

A Research Methodology of the Housing Crisis in Modern Russia

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Abstract: In this article the general and specific reasons of emergence of housing crises are presented. The methodology of research of conditions and preconditions of emergence of housing crisis in the market is presented. Investigated market indicates the housing sector, housing affordability index, the elasticity of demand and elasticity of supply at the regional level. The factors of regional asymmetries in the duration and depth of the housing crisis are defined. This article describes the basic methodology of research of the housing crisis which can be used for realization of the effective housing policy.

Key words: Business cycle • Housing market • Housing crisis • Methodology • Market indicators
• Quality of housing conditions • Russia

INTRODUCTION

The institution of ownership and methods of government control changed in different periods of the country's social development. The precondition of the development of housing sectors in Russia is a continued existence of the state ownership. The Soviet housing sector had such immanent features as absolute deficit, bureaucratization and opportunist behavior in the distribution of accommodation, absence of a proper housing maintenance and utilities system. From 1990 the housing problem was no longer under the supervision of the State and fell under the full responsibility of families. It led to a shortage of housing resulting from the 'state paternalism' policy and a continued existence of the state ownership.

For many decades of its existence the Soviet system could not give a substantial social result. The social fairness approach was replaced by the principle of equality of all citizens who did not have the social choice and prospects for an independent solution of the improved housing problem. From 1930 the administrative system was extended to include the housing sector that was seen to be an integral part of investments in the construction of production facilities. It functioned as an incentive for labour and a means to assign labour resources to a particular enterprise and to limit their turnover.

The housing sector in the period of state ownership had the following distinctive features:

- The purpose of state ownership consists in meeting the demand of people with low income for housing improvement;
- Absence of efficient sources of investment in the housing renewal program. Government allowances are prioritized on any principle except the customer demand resulting in the territorial discrepancy between demand and supply. The budget potential is limited; the government tries to minimize the expenses investing in low cost housing construction. However, this leads to a further increase in social and economic costs of maintenance;
- In the conditions of low costs of housing services, significant excess of demand over supply and public housing distribution informal rules get stronger influence and transaction expenses grow.

Role and functions of housing sector throughout historical development of Russia significantly changed and change still. Starting from the 1970s the housing sector got a political function in addition. Travel and exchange restrictions, a direct assignment of a residential address through a registration at place of residence are common features of the Soviet system but are not the essence of the housing sector. These are the features of the Soviet political system utilizing various means of enforcement. The Soviet housing sector became the main factor of attractiveness of some or other material production getting many other social infrastructure facilities built for this purpose.

Due to the specific political and economical functions of the housing sector the public ownership grew into a universal trend. In that situation investment in construction and investment in housing maintenance services were not interrelated processes. It led to the increase in cost of low-quality housing maintenance services, cessation of basic capital reproduction and a low ecology of the living environment. The investment process did not become a sustainable system of interaction of its parties having a common purpose of achieving economic efficiency for everyone. The process was divided into loosely related stages, the parties disconnected. One instances defined objects and a site, others – planned investments and restrictions on production expenses, the third – ordered, the fourth – projected, etc.

The remedial measures of the State proved to be inefficient as they were directed toward the consequences but not the reason consisting in the predominance of the state ownership. At that time the state was trying to preserve the housing sector in its current status, but that system had a tendency towards destruction as far as the black economy sector acted as the market and started to replace the public sector. The ideology of ‘free and the cheapest housing in the world’ caused the increase in social costs when Russia was undergoing the transition to the market economy.

Accordingly, the Russian reform of the 1990s was directed toward the formation of the institution of private ownership. This was a critical period characterized by a quick destruction of the ‘old’ institutions and a slow creation of ‘new’ ones [1].

The housing market in mixed economy carries out the following functions:

- Use of effective methods for creation of consumer properties of housing;
- Distribution of full or partial ownership rights of housing from one economic subject to another and protection of the rights of owners;
- Free market pricing on housing and housing services;
- Redistribution of investment streams between alternative housing objects.

The modern housing sector of Russia has changed its function and ‘instead of being a means of housing improvement it has turned into an investment object for the purpose of capital maintenance and even into a tool for illicit profit making and financial fraud’ [2].

