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**Competition Analysis of Mortgage
Housing Credit Market in Russia**

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Competition Analysis of Mortgage Housing Credit Market in Russia

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Abstract

Mortgage housing credit expands current consumption of such a unique economic wealth as dwelling, and has an impact on wide range of socio-economic processes. The competition in the market of mortgage housing credit has an impact on the welfare of society, the indicators of the banking system and the results of individual banks activity. The objectives of this research are to identify the factors affecting competition in the market of mortgage housing credit, to work out the procedure of market competition analysis, adjusted for specifics of mortgage housing credit market, to analyze market competition indicators of Russian mortgage housing credit market and to make overall assessment of market competition state and tendencies.

Keywords:

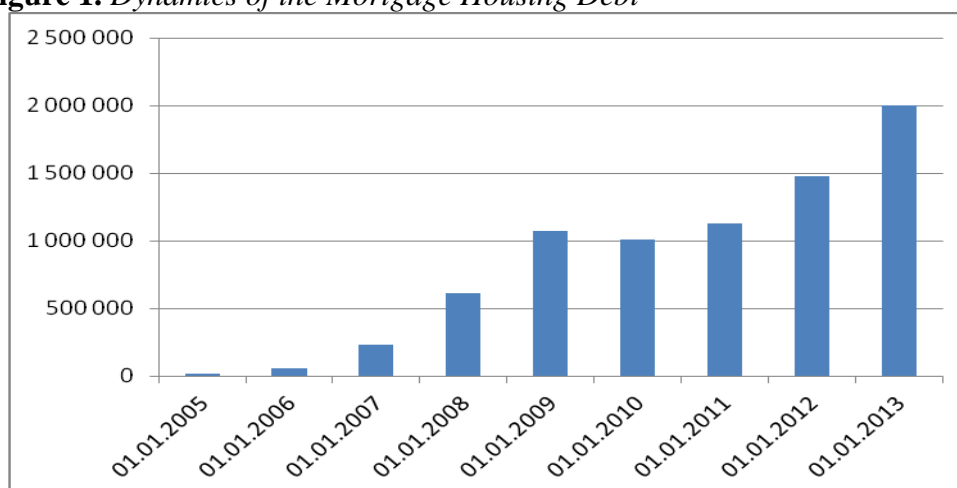
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Introduction

Russian system of mortgage housing credit is formed on the base of two-level American model including mortgage loan market and mortgage-based security market. Mortgage housing credit market exists in its present form since 2005. To this time the legislation base of mortgage relations was defined, the market participants and their functions were determined.

In 2012 total volume of mortgage housing debt constituted 3.19% of Russian GDP. Dynamics of the mortgage housing debt is presented in fig.1.

Figure 1. Dynamics of the Mortgage Housing Debt



Significant part of the period of Russian mortgage housing credit market existence coincided with the period of financial and economic crisis and post-crisis restoration. Now the consequences of the crisis have been overcome: mortgage debt growth is continuing, annually issue of mortgage credits is increasing, the banks offer new mortgage programs and mortgage credit products.

In the previous papers of the author (Guzikova, 2009) it was proved that maximal extent of social wealth can't be created nor by monopoly, neither by perfect competition structure of credit market, but can be achieved in the some intermediate situation.

The competition analysis of the current state of the mortgage housing credit market allows:

- to characterize the processes taking place in this market and to estimate the prospects of its development from the standpoint of the social wealth;
- to identify the interrelation of this market and characteristics of the banking system;
- to form the base of strategic decision-making for the banks operating in this market.

Specifics of Competition in The Mortgage Housing Credit Market

Mortgage housing credit market is the field of banking competition. Babayan (2013) identified five specific features of banking competition:

- 1) higher price of successful result compared to that in the other activities;
- 2) more pronounced social significance compared to the competition in the other areas;
- 3) possibility of participation in financial and industrial groups as the specific form of banking competition;
- 4) narrow field of competition due to limited range of banking services and legislative status of banking as an exclusive activity that can't be combined with production, trade, insurance or other activities;
- 5) wide and rigid governmental control intervention including banking supervision.

Russian mortgage housing credit market is affected by the factors specific for emergency economies. It's necessary to mention the initially exaggerated social expectations connected with the mortgage housing credit as the main solving instrument for the large-scaled and exceptionally sharp housing problem and the low incomes of the most part of population limiting the growth potential of the market. In fact in the mortgage housing credit market the banks compete for the limited number of creditworthy clients and seek to increase the credit volume and the number of loans by liberalization of borrowers' standards.

The price decrease is the classic result of competition, but Russian banks use the interest rate decrease as a competition instrument unwillingly. Interest rates of secondary housing purchase credit established by the leading participants of the mortgage housing credit market are shown in the table 1. Usually the lower rates are used for the shorter credit term.

Table 1. *Interest Rates of Secondary Housing Purchase Crediting Used by the Leading Participants of the Mortgage Housing Credit Market in 2012*

Bank	Interest rate for credits in rubles		Interest rate for credits in foreign currency	
	min	max	min	max
1. Sberbankk	12,25	14	10,1	12,1
2. VTB24	9,9	17,95	8,95	14,15
3. Gazprombank	12	14,3	10,5	11,5
4. Deltacreditr	10,5	19,25	7,25	15,25
5. Rosbankk	11,75	19,75	9	16,5
6. Svyazbank	10,5	15	-	-
7. Uralsib	12	13,5	-	-

In Russia the number of credit organizations has tendency to decrease. Up to 01.01.2013 it decreased by 13.72% compared to 01.01.2009 and now equals to 667. The banks issuing mortgage housing credits constitute 69.77% of the total number of credit organizations and their number increased by 10.80% compared to 01.01.2009.

