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Problems of property market development in Russia in the modern context

Problemas de desarrollo del mercado inmobiliario en Rusia en el contexto moderno

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Content

- 1. Introduction
- 2. Literature review
- 3. Method
- 4. Results
- 5. Conclusion

Acknowledgement

Bibliographic references

ABSTRACT:

This paper analyzes the development prospects of the property market and discusses its current state in Russia. The study identifies the main problems and factors affecting the development of the Russian housing market. It is shown that the key problems of the Russian housing market are the low effective demand and income level of the population, a high level of interest rates, the low consumer satisfaction with respect to the volume of housing construction in certain regions, particularly in rural areas, the lack of borrowed and attracted financial resources and other factors. The paper gives a review of the main development trends of the property market in Russia and presents a comparative analysis of its development trends in other countries.

Keywords Housing market, housing (mortgage) lending market, per capita income, housing stock.

RESUMEN:

En este trabajo se analizan las perspectivas de desarrollo del mercado inmobiliario y se discute su estado actual en Rusia. El estudio identifica los principales problemas y factores que afectan el desarrollo del mercado inmobiliario ruso. Se demuestra que los problemas clave del mercado inmobiliario ruso son la baja demanda efectiva y el nivel de ingresos de la población, un alto nivel de tasas de interés, la baja satisfacción del consumidor con respecto al volumen de construcción de viviendas en ciertas regiones, particularmente en las zonas rurales, la falta de recursos financieros prestados y atraídos y otros factores. El documento da una revisión de las principales tendencias de desarrollo del mercado inmobiliario en Rusia y presenta un análisis comparativo de sus tendencias de desarrollo en otros países. Palabras clave Mercado de la vivienda, mercado de

préstamos de vivienda (hipoteca), renta per cápita,

stock de vivienda.

1. Introduction

The property market plays an important role for any state and its population. An important task for the state is not only the development of the property market in the whole country, but also the promotion of housing affordability for citizens through various tools for housing market financing. In recent years, the property market has experienced various conditions, including a sharp jump before the crisis and a fall after the crisis. All this confirms the need for state support to develop the property market, which will contribute to the solution of many social problems and the development of the economy as a whole. On the one hand, the property market is sensitive to the changes in interest rates.

The key problems of the housing market include the insufficient effective demand and the low per capita income of the population in need of housing, high loan interest rates, uncoordinated relations between executive authorities and developers, insufficient volumes of housing construction in certain regions, particularly in rural areas, a deficit in borrowed and attracted financial resources and other factors.

The purpose of this study is to review the main trends in the development of the property market in Russia, make a comparison with its development trends in other countries, as well as identify the main problems and influencing factors in this area.

2. Literature review

With regard to the theoretical foundations of the essence of the housing market and its development models, a large number of studies are devoted to determining the role of mortgage housing lending in the development of the property market as well as the models and forms of housing financing. A significant contribution to the development of theoretical and methodological issues in the analysis of the residential property market and the main directions of its development was made by A.N. Asaul, V.V. Buzyrev, A.I. Vakhmistrov, S.A. Ershova, V.A. Zarenkov, L.M. Kaplan, A.N. Larionov, Yu.P. Panibratov, N.I. Pasyada, A.S. Robotov, E.B. Smirnov, R.A. Faltinsky, L.I. Tsapu, V.A. Yakovlev and a number of other researchers. Certain aspects of the mortgage lending process were considered in the works of such scholars as T.A. Akulova, L.Yu. Andreeva, A.V. Krysin, A.A. Lupar, E.S. Maltseva, I.V. Pavlova, E.A. Rusetskaya, L.I. Ryabchenko, V.A. Savinova, E.N. Sokolovskaya, E.S. Tkacheva, A.D. Yushkantsev, Yu.S. Berestova, T.V. Volodina, G.A. Grabsky, E.A. Zakharov, M.P. Loginov, O.N. Loginova, I.V. Dovdienko, L.Yu. Grudtsyna, S.V. Pechatnikova, I.V. Zhigunov, A.S. Kudeev, V.V. Klevtsov, Yu.A. Timagina, A.V. Falkovsky, A.I. Shakiryanova.

