 9%, and its share - from 17.3 to 21.3%. The provision by credit institutions of borrowed resources to companies for the construction of buildings and structures in 2019 decreased by 9% compared to 2018. For all other things, companies operating in the real estate market in modern conditions have to adapt to digital transformation, which means thinking about the feasibility, timing and methods of implementing such initiatives.

However, the consumer demand for real estate present in modern conditions contributes to the growth of the total construction volume of buildings. In 2018-2019, the construction volume of buildings increased 1.1 times or by 67.3 million m and amounted to 652.2 million m. In general, we can talk about maintaining the development trajectory of the real estate market, but there is also the presence of overdue debts of companies involved in the construction of buildings and structures. According to statistics, the volume of debt in construction increased by 9%, and its share - from 17.3 to 21.3%. The provision by credit institutions of borrowed resources to companies for the construction of buildings and structures in 2019 decreased by 9% compared to 2018. For all other things, companies operating in the real estate market in modern conditions have to adapt to digital transformation, which means thinking about the feasibility, timing and methods of implementing such initiatives.

It should be noted that it remains impossible for most citizens to purchase real estate at their own expense [7, p. 3]. According to a survey conducted by ДОМ.РФ JSC together with VTsIOM in 2019, more than 45% of Russian families need to improve housing conditions. The main market way to purchase housing for the majority of citizens is a mortgage. In this regard, commercial banks offer various mortgage lending programs, and mortgages remain one of the effective tools that allow you to purchase real estate in Russia [15, p. 301].

The pandemic of coronavirus, like any other source of the crisis, has brought new opportunities besides losses [9]. One of them is the expansion of mortgage registration through remote channels. The digital format has become a new reference point for the development of not only the mortgage lending market, but also the real estate market in post-pandemic conditions.

Currently, there is a combination of online channels of the bank and developers on the platform, which allows the borrower to receive services on the principle of "one window." Marketplaces are well represented, with the help of which you can easily issue a mortgage loan in the credit institution that is most suitable for the parameters of the loan, having previously calculated them on an online calculator. Remotely participate in the processing of documents and the MFC and the portal of public services. Marketplace operates on the principle of "plug & play" ("connect and play") and unites many participants in various transactions: citizens, financial service providers, aggregator sites/digital platforms. All Marketplace members have clear advantages. The digital format allows you to make the transaction more transparent, understandable and predictable, which reduces the risks of buyers of real estate and banks issuing mortgages. When choosing a service bank, a potential borrower can use the services remotely by applying remote identification. Remote identification is a mechanism by which individuals can receive financial services remotely from different banks, confirming their identity using biometric personal data. The use of the remote identification platform in the context of the mortgage business facilitates the transfer of the service to a digital environment. In addition, such a digital platform increases the availability of services for consumers, including people with disabilities, the elderly and low-mobility population, and also increases competition in the financial market. Modern approaches to doing business in digital format are diverse and are improving every year. In order to improve the quality of payment services, in particular, making a monthly payment for using a mortgage loan, commercial banks offer a digital platform - a fast payment system. This service allows you to instantly make payment transactions, regardless of which bank has an account. You can transfer funds by phone number or other details, just install the mobile application on the phone, or other devices connected to the Express Checkout system. The introduction of this digital platform increases financial availability and is an infrastructure important project of national importance.

It should be noted that many leading banks have already switched to remote customer service - issuing online mortgages, using a new digital platform to identify the client, processing instant payments. However, this digital approach, due to limited financial literacy, is taken by our society with difficulty, which hinders the digital revolution. At the same time, we believe that entering the digital format will expand the boundaries of the mortgage market.