Due to the historical reasons the housing issue in Russia has acquired important aspects characterized by an imbalance and a negative value of the main parameters:

- The quantitative – deficiency of housing and discrepancy of level of solvency of citizens to demand for housing and housing services;
- The structural – structure of housing stock does not correspond to demographic structure;
- The qualitative – discrepancy of housing stock to consumer qualities;
- Maintenance parameter: failure to comply with the requirements for housing maintenance, deformity of the housing and utilities sector under the conditions of the inefficient public subsidy system;
- Investment parameter: limitation of financial resources and a high demand for investments; failure of immovable property to function as long-term investments.

In foreign countries the housing crisis is the characteristic of cyclic development of market economy. The housing crisis in Russia has been caused mainly by the non-market principles adopted on the basis of the foreign market housing model that has proved to be inefficient.

The Housing Crisis in Russia: The housing crisis in Russia has not only the general, but also the specific reasons of its emergence.

General reasons of emergence of a housing crisis in Russia are:

- Influence of an economic crisis and instability of an economic situation in the country and the world;
- Change of macroeconomic policy;
- Decrease in the income of citizens and consumer demand;
- Weak institutions ensuring development of the housing market; high administrative barriers;
- High cost of construction and service of housing sector;
- Weak economic culture.

The specific reasons of emergence of a housing crisis in Russia are:

Historical Reasons: dependence on a trajectory of historical development of the country and regions; inefficiency of the Soviet housing system; privatization

did not promote formation of institute of the effective owner. The constant rise in prices for housing throughout two periods (1991-1998 and 2001-2008) made real estate sector speculative;

The Economic Reasons: low availability of housing to the most part of citizens; big differentiation of the market of housing; investment in "old" architectural projects; high bank percent; high power consumption of construction; lack of the land plots for housing construction; low innovative activity of subjects;

The Administrative Reasons: poor quality of management in construction and service which promotes development of corruption and administrative barriers; low responsibility of real estate development companies before consumers which causes mistrust of consumers to actions of the authorities and representatives of real sector;

Institutional Reasons: inefficiency of functioning of social and economic institutes (inefficiently functioning institute of a mortgage in Russia); corruption in housing construction; high extent of monopolization in construction; fraud; low market culture, unsystematic development of institutional structure; expectations of consumers in rise in prices for housing.

The Housing Crisis Is a Result of Impact of Several Parallel Processes: Influence of a macroeconomic situation and recurrence of real estate market. If the market is not sufficiently flexible, the housing crisis lasts longer and gets deeper. The stagnation problem is aggravated due to the lack of control over construction. If the supply exceeds the demand for housing, then the housing crisis lasts longer.

Indicators for research of conditions of a housing crisis are:

- The change in price for housing in primary and secondary market;

- The demand volume;
- The supply volume;
- The number of sales transactions;

Supply and demand ratio for the purpose of determination of deficiency or surplus of housing. Excess of the offer over demand and reduction of number of transactions of purchase and sale characterizes emergence of a crisis situation;

- The demand elasticity
- The supply elasticity;
- The liquidity position
- Ratio of market real estate value and prime cost (installation and construction works and earth cost);
- The housing provision indicators
- The housing availability index;
- Mortgage availability index.

Price Changes in the Housing Market: In the primary market deals are made in terms of newly-built accommodation which is a part of the aggregate offer. The role of the primary market consists in provision of citizens with accommodation, promotion of investment activity of entities and housing development. The main feature of the secondary market is that deals are made in terms of redistribution of available housing stock among citizens without building it up. The scope of deals can only be evaluated on the basis of the data provided by the state registration of real property rights authorities.

There is a dependence between inflationary cycles and real estate market cycles and peaks of inflation and recurrence of the market of housing coincide. Inflation stimulates rise in prices for housing and the income from its property on an upward phase. During inflationary growth the real estate becomes attractive to investments, an effective anti-inflationary asset which allows to keep the financial capital. In the Volgograd region at inflation of 11,9% in 2007 rates of a gain of the prices in primary and secondary markets of housing were 47,6 and 46,6%; at inflation of 13,3% in 2008 respectively 40,5 and 52,6% (Table 1).