Modern problems of mortgage housing lending were analyzed by such foreign researchers as M. Halter, E. Davidson, E. Sanders, L. Wolf, S. Dobson, J. Dolan, R.J. Strike, R. Dornbusch, S. Fisher, K. Campbell, D. Lindsay, S. Polfreman and others.

A form (model) of housing financing is understood as the totality of organizational, functional, legal and financial-economic mechanisms operating in a single system according to a certain pattern of relationships between subjects of the housing market.

The following forms of housing financing are distinguished by economists:

- financing of housing acquisition;
- financing of housing construction, including state (municipal) rental housing;
- state support in providing housing for families with low incomes.

Studying the experience of housing construction financing with the help of lending allows all forms to be structured into models, according to the used refinancing mechanism within them and financing sources:

- shared construction and housing installment sale;
- provision of loans and credits for housing acquisition for employees by enterprises;
- housing certificates;

- municipal housing bonds;
- regional schemes (programs) using resources of regional and local budgets;
- bank crediting;
- savings scheme and experience of consumer unions;
- a classical two-level model (developed in Moscow and St. Petersburg).

Each case has its problems, advantages and disadvantages. In terms of equity participation, the problems are the risks of non-completion of construction, the existence of high effective demand, the need to attract credit resources, the inaccessibility for the population with low incomes, and the low level of insurance protection.

Regional programs using budgetary funds are implemented only in the regions whose budget has sufficient financial resources. The advantage is the availability of state guarantees for low-income families, their reliability, and the disadvantage is the limitation in terms of financing.

The housing financing mechanism has not been widespread in Russia.

Consumer lending is possible in profitable and financially sustainable companies that have sufficient resources for this activity and are ready to provide their employees with such opportunities. This option is not of a mass nature.

Banking mortgage should be one of the most important and massive ways to develop the residential property market. However, in Russia, despite some decline, interest rates are rather high, which does not allow the development of this type of lending. The constraints to the development of this model are lending conditions that are inaccessible to the majority of the population – the amount of down payment and monthly payments on the loan, depending on the monthly income.

The loan and savings model is not widely spread due to the lack of confidence in savings and loan funds, high inflation, the lack of state support and state guarantees.

A classical two-level model can only develop in large cities, where the incomes of the population are relatively high.

Despite the fact that currently the mortgage lending system occupies an insignificant share in the total volume of housing construction financing, with regard to foreign experience, it is the most progressive one. The insufficiency of its wide application in Russia is caused by a number of reasons: the insignificant growth of housing construction, rather tough conditions of mortgage lending, and the instability of the socioeconomic situation in the country.

Let us consider some models of property market development in foreign countries.

Reed and Wu (2010) consider the model of property market development in terms of the principle of cyclicity and risk factor, based on the work of Barras (1994), which is shown in Table 1.

lable 1. How the building cycle works					
Real economy	Property economy	Money economy			
Economic up-turn		Credit expansion			
	Increased property demand				
	Supply shortage				
	Rising rents/falling yields				

Table 1. How the building cycle works

Economic boom	Building boom	Credit boom
Economic down-turn	Increased supply + slackening demand	Rising interest rate
	Falling rents/rising yields	
Recession	Property slump	Credit squeeze

Source: https://dro.deakin.edu.au/eserv/DU:30024131/reed-understandingproperty-post-2010.pdf

Hornstein (2009) examines the impact of innovative methods of financing the mortgage property market, the development of which directly and indirectly affects the growth of the country's gross domestic product (GDP). In this case, it is emphasized that increasing the incomes of the population requires not expanding the range of innovative financial services, but increasing the return on investment in real estate in the future.

The features of a real estate investment financial analysis were reviewed by Poorvu (2003). He outlines the following assumptions that complicate the process of conducting a financial analysis with respect to a real estate investment: the extremely long time horizon involved, the effects of an ever-changing environment, and liquidity problems. In this connection, the following components of an analysis are distinguished:

- cash flow,
- tax effect,
- future benefits.