TABLE 2. SHOWS THE MAIN INDICATORS CHARACTERIZING THE STATE OF MORTGAGE LENDING IN RUSSIA FOR 2017-2019 [17]

Name	2017 r.	2018 r	2019 r.
Number of credit institutions providing housing loans, units	428	363	324
Number of mortgages granted, units	1 092 316	1 476 376	1 287 818
Volume of mortgage loan provided by RUB mln.	2 028 392	3 019 577	2 857 842
Weighted average rate on a mortgage loan provided in rubles,%	9,79	9,66	9,01
Mortgage debt volume, million rubles, v.t.h.	5 220 010	6 434 152	7 512 520
- amount of overdue mortgage debt, million rubles.	74 862	76 995	76 220

Characterizing the mortgage lending market in Russia, it should be noted its change in the main indicators. 2019 can be called "subsiding" in the dynamics of key indicators of the development of mortgage lending. The number of credit organizations providing mortgages decreased in 2019 by 104 units compared to 2017 and by 39 units compared to 2018. Such changes are caused by the revocation of licenses and increased competition in the current situation in the country. Some commercial banks, in the context of a worldwide transition to a remote form of business, were unable to timely and qualitatively switch to a digital format for the provision of services, which led to the exit of a number of commercial banks from the mortgage market.

Against the background of a decrease in the number of credit organizations providing housing loans in the Russian Federation, the number of mortgage loans provided is increasing. During the analyzed period 2017-2019. the number of granted mortgages increased by 195,502 units and amounted to 1,287,818 units in 2019 against 1,092,316 units in 2017. At the same time, relative to 2018, there is a clear reduction of 188,549 units of mortgage loans issued. It is important to note that in modern conditions, more mortgages have been issued, but the average amount of a mortgage loan per borrower has decreased.

Due to the ongoing socio-economic changes in the country, in 2019, the volume of mortgage lending could not maintain the growing dynamics. The volume of mortgage loans issued in 2019 compared to 2018 decreased by 161,735 million rubles and amounted to 2,857,842 million rubles. The high level of interest rates characteristic of most of 2018, rising prices for real estate and a decrease in the volume of loans issued with a low down payment, served as the main reasons for the decrease in mortgage lending [3, p. 717].

According to analysts in the mortgage lending market, in 2019 in May the number of mortgages compared to last month decreased by a record 21%. It was during this period that mortgage rates reached 10.5% per annum, which led to a decrease in demand for a credit product. The largest number of mortgages was issued in December, when the mortgage rate for the first time decreased to 9%.

Despite a positive reduction in interest rates on mortgages, their level at the beginning of 2019 was higher than in 2018. This caused a slowdown in the mortgage lending market. In addition, the reason lies in the client's reluctance to issue a mortgage transaction online. However, an online mortgage transaction allows credit institutions to reduce decision time and the cost of registration. As a result, making a mortgage in digital format can be cheaper by a couple of percent than in offline format.

An equally important reason for the weakening of the mortgage market was the increase in real estate prices [5, c. 50]. If on average in the country in 2017 1 square meter of housing could be purchased for 56.9 thousand rubles, then in 2019 for 67.8 thousand rubles. The increase in prices for real estate in the conditions of stagnation of real incomes of the population led to an increase in the average size of the mortgage loan - by 10% for 2019, from 2 to 2.2 million rubles.

It should be noted that in early April 2020, the demand for housing increased sharply. In our opinion, this is directly related to the fall of the ruble and the desire to invest savings in real estate capable of generating income in the future.

Another reason for the increase in the cost of housing can be considered new legislation in shared construction. New escrow accounts minimize the risks of equity holders, but increase the cost of apartments.

In modern conditions, the main problem of the mortgage segment in Russia is the growth of debt, including overdue debt [10, p.144]. According to statistical reporting, the amount of debt for 2017-2019. increased by 2,292,510 million rubles. 1.4 times and amounted to 7,512,520 million rubles. At the same time, the amount of overdue debt decreased for the analyzed period by 1,358 million rubles. and amounted to 76,220 million rubles. in 2019.

The problem of the growth of mortgage debt is directly related to the deterioration of the financial condition of a number of borrowers [12, p. 660], which arose against the background of a pandemic. However, commercial banks, due to the support of borrowers, introduced credit holidays, the essence of which is to ease their financial burden. The weakening may be different: postponement of payment on a mortgage loan for a long period of time; Payment of mortgage interest only; Reduction of payments by a specific percentage (depending on the agreement with the commercial bank).

In addition, the Central Bank of Russia published recommendations on the restructuring of loans (including mortgage) borrowers who were found to have coronavirus. However, this is solely a recommendation. Due to this, credit organizations, when deciding on restructuring, will focus on changing the income of sick borrowers.