Table 1: Price changes in the Volgograd housing market

| Indicators | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Average housing prices in the primary housing market, thousand rubles / sq m | 5,2 | 6,3 | 8,3 | 10,4 | 13,3 | 18,0 | 24,1 | 35,6 | 49,9 | 37,38 | 37,39 |
| Price indexes in primary market, % to previous year | 101,8 | 127,9 | 115,7 | 119,3 | 113,6 | 133,5 | 124,5 | 155,4 | 137 | 74,1 | 113,2 |
| Average housing prices in the secondary housing market, thousand rubles / sq m | 5,1 | 6,5 | 8,9 | 10,5 | 13,2 | 17,6 | 23,3 | 34,1 | 52,1 | 38,8 | 38,9 |
| Price indexes in the secondary market of housing, % to previous year | 102,7 | 129,1 | 126,9 | 109 | 119 | 130,3 | 126,4 | 141,9 | 136,5 | 74,4 | 101,9 |
| Consumer price indexes, % to previous year | 119,2 | 120,5 | 117 | 110 | 111,1 | 114,7 | 108,9 | 111,7 | 113,1 | 108,8 | 109,5 |

Source: Russian Statistical Department [3, 4]

During economic growth of the price increased considerable rates in all regions. In Moscow the average price for one square meter increased from 10,3 thousand rubles in 1998 to 141,25 thousand rubles in 2008, in St. Petersburg according to 9,48 to 79,72, in the Volgograd region with 4,35 to 51,0 thousand rubles [4]. In 10 years of housing price in Spain grew by 288% [5]; India – on 284; Russia – 209; The Republic of South Africa – 161; To Lithuania – 143; Hong Kong – 125; 6 Bulgaria 106; France – 82; Norway – 72% [6].

The *liquidity position* is determined by the period of sale of a real property facility. When housing prices grow and the period of exposure lasts longer (over six months), it indicates the start of a crisis in the housing market. If the exposure period is twice as long, within the following six months the phase of a housing cycle changes, while the reduced exposure period indicates a revival of the market. Currently, the average liquidity period is from five to six months, prices are gradually going up; real estate sellers are expecting the price growth and have adopted a wait-and-see attitude to sell their real property items.

In order to carry out a housing market research it is important to differentiate a customer demand and an investment demand. In an economic crisis residential property becomes attractive for investments, the investment demand grows and prices go up. The customer demand cannot be fully met due to high prices. The predominance of the investment demand over the customer demand cause the excess of demand over supply leading to the creation of a financial bubble in the housing market and, thus, to a housing crisis. The excess of supply over demand for housing and a decrease in the number of deals indicate the changes of the housing cycle phase and the start of a crisis.

Factors Which Increase Demand for Housing:

- Growth of the real income of consumers which stimulates an investment demand for housing;
- Development of institutes of mortgage lending and availability of mortgage loans to citizens with the high income;
- Capital outflow from the financial markets on real estate market which is caused by decrease in profitability in the financial market;
- Irrational expectations of consumers and producers in rise in prices for housing;
- The limited supply in the housing market.

An imbalance in the housing market is caused by the excess of demand over supply; the latter can be limited due to the reduction of housing construction and an increase in the number of slum and dangerous dwellings. The housing construction activity decreases because of high administrative barriers, low financial potential of entities or an intentional limitation aiming at price and demand improvement (it exists in the form of oligopolies amongst construction companies).

The main reason for creation of financial bubbles in 2008 was the loan policy aiming at the maintenance of low interest rates that caused the increase in financial liquidity. Besides, it is important to take into consideration the dependence of prices for Russia real property on oil prices. A decrease in the price for dollar which is still the foundation of the international financial system causes the growth of the prices for oil and, thus, for real property. In Russia the real property prices started to go up in 2002 together with the increase in oil prices and stopped in August 2008. This dependence is explained by the Russian economy based on the export of commodities and the correlation between the prices for oil and secondary housing in that period was quite high. However, during an economic crisis the influence of oil prices on housing diminishes. Along with changes in the exchange rates and oil prices it is important to consider such factors of housing price rise as personal incomes, irrational expectations of representatives of the investment demand and rational expectations of representatives of the customer demand.