Lin (2012) built the dependence of the main participants of the property market on the key parameters, as reflected in Table 2 and Table 3.

Table 2. Variables and ratios for property market analysis

Market	Housing	Industrial	Office	Retail
Variable and ratio				
Variable				
Money supply	+	+	+	+
Interest rate	+	+	+	+
GDP	+	+	+	+
Housing starts (for residential)	+			
Number of days on market	+			
Number of unsold homes in a city	+			
Number of homes on market over 120 days	+			

Number of mortgage applications	+			
Population growth	+			
Household formations	+			
Cost of renting housing	+			
Industrial production		+		
Manufacturing employment		+		
Transportation employment		+		
Airfreight volume		+		
Rail and truck volume		+		
Retail sales		+		+
New office construction (for office)			+	
White collar employment			+	
Inflation expectation				+
Car registrations				+
Retail sector expenditure				+
Aggregate household wealth				+
Ratio				
Affordability (household income to price)	+			
House price to employee compensation	+			
Asking price to transaction price	+			
% of properties bought for investment	+			
Industrial capacity utilization		+		
Vacancy rates		+	+	+
Cap rates to interest rates		+	+	+

Rental cost to mortgage costs + + + +

Source: https://eres.architexturez.net/system/files/pdf/eres2012_355.content.pdf

Table 3. A comparative framework for commercial and residential markets by property market data and information

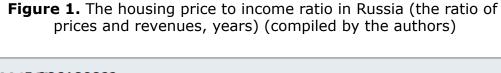
	Property n	Property market information					
Location/level data	User-occupier			Developr	ment – land	d market	
International level		User cost ratio		New order	New output	New building sold/new building buil	
National level	Rent	Interest/deposit	Service charge	Developer as an occupier (number, space m^2, value)			
Regional level	Maintenance	e cost	Tax (council tax)	Price elasticity of supply			
Sub-regional level	Owner-investor		Development cost structure analysis				
Corporate level	Owner – investor market ratio		Property Construction cost price				
	Price	Rent /cost	Stock volume and value	Land price	Land price Developers profit		
Physical characteristics data	Affordability	(income price rati	0)	Land price vs. Developer's total cost, construction cost, sold price, developer' profit			
Age	Bubble (rent-price ratio, income yield)		ne yield)	Develope	er analysis		
Structure		Transaction					
Style	Total volum	e	Total value	background Capital, output Short term		Performan	
Type of use	Exist stock		% of existing stock			Short term debt / equity	
Layout	New output		% of new	Company age Long term debt / equity			

Size	Total stock		% of total stock	Employee		Long term debt / fix asset
Height (floor)/density	Vacancy rate	e (by region and sectors)		Revenue, pro	fit	Operation cost / equity
Environment		SUPPORTING				
	Financial market					
	Interest rate	Exchange rate	Return-risk	Credit affordability	Debt struc	cture – credit

Source: https://eres.architexturez.net/system/files/pdf/eres2012_355.content.pdf

3. Method

Consider the main housing affordability indices in Russia. The housing price to income ratio is calculated as the ratio of the average price of an apartment of 54 square meters in area to the average income of a family consisting of three persons per year. The value of this index corresponds to the number of years during which a family can save for an apartment, assuming that the entire money income received will be deferred to purchase an apartment. In Figure 1 and Figure 2 we observe a downward trend in this index, which indicates a certain increase in housing affordability. It is also positive that the proportion of families with mortgage payments is growing. However, it should be noted that despite the growth, this level yet cannot be called high.