In addition to credit holidays, a program of preferential mortgage lending was approved in post-pandemic conditions - 6.5% per annum. Such a preferential credit product could be used until November 01, 2020 [16].

In the portfolio of overdue debt in the mortgage lending segment, one should note the relative stability of the situation [11, c. 372]. Given the current negative events of postpandemia, commercial banks refuse to provide mortgage loans to employees of those industries that were most affected by coronavirus emidemia.

It should be noted that the all-Russian trends in the formation of mortgage lending as the main tool for the development of the real estate market in modern economic conditions are characteristic of the regions.

In 2019, 40% of loans accounted for the top ten regional leaders in the number of mortgage loans issued. In relation to 2018, their list in 2019 remained the same: Moscow (80.8 thousand mortgages), Moscow Region (71.4 thousand), St. Petersburg (64 thousand), Tyumen region (52.6 thousand), Bashkortostan (46.2 thousand), Tatarstan (44.1 thousand), Sverdlovsk region (43.6 thousand), Krasnodar Territory (39.2 thousand), Chelyabinsk region (37.1 thousand), Novosibirsk region (32.4 thousand).

Figure 1 shows the distribution of the mortgage lending market in the federal districts of Russia in 2017-2019.

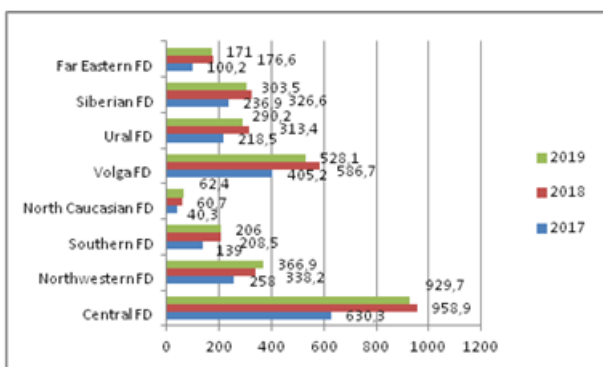


Fig. 1. Distribution of mortgage lending market by federal districts of Russia in 2017-2019 [17]

According to Figure 1, mortgage lending by region in 2019 is declining. The most developed mortgage lending market is located in the Central Federal District. Mortgage lending increases in 2019 only in the North Caucasus Federal District.

Experts note that at the end

of 2019, only some regions have an increase in mortgage transactions compared to 2018 data. The most dynamic increase is observed in the Republic of Crimea and Sevastopol, 32%, respectively [4]. Mortgage lending in Crimea has been expanding its borders for the second year in a row, which is caused by demand, both from local residents and those living in other regions. Note the territorial and investment attractiveness of Crimea and Sevastopol [8, p. 278].

Note that the smallest number of mortgage transactions for 2019 was made in the Ulyanovsk region (-24.5%) and the Nenets Autonomous Okrug (-24%).

In general, despite the structural changes taking place in the mortgage lending segment, it is necessary to note the prospects of this direction, since mortgage lending is the only driver of the growth of the construction market and the main tool for the availability of residential real estate for the population [14, c.101]. We believe that in the near future a significant reduction in the volume of mortgage loans issued is possible, but the mortgage market is very promising and rapidly recovering.

#### IV. CONCLUSION

Thus, in the modern conditions of postpandemia and the transition of the economy to a digital model of development, Russian banks face new tasks - to study and make the widest possible use of the new opportunities in the field of mortgage lending and construction lending, to develop and implement new market standards for lending to developers, project financing in the housing sector, combining mortgage portfolios and joint issuance of mortgage securities. The digital format of mortgage lending creates fundamentally new technological and organizational and managerial challenges. Digitalization of the economy requires credit institutions to create new information platforms that can develop the corresponding business directions of the bank in the same plane as the information era. However, only technology will not allow the main participants in the mortgage lending market to adapt in a rapidly developing digital world. At the moment, commercial banks and construction organizations need experts who can reliably assess which technological solutions business needs in the first place, and how to form the idea of a future digital copy of the business. In our opinion, the crisis inherent in the Russian economy is short-term. In the near future, mortgage conditions will become much more affordable, lending volumes will recover and the scale of the construction market will expand. At the same time, it should not be forgotten that the rapid spread of the pandemic in 2020 certainly caused all further economic, and in many ways political problems. We believe that the crisis is structural in nature, so it is very important to develop a successful anti-crisis policy that can stop it and prevent "creative destruction."