The creation of a financial bubble is facilitated by the demand and supply factors. In order to reveal a financial bubble we need to research the relation between the growth rates of housing prices and the growth rates of purchasing power of an average salary. The purchasing power of an average salary shows how many square meters can be bought for one average monthly salary [7] (Table 2).

Thus, in 2000 the citizen of the Volgograd region needs 3,2 months to buy 1 sq.m of housing. In 2001-2003 the situation improved a little and for this purpose about 2,7 months are necessary. In 2004 this indicator grew till 3,1 months. In 2008 made 4,6 months in primary and 4,8 months in secondary housing markets. It reached 2,7 months in 2010 that practically corresponds 2003. 20% of citizens can buy housing in Russia and their financial opportunities determine housing price.

Table 2. The purchasing power of an average salary in the Volgograd region [4]

| Year | The primary housing market | | | | | The secondary housing market | | | |
|------|------------------------------------|---|---------------------------------------|--|--|---|---------------------------------------|--|--|
| | An average salary, thousand rubles | Average housing prices, thousand rubles | The growth rates of housing prices, % | The purchasing power, number of months | The growth rates of purchasing power of an average salary, % | Average housing prices, thousand rubles | The growth rates of housing prices, % | The purchasing power, number of months | The growth rates of purchasing power of an average salary, % |
| 2000 | 1,6 | 5,2 | - | 3,3 | - | 5,1 | - | 3,2 | 0,0 |
| 2001 | 2,1 | 6,3 | 121,2 | 3,0 | 92,3 | 6,5 | 127,5 | 3,1 | 97,1 |
| 2002 | 2,9 | 8,3 | 131,7 | 2,9 | 95,4 | 8,9 | 136,9 | 3,1 | 99,2 |
| 2003 | 3,8 | 10,4 | 125,3 | 2,7 | 95,6 | 10,5 | 118,0 | 2,8 | 90,0 |
| 2004 | 4,6 | 13,3 | 127,9 | 2,9 | 105,6 | 13,2 | 125,7 | 2,9 | 103,9 |
| 2005 | 5,9 | 18,0 | 135,3 | 3,1 | 105,5 | 17,6 | 133,3 | 3,0 | 104,0 |
| 2006 | 7,9 | 24,1 | 133,9 | 3,1 | 100,0 | 23,3 | 132,4 | 2,9 | 98,9 |
| 2007 | 9,4 | 35,6 | 147,7 | 3,8 | 124,1 | 34,1 | 146,4 | 3,6 | 123,0 |
| 2008 | 10,9 | 49,9 | 140,2 | 4,6 | 120,9 | 52,1 | 152,8 | 4,8 | 131,8 |
| 2009 | 12,6 | 37,38 | 74,9 | 3,0 | 64,8 | 38,8 | 74,5 | 3,1 | 64,4 |
| 2010 | 14,1 | 37,39 | 100,0 | 2,7 | 89,4 | 38,9 | 100,3 | 2,8 | 89,6 |

Source: Russian Statistical Department [4]

Table 3: The demand elasticity and the supply elasticity in the housing market of the Volgograd region

| Year | The demand elasticity in the primary housing market | The demand elasticity in the secondary housing market | The supply elasticity in the housing market |
|------|---|---|---|
| 2001 | -2,75 | -9,48 | 22,57 |
| 2002 | -6,90 | -43,50 | 21,54 |
| 2003 | -5,78 | -1,80 | 13,70 |
| 2004 | 4,94 | 6,68 | 17,33 |
| 2005 | 6,40 | 8,43 | 22,55 |
| 2006 | -48,19 | -28,68 | 13,26 |
| 2007 | 1,98 | 2,02 | 32,15 |
| 2008 | 1,92 | 1,66 | 24,10 |
| 2009 | 0,71 | 0,72 | 0 |
| 2010 | -0,0025 | -0,02 | 0,31 |

Source: calculation of the author by data [8]

To existence of financial bubbles points sharp reduction of prices of real estate in Russia regions and other countries. In the cities of Volgograd, Perm, Rostov-on-Don, Moscow and St. Petersburg the prices fell respectively by 25,2%, 23,5; 22,3; 20,3 and 19,7%. The prices fell in the USA – on 20–25%; Spain - 15-20, England – 10; Latvia – 33; Estonia and Ireland – 14%, etc.