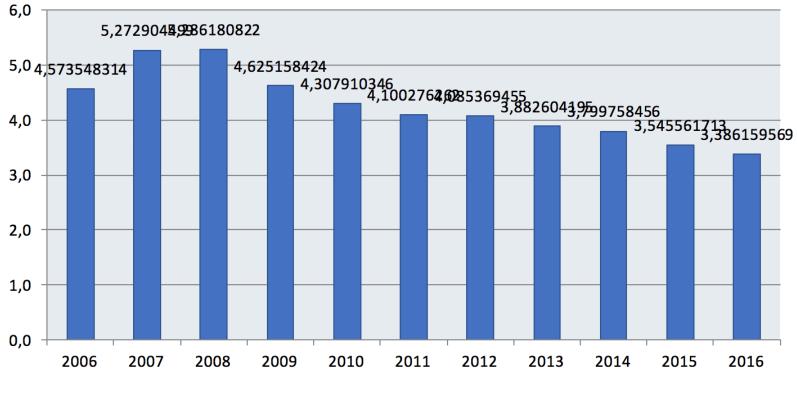


Figure 2. Share of families that afford house mortgage in Russia, % (compiled by the authors)

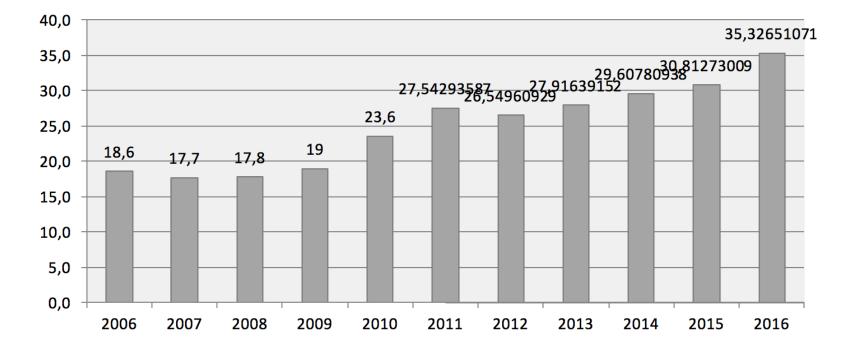


Table 4 presents the main indices that characterize the Russian property market. The dynamics of many indices is unstable. For example, after the crisis of 2014, the number of mortgage loans issued as well as property rights of individuals for residential premises decreased. A sharp increase in the rate of mortgage loans in 2015 had an adverse impact on the development of the residential property market in Russia.

Table 4. Main indices characterizing the Russian property market for the period of 2012-2016

F. F. F.	,	the period of			
Indices	2012	2013	2014	2015	2016
Average per capita money income of the population (per month), thousand rubles	23,2	25,9	27,8	30,5	30,7
Share of costs for property acquisition in the population's money expenditures, %	4,2	3,9	4,5	2,9	н/д
Housing fund, million m2 of the total area of residential premises	3349	3359	3473	3581	3663
Commissioning, million m2 of the total area of residential premises	65,7	70,5	84,2	85,3	80,2
Average size of apartments built, m2 of total area	78,4	75,8	74,9	71,4	68,7
Share of the volume of housing mortgage loans provided in GDP, %	1,54	1,91	2,23	1,4	1,71
Registered property rights of individuals for residential premises, units	8 729 967	9 768 589	9 696 212	9 069 938	8 374 828

Registered mortgages of residential premises, units	1 159 208	1 245 833	1 425 016	1 134 333	1 290 682
Number of housing mortgage loans provided, units	691 724	825 039	1 012 814	699 510	856 461
Average weighted rate, %	12,29%	12,56%	12,37%	13,44%	12,62%
Average price in the residential property market for 1 m2 of total area, thousand rubles (primary market)	48,2	50,2	51,7	51,5	53,3

The search for dependencies between the average mortgage rate and other indices makes it possible to conclude that the correlation between the mortgage rate and the share of costs for property acquisition is the strongest. It is interesting that the correlation between the size of mortgage rates and the number of loans issued is weak, and the correlation between the rate and GDP, the total amount of housing stock is average (see Table 5).