#### REFERENCES

[1] S. M. Bukhonova, A. E. Yablonskaya, "Research of digital transformation of the Russian banking sector in the context of its investment attractiveness", *Voprosy innovatsionnoy ekonomiki*, 2020, Vol. 10, No. 2, pp. 951–960.  
 [2] *Housing in Russia, 2019: Stat. sat.*, Rosstat, M., 2019, 78 p.

- [3] V. V. Znamenskaya, E. V. Lapteva, L. V. Zolotova, “Mortgage lending in solving the housing problem in the Russian economy”, *Economics and Entrepreneurship*, 2018, № 8 (97), pp. 716–719.
- [4] Indicators of the real estate market. Analytical cent IRN.RU. URL: Mode of access: <https://www.irn.ru/indexes/> (accessed 10.11.2020).
- [5] Results of 2019 and forecast for 2020 in the mortgage market: the threat of infection. URL: [https://raexpert.ru/researches/banks/ipoteka\\_2019](https://raexpert.ru/researches/banks/ipoteka_2019) (accessed 10.11.2020).
- [6] T. S. Kolmykova, E. S. Nesenjuk, K. Yu. Khalameev, “The development of the digital economy in the transition to the sixth technological order”, *Izvestiya Yugo-Zapadnogo gosudarstvennogo universiteta*. Series: Economics. Sociology. Management, 2019, T. 9. - № 1 (30), pp. 57–64.
- [7] T. S. Kolmykova, E. V. Sitnikova, I. N. Tretyakova, “Credit resources in solving problems of modernization of national economy”, *Finance and credit*, 2015, № 14, (638), pp. 2–11.
- [8] T. S. Kolmykova, S. G. Emelianov, E. A. Merzlyakova, “Research of innovative potential of the region”, *Journal of Applied Engineering Science*, Issue 15(3), 2017, pp. 276-279.
- [9] Coronavirus: measures to support citizens and businesses. URL: <https://cbr.ru/covid/> (accessed 10.11.2020).
- [10] A. S. Obukhova, N. P. Kazarenkova, “The use of digital technologies in assessing the creditworthiness of the borrower”, *Izvestiya Yugo-Zapadnogo gosudarstvennogo universiteta*. Series: Economics. Sociology. Management, 2020, Vol. 10, No. 2, pp. 140–153.
- [11] E. V. Sitnikova, T. S. Kolmykova, E. O. Astapenko, E. A. Grivachev, “An Assessment of Commercial Banks’ Financial Sustainability”, *Lecture Notes in Networks and Systems*, 2020, 115, pp. 370–378.
- [12] E. V. Sitnikova, I. N. Tretyakova, T. S. Kolmykova, O. V. Aseev, “Role of credit resources in modernization of Russia’s economy”, *Procedia Economics and Finance*, 2015, No. 24, pp. 659–665.
- [13] E. V. Sitnikova, T. S. Kolmykova, E. O. Astapenko, “The impact of digitalization on the development trends of banking activities in the regions of Russia”, *Region: systems, economy, management*, 2020, № 1 (48), pp. 71–76.
- [14] I. Tretyakova, E. Sitnikova, “International financial processes influence on the retail lending market in Russia development”, *Ekonomichny chasopis-XXI*, 2016, Vol. 157, no. 3-4-1, pp. 100–102.
- [15] I. N. Tretyakova, A. E. Yablonskaya, E. S. Alyokhina, “Economic conditions and factors determining the development of mortgage lending in the Russian Federation”, *Bulletin of the Belgorod University of Cooperation, Economics and Law*, 2015, № 4 (56), pp. 300–308.
- [16] The Central Bank announced support measures for banks and their borrowers due to the pandemic. <https://www.rbc.ru/finances/20/03/2020/5e74a0739a79475292bd0ac5> (accessed 10.11.2020).
- [17] Official website of the Central Bank of the Russian Federation. (accessed 10.11.2020).
- [18] Official website of the Federal State Statistics Service. (accessed 10.11.2020).