The price overheat in the housing market is defined by a situation when growth rates of housing prices increase quicker than growth rates of purchasing power of an average salary. In the Volgograd primary and secondary housing markets during 2000-2010 growth rates of the prices exceeded growth rates of purchasing power: in 2001 – on 31%, 2006 – 34; 2008 – 16; 2010 – 12%.

In order to research the financial bubble we need to use the demand elasticity formula (Table 3) showing a percentage change of the purchasing power of population depending on the one per cent price change.

$$\gamma^D = \frac{\Delta P}{P} : \frac{\Delta I}{I}$$

P – average housing price; I – the purchasing power of an average salary (number of months).

Financial Bubbles Are Created under Two Conditions:

- The market status characterized by the housing price growth rates outstripping the rates of increase in the purchasing power; the financial bubble is created due to the increased customer demand;
- The housing price growth is followed by a decrease in the purchasing power of population; the financial bubble is created due to the increased investment demand.

In the Volgograd housing market financial bubbles in 2002 and 2006 are caused by an excess investment demand, in 2007 and 2008 they also are present at a considerable advancing of rates of a gain of the prices over purchasing power. In 2009 the financial bubble was not created. The situation of 2009-2010 shows a condition of the market at which the ratio of rates of a gain of the prices and rates of purchasing power decreases. It characterizes increase of activity of subjects of the market.

In order to characterize the housing market it is necessary to analyze the dynamics of the supply elasticity change showing the change of offer (provision of housing) depending on the one per cent price change (Table 3).

$$\gamma^S = \frac{\Delta P}{P} : \frac{\Delta Q_s}{Q_s}$$

P – average housing price; Q_s – the housing provision pro one person (sq.m/person).

Table 4: The average housing provision on one person in Russia and the Volgograd region, sq.m/person [8]

| Year | the Volgograd region, sq.m/person | Russia, sq.m / person |
|------|-----------------------------------|-----------------------|
| 2001 | 18,8 | 19,5 |
| 2002 | 19,1 | 19,8 |
| 2003 | 19,4 | 20,2 |
| 2004 | 19,7 | 20,5 |
| 2005 | 20,0 | 20,9 |
| 2006 | 20,5 | 21,3 |
| 2007 | 20,8 | 21,5 |
| 2008 | 21,2 | 22,0 |
| 2009 | 21,2 | 22,4 |
| 2010 | 21,3 | 22,6 |

A financial bubble is created in case $E^s > 0$ and characterizes the market status when the housing price growth rates outstrip the housing provision growth rates and the financial bubble is explained by the housing deficiency.

On the Volgograd housing market the supply elasticity research shows that in 2001-2009 there existed financial bubbles caused by housing deficiency resulting from an insignificant increase in housing provision by 12%. In 2008-2009 the housing provision did not change and the supply elasticity is zero. The great demand on housing at its low offer stimulates an uncontrollable rise in prices.

The Housing Provision Indicators: In the period of the private ownership predominance the housing provision depends on the individual income level while there is no such dependence if the state ownership predominates. Now the average housing provision on one person in Russia is 23,4 sq.m of total area, in developed countries is 45-60 sq.m/person. In Norway this indicator is 74 sq.m, in the USA – 70, in Germany – 50, in Ukraine – 26 sq.m. The housing provision in the Volgograd region from 17,3 sq.m in 1991 to 21,3 sq.m in 2010 (Table 4).