Table 5. Correlation coefficients between the average weighted mortgage rate and other indices in Russia

Indices	Average weighted mortgage rate	Correlation
Number of housing mortgage loans provided, units	-0,4322	Reverse weak
Share of the volume of housing mortgage loans provided in GDP, %	-0,5841	Reverse average
Share of costs for property acquisition in the population's money expenditures, %	-0,9657	Reverse strong
Average per capita money income of the population (per month), thousand rubles	0,6661	Direct average
Housing fund, million m2 of the total area of residential premises	0,5327	Direct average
GDP, billion rubles	0,5516	Direct average

Source: Author's own computations.

The search for dependencies between the volume of housing fund and other indices makes it possible to conclude that the strongest correlation is between the average per capita money income of the population, the volume of GDP and the average price. It is interesting that the number of mortgage loans provided has a small impact on the volume of housing stock, and there is a correlation with the interest rate for a loan, but it is average (see Table 6).

Table 6. Correlation coefficients between the volume of housing fund and other indices in Russia

Indices	Housing fund, million m2 of the total area of residential premises	Correlation
Average weighted mortgage rate	0,5327	Direct average
Average price in the residential property market for 1 m2 of total area, thousand rubles (primary market)	0,8896	Direct strong
Registered mortgages of residential premises, units	0,1083	Direct weak
Number of housing mortgage loans provided, units	0,1301	Direct weak
Share of costs for property acquisition in the population's money expenditures, %	-0,6520	Reverse average
Average per capita money income of the population (per month), thousand rubles	0,9408	Direct strong
GDP, billion rubles	0,9679	Direct strong

As a result of the study it was revealed that the size of average per capita income is connected to the volume of housing stock, and this relationship is described by the model:

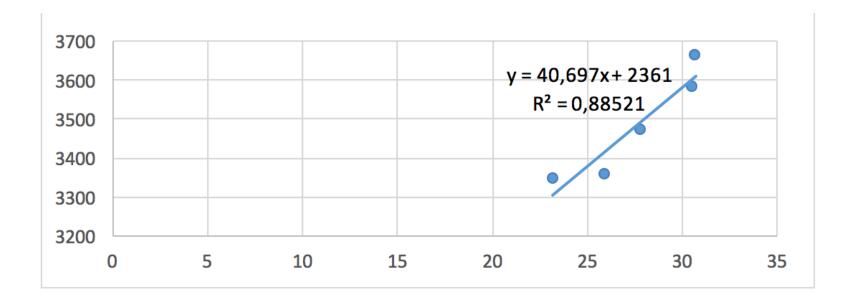
y = 40,697x + 2361

 $R^2 = 0.8852$

where x is the size of average per capita incomes of the population,

y is housing stock, million m2 of the total area of residential premises.

Figure 3. Correlation between the size of average per capita income and the volume of housing stock in Russia.

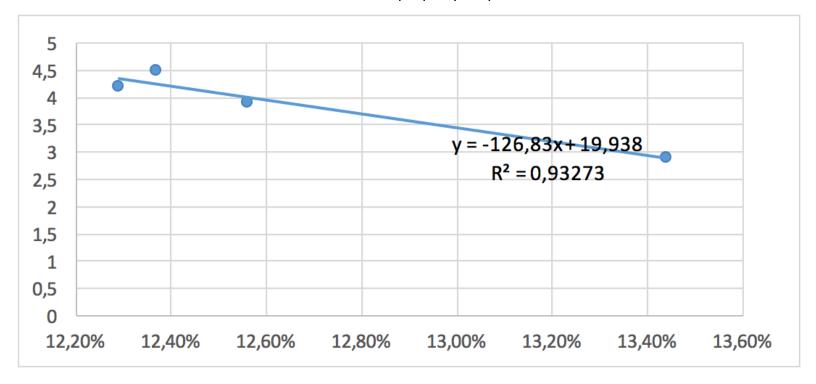


It was revealed that the average weighted mortgage rate is connected to the share of costs for property acquisition, and this relationship is described by the model:

$$y = -126,83x + 19,938$$

 $R^2 = 0,9327$

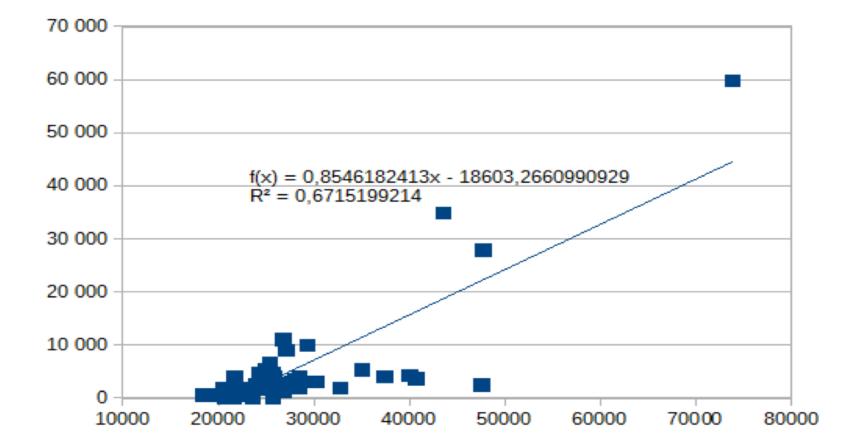
Figure 4. Correlation between the average weighted mortgage rate and the share of costs for property acquisition in Russia.



Source: Author's own computations.

The study showed that there was a correlation between the average monthly accrued wages and the amount of early repaid mortgage loans, as can be seen in Figure 5.

Figure 5. Correlation between the index of the average monthly nominal accrued wages within a full range of organizations by entities of the Russian Federation, rubles (x) and the resulting index of the volume of early repaid mortgage housing loans by borrowers in 30 largest banks (regional section) (y) as of January 1, 2017, million rubles.



The presented dependence is based on the official data of the Federal State Statistics Service for such federal districts as the Central Federal District (excluding the Belgorod and Bryansk regions), the Northwestern Federal District (excluding the Nenets Autonomous District), the Southern Federal District, and the Volga Federal District. As can be seen, the growth of wages stimulates the receipt of payments for the satisfaction of mortgage. It is of great importance in this case to stimulate people's intentions to save and implement capital investments under constantly changing economic conditions in the long term.

4. Results

4.1 Analysis of the structure and dynamics of property market development in the UK (London)

Property market development problems and trends as an object of investment from both commercial and private structures are considered by various analytical agencies in foreign countries, which explore the experience of this market development in large cities such as London (UK) (Report, 2016). The value of commercial property in the UK in 2015 reached a record level, with most of it -41% – being retail property, offices accounted for 31%, industrial property – 19%, as can be seen from Table 7 and Table 8.

Table 7. Owner-occupied and invested commercial property in London, 2015

Indicators	Pounds, BN	% of total
1. Retail	360	41
Shopping centers	66	8
Retail warehouses	52	6

Other retail (including supermarkets)	243	28
2. Offices	270	31
London	173	20
South Eastern	32	4
Rest of UK	65	7
3. Industrial	169	19
London and South Eastern	67	8
Rest UK	102	12
4. Other commercial	73	8
Hotels	31	4
Leisure	17	2
Miscellaneous other commercial	24	3
5. Total commercial property	871	100
of which London	330	38
of which rest of UK	541	62

Source: http://www.bpf.org.uk/sites/default/files/resources/PIA-Property-Report-2016-final-for-web.pdf

Analysis of the commercial property market by investor type shows that the majority are overseas investors – 28%, UK institutions – 17%, collective investors – 16%.

Table 8. Ownership of UK commercial property by investor type

	Pounds, BN 2015	% change 2005-2015	% of total
Overseas investors	135	125	28
UK institutions (insurance companies and pension funds)	84	- 10	17
UK collective investment schemes	79	64	16
UK REITS & listed prop companies	71	37	15

Total value of buildings in investment portfolios	483	31	100
UK private investors	13	19	3
UK other	20	-8	4
UK traditional estates/ charities	23	40	5
UK unlisted prop companies	59	-13	12

Source: http://www.bpf.org.uk/sites/default/files/resources/PIA-Property-Report-2016-final-for-web.pdf)

The total cost of investment of insurance companies and pension funds in commercial property in 2015 was £178 billion (about 6%). Almost 3% of their total investments are direct investments in state institutions.