Compared to the all-Russian housing construction activity index for 2010 amounting to 0.4 m² per person the Volgograd regional value is 0.26 m² per person. The housing construction activity is determined as a relation of housing construction to the population size. The housing provision is 21,3 m² per person. In order to achieve in the Volgograd region the housing provision level of 40 m² per person as in the foreign countries, it is necessary to build another 48.4 mln m². Considering the actual construction rates of approximately 667,000 m² per year it will take 72 years. Considering the Europe-wide housing construction rates of 1 m² per person the period of achievement of the housing provision level of 40 m² per person will be reduced to 18 years.

Table 5: The housing availability index in 2012 [5]

| City | A number of years that a family has to save all its income in order to buy a apartment (without the credit), a year | Average price of one square meter, thousand rubles. |
|--------------|---|---|
| Tokyo | 11,2 | 290,3 |
| Buenos Aires | 12,4 | 44,5 |
| Barcelona | 13,2 | 92,6 |
| Tehran | 15,25 | 80,4 |
| Moscow | 16,0 | 127,3 |
| Hong Kong | 26,3 | 237,9 |
| Calcutta | 49,8 | 27,7 |
| Havana | 177,3 | 24,2 |

Apart from a low housing provision level the housing stock suffers moral and physical depreciation. Despite the increase in housing construction volume in the Volgograd region, the quality of living conditions often does not meet the up-to-date needs of the population. The ecological safety of housing facilities and social standards are not taken into consideration. In Russia houses of over 30 years in age currently account for about 60% of the housing stock and the wear rate of one third of this stock is over 60%. The need for replacement of slum and unlivable houses with new ones is very high. The Volgograd region has 2,213 families living in slum and dangerous houses. In view of the increase in the amount of slum and dangerous housing the regional special-purpose programme 'Housing' includes a subprogramme on 'Resettlement of citizens living in the Volgograd region from slum and dangerous houses'. The money was directed to buy apartments in partially constructed blocks of flats completed for at least 70%. It helped to maintain the economic stability of construction companies in the financial crisis and solve the problem of investors who had bought apartments in incomplete blocks of flats.

The Housing Availability Index: The *housing availability index* is a number of years that a family has to save all its income in order to buy a standard apartment for an average housing price (Table 5). Usually stable it is considered level from 3 to 5. The upward trend of this index is explained by housing prices outstripping significantly incomes and indicates the market overheat.

Let's conduct research on definition of an index of availability of housing (Table 6):

- The *availability index* according to the standard practice. However, this index does not take into account the current consumption expenses and payments for mortgage credits;

Table 6: The housing provision indicators in the Volgograd region

| Year | Index I ₁ , number of years | | Index I ₂ , number of years | | Index I ₃ , number of years | | Index I ₄ , % | |
|------|--|--------------------------|--|--------------------------|--|--------------------------|--------------------------|--------------------------|
| | Primary housing market | Secondary housing market | Primary housing market | Secondary housing market | Primary housing market | Secondary housing market | Primary housing market | Secondary housing market |
| 2002 | 4,3 | 4,6 | 17,8 | 19,0 | 97,3 | 104,3 | 23,0 | 21,5 |
| 2003 | 4,1 | 4,1 | 13,1 | 13,2 | 26,6 | 26,8 | 26,3 | 26,0 |
| 2004 | 4,3 | 4,3 | 12,4 | 12,3 | 20,9 | 20,7 | 24,9 | 25,0 |
| 2005 | 4,6 | 4,5 | 12,6 | 12,3 | 20,4 | 19,9 | 27,1 | 27,7 |
| 2006 | 4,6 | 4,4 | 11,1 | 10,7 | 15,4 | 14,9 | 28,9 | 29,9 |
| 2007 | 5,7 | 5,4 | 14,8 | 14,1 | 22,0 | 21,1 | 22,9 | 24,0 |
| 2008 | 6,9 | 7,2 | 17,9 | 18,7 | 26,8 | 28,0 | 20,1 | 19,2 |
| 2009 | 4,5 | 4,6 | 11,1 | 11,5 | 15,7 | 16,3 | 28,8 | 27,8 |
| 2010 | 4,0 | 4,1 | 10,4 | 10,8 | 15,7 | 16,3 | 34,3 | 33,0 |

Source: calculation of the author by data [4]