Table 9. Insurance company and pension fund investment in commercial property in UK as & of total investments

	2015 pounds BN	% of total
Total assets (equity, bonds, property, etc.)	3064	100
Directly – owned UK property	84	2.8
Investments in UK collective investment schemes (net asset value)	57	1.9
UK & overseas property company shares (market capitalization)	37	1.2
Total property	178	5.8
Lending against commercial investment property	26	0.8

Source: http://www.bpf.org.uk/sites/default/files/resources/PIA-Property-Report-2016-final-for-web.pdf

Housing is one of the key priorities of the UK government. For many people, the affordability and accessibility of housing has become increasingly difficult in recent years. As part of its housing policy, the government has two goals: to stimulate housing for the next five years and to increase the proportion of its own housing (Boyd, 2014).

The total amount of public housing costs in England was about £28 billion in 2015-16. "The Home Building Fund is worth £3 billion up to 2020-21 and provides a mix of short- and long-term development and infrastructure loans. Of this funding £1 billion will be targeted at small and custom builders, through which the government aims to complete 25,500 new homes by 2020. The remaining £2 billion is designed to provide long-term funding for infrastructure" (https://www.nao.org.uk/wp-content/uploads/2017/01/Housing-in-England-overview.pdf).

4.2 Analysis of the structure and dynamics of property market

development in Finland

The volume of property transactions remains high in 2017 in Finland. However, in the first quarter of 2017, the average transaction amount was relatively low, leaving the total volume clearly lower than in 2016. Strong investment demand has reduced the volume of profitability, which has reached record low levels.

In recent years, the most active groups of investors in the market are companies and funds as well as overseas investors. All these groups have increased their portfolios, both funds and overseas players. As the total size of the market continued to grow, the share of institutional investors in the overall market continued to decline.

Table 10. The structure of Finish property investment market by investor group. Direct property investments in Finland 2011-2015, EUR billion

	2011	2012	2013	2014	2015
Institutional investors	15.4	16.2	16.2	16.0	15.6
International investors	9.0	9.0	9.3	9.8	11.9
Listed property companies	5.2	5.4	5.6	5.6	5.8
Non-listed property companies	6.5	7.6	8.4	9.9	11.1
Real estate funds	5.7	6.3	7.1	7.5	9.1
Charities, endowments and other	1	1	1	1	1

Source: https://kti.fi/wp-content/uploads/The-Finnish-Property-Market-2016.pdf

As can be seen from Table 11, the share of direct domestic investments in real estate is 72.1%, indirect domestic investments – 13.5%, and the share of all foreign investments – 14.4%.

Table 11. Real estate exposure of Finish institutions in 2015, %

	Direct domestic investments	Indirect domestic investments	Direct foreign investments	Indirect foreign investments
2015	72.1	13.5	2.1	12.3

Source: https://kti.fi/wp-content/uploads/The-Finnish-Property-Market-2016.pdf

The total investment of these groups of investors in the Finish property market amounted to €21.6 billion in 2015.

The structure of the Finish property market in 2016 is reflected in Table 6, where it can be seen that most of it is occupied by office property is 29.2%, residential property – 28.6%, and retail property – 25.9%.

Table 12. The structure of Finish property investment market by sector in 2015, % (the total size of EUR 54.5 billion)

	Office	Retail	Industrial	Residential	Hotel	Other
2015	29.2	25.9	8.1	28.6	4.6	3.7

Source: https://kti.fi/wp-content/uploads/The-Finnish-Property-Market-2016.pdf

Analysis of the ownership structure of rent in Finland in 2015 showed that most of them are private investors – 36% and municipalities – 29%.

Table 13. Ownership structure of rental apartments in Finland (total 824,000 rental apartments), 2015

2015	Professional investors (non-subsidized)	Households/private investors (non-subsidized)	Subsidized/municipalities	Subsidized/other owner
%	17	36	29	19
quality	139,000	295,000	237,000	153,000

Source: https://kti.fi/wp-content/uploads/The-Finnish-Property-Market-2016.pdf

4.3. Analysis of the structure and dynamics of property market development in the Russian Federation

In accordance with the Strategy for the Development of Housing Mortgage Lending in the Russian Federation until 2020, the main areas are:

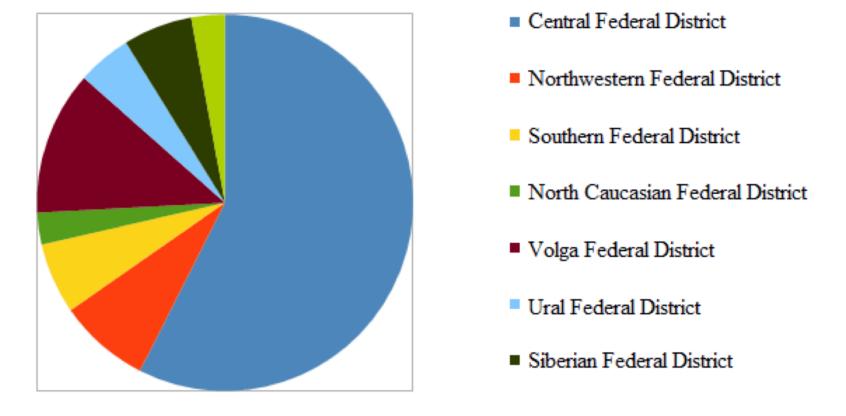
- development of the primary mortgage lending market;
- implementation of special mortgage programs for socially priority categories of citizens;
- provision of long-term resources for financing of the mortgage lending market;
- unification and standardization of the mortgage lending market, development of the market infrastructure;
- development of mechanisms for crediting commercial developers for housing construction, crediting of individual housing construction and housing non-profit associations of citizens, financing of the construction (acquisition) of engineering infrastructure facilities, crediting for construction or acquisition of rented houses.

Currently, the number of credit organizations in Russia is 623, of which 506 provide mortgage loans. At the same time, most of these organizations (more than 50%) are located in the Central Federal District.

Table 14. The number of credit organizations – participants in the housing (mortgage) lending market (regional section) in the Russian Federation as of January 1, 2017

				claims under agreements for participation in equity construction			
Russian Federation	623	506	484	210	128	41	93
Central Federal District	358	268	1	107	69	34	52
Northwestern Federal District	49	42	41	18	11	1	6
Southern Federal District	38	37	36	12	5	2	2
North Caucasian Federal District	17	8	4	2	0	0	0
Volga Federal District	77	75	75	39	24	2	22
Ural Federal District	29	29	28	14	8	1	1
Siberian Federal District	37	31	31	13	7	1	7
Far Eastern Federal District	18	16	15	5	4	0	3

Source: https://www.cbr.ru/statistics/UDStat.aspx?Month=01&Year=2017&TbIID=3-2



Source: https://www.cbr.ru/statistics/UDStat.aspx?Month=01&Year=2017&TbIID=3-2

5. Conclusion

The property market plays an important role in the development of the country's economy and affects the volume of GDP, which causes the need to stimulate its development. The development of the residential property market is of special social significance for the country's population as well as the level and quality of living standards. The development of the residential property market requires the expansion of the possibilities of housing financing with the support of state, development institutions and organizations. The most important influencing factors also include the size of the average weighted mortgage rate and the per capita income of the population. In turn, these factors depend on other social and economic indicators, the state of the monetary market, the financial system, the country's budget system, economic growth and political situation in the country and at the international level. To further stimulate the development of the property market, it is necessary to gradually reduce mortgage rates, expand subsidies, as well as elaborate various tools for the development of housing construction and social mortgage.

Acknowledgement

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[Index]

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