Table 7: A mortgage loan in the various countries in 2012 [9]

| Country | a mortgage loan, % |
|-------------|--------------------|
| Denmark | 1,36 |
| Sweden | 2,23 |
| Spain | 2,44 |
| Norway | 2,89 |
| Germany | 3,65 |
| England | 3,77 |
| Switzerland | 4,4 |
| USA | 4,61 |
| Honduras | 10,5 |
| Russia | 12,0 |
| Egypt | 13,07 |
| Ukraine | 16,2 |

- The adjusted availability index for a family adjusted for the current consumption expenses (minimum living wage) for two persons. The difference between the family incomes and expenses is called an investment potential sufficient to buy a house;
- The adjusted availability index for a young family consisting of two adults and one child adjusted for the minimum living wage accordingly;
- The mortgage availability index indicates the relation of the income of households with two family members to the income that is sufficient to take out a residential mortgage loan on standard terms to buy a standard apartment of 54 m². This indicator is calculated as a ratio of a family's average monthly profit and its marginal propensity to earn in order to repay the mortgage (25%) loan to a monthly mortgage payment. The 100% value indicates that a two-member family has the profit that is sufficient to take out a residential mortgage loan on moderate conditions in order to buy a standard apartment. If the index is below 100%, the family cannot afford to buy a standard apartment.

In Europe the coefficient of availability of housing varies on the average from 3-4 to 5-6 years, in certain CIS countries reaches 7 years. Thus it is necessary to consider various housing standards and indicators of provision housing. In the Volgograd region indexes of availability reached peak: in 2008 indicators of I₂ made 12 years and I₃ – 26,8 years, then decrease by 2010 respectively till 10 years and 16 years. This situation characterizes housing problem especially for young families with children who cannot buy housing.

The mortgage availability index analysis shows a positive trend of growing incomes in order to take out a residential mortgage loan from 23% in 2002 to 34,3% in 2010 in the primary housing market and from 21,5% in 2002 to 33% in 2010 in the secondary housing market. Value of an indicator of 33% means that the family has only 33% of the income necessary for acquisition of the apartment by means of a mortgage loan for a period of 15 years. Rates of a mortgage loan in Russia are high: in 2002 – 20%, in 2010 – 13,1%, in 2011 – 12% in comparison with countries of Western Europe and the USA (tab. 7). Thus families have small opportunities for improvement of the housing conditions.

The housing sector analysis in 2000-2009 showed that the crisis of 2008 had accelerated the institutional crisis of the current housing model. The crisis consisted in the lack of financial mechanism to provide the welfare of the population; property developers and investors did not have long-term assets; the decreased effective demand in the financial crisis led the majority of companies to financial instability. The housing market stagnation led to a significant housing price fall (30-50%), reduction in the number of secondary market deals, price change uncertainties causing a sales slowdown. The main tendencies in the housing market during the crisis period: reduction of prices; reduction of business activity;

growth of number of the supply in the housing market; reduction of number of professional subjects of the market; growth of number of the vacant areas.

Regional asymmetry duration and depth of crisis is formed under the influence of the following factors:

- Extent of diversification of regional economy (monoregions, diversified regions);
- Quality of management in the conditions of the economic growth and crisis;
- Level of development of institutes of the market of housing;
- Financial opportunities of regional budgets;
- Development of the credit and financial mechanisms promoting increase of housing availability;
- Development of material resources for housing construction;
- Investment and innovative activity of real estate development companies;
- Income of consumers and their structure, solvent demand.
- Level of development of institutes of the market of housing;
- Economic culture of subjects

CONCLUSION

Thus, the research of housing market indicators is important to detect present-day crisis conditions and to work out a crisis forecasting and mitigation concept and procedure. The development of the Russian housing market during the post-crisis period happens according to tendencies of foreign real estate markets and in interrelation with the international markets of the capital and change of macroeconomic indicators. Feature of the Russian housing market is the increased demand for improvement of housing conditions quality. At the same time as in developed countries, high level of housing is available per capita and lower interest mortgage rates, the high average per capita income influence the adjustment prices.

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