A characteristic feature of Russian banks is the lack of specialization, so the vast majority of market participants combine the activity in the mortgage housing credit market with the activity in the other financial markets and, in our opinion, often do not take into account the specific features of mortgage housing credit described in the previous work of the author (Guzikova, 2009).

Mortgage housing credit has specific features of four widely used types of credit identified on different classification bases: long-term credit, credit for physical entities, target credit, collateral credit.

Competitive behavior of mortgage housing credit market participants is affected by factors specific for each type of credit mentioned above.

Specific features affecting the banks competitive behavior are:

- social significance;
- complexity and inhomogeneity of the information field;
- features of the borrowers' behavior and decision-making caused by the fact that housing is a basic component of human life and has no substitutes;
- narrow range of target objects of the credit;
- narrow range of the pledged property;
- affect of the same factors on the value of the target object and on the collateral object;
- ability of the target object and the collateral object to maintain its basic consumer properties for a long time;
- possibility of a significant change in consumer properties of the target object and the collateral object under the influence of individual factors that do not affect the other objects of the same kind.

Analysis Procedure

The method described by Bagiev&Bogdanova (2000) was used for analysis of competition in the Russian mortgage housing credit market. The method was modified for the analysis of competition in financial markets, as particular, in the credit market (Kozlovskaya&Guzikova, 2008).

The procedure involves the following steps.

Evaluation of Competition by the Market Dynamics

At this stage the dynamics of the total market volume, determined by the aggregate amount of loans granted during the period is to be analyzed. It is assumed that competition in the rapidly growing market is weaker compared to that in the stagnating or contracting market. The actual market dynamics must be compared with the average rates determined by the historical data.

Evaluation of Competition by the Market Return

Profitability of the credit market for the purpose of analysis is characterized by the weighted average interest rate, which must be compared with its historic lower and upper values. It is assumed that the lower interest rate corresponds to a higher level of competition.

Evaluation of Competition by the Dynamics of Market Shares

From the financial performance point of view the market shares of participants should be calculated by the volume of granted loans. The market share of the j-th bank is equal to:

$$S_j = C_j / \sum_{i=1}^N C_i$$

where N – the number of banks - market participants, C_j - the volume of mortgage housing loans granted by j-th participant during the period, and $\sum_{i=1}^N C_i$ is the market volume.

Taking into account the social significance of mortgage housing credit the shares should be also defined by the client base, that is, by the number of loans issued. The share of the j-th bank, calculated on the basis of the number of loans is equal to:

$$s_j = c_j / \sum_{i=1}^N c_i,$$

where c_j - the number of mortgage loans granted by the j-th participant and $\sum_{i=1}^N c_i$ is the total power of client base.

It is assumed that the higher intensity of competition corresponds to the lower value of the variation coefficient of participants' market shares. The indicators characterizing the level of competition on the basis of volume and number of loans can be calculated according to the formulas

$$U_C = 1 - \frac{\sqrt{\frac{\sum_{i=1}^N (S_i - S_m)^2}{N}}}{S_m}$$

and

$$U_c = 1 - \frac{\sqrt{\frac{\sum_{i=1}^N (s_i - S_m)^2}{N}}}{S_m}$$

where $S_m = 1/N$ is the average market share.

Analysis of Monopolization

The competitive environment in the mortgage housing credit market and its monopolization can be estimated by calculating the concentration indices, showing the aggregate market share of the corresponding number of major participants, and Herfindahl-Hirschman Index for market shares as well as for shares of the client base, expressed in percents

$$IHH_S = \sum_{j=1}^N S_j^2 \text{ and } IHH_s = \sum_{j=1}^N s_j^2.$$

The growth of these indicators reflects an increased monopolization and competition reduction.

Factor Analysis of Market Shares

Changes of the market share and the share of the client base of a particular bank may occur under the influence of internal and external factors. The increase may occur as the result of deliberate actions of the bank or due to the weakening of competition. The decrease may be explained by the reduction of the bank's own efforts in the fight for clients and market share or by the increased pressure of competitors. The factor analysis should be used to identify the causes of changes and to determine their relative importance.

Change in the market share of the j -th bank can be written as:

$$\Delta S_j = \Delta \hat{S}_j + \Delta \tilde{S}_j,$$

where $\Delta \hat{S}_j$ - change due to the bank's own actions, and $\Delta \tilde{S}_j$ - change due to the actions of competitors.

Under the assumption of the equal influence power of internal and external factors it can be written:

$$\Delta \hat{S}_j = 0,5 * [\Delta S_j + C' / C_j / (C'_j + \sum_{\substack{l=1 \\ l \neq j}}^N C_l) - C_j / (C_j + \sum_{\substack{l=1 \\ l \neq j}}^N C'_l)],$$

$$\Delta \tilde{S}_j = 0,5 * [\Delta S_j + C_j / (C_j + \sum_{\substack{l=1 \\ l \neq j}}^N C'_l) - C'_j / (C'_j + \sum_{\substack{l=1 \\ l \neq j}}^N C_l)].$$

Similarly we can analyze the impact of the bank's own actions and the actions of its competitors on the change in its share of the client base.

Internal factors are considered as the directions of the management quality increasing and external - as the directions of resistance to the environment pressure, which should be considered as threats affecting the bank's strategy.

Identification of Strategic Competitive Position

For each bank the following parameters can be calculated:

- rate of change in the loans volume $t_j^C = \frac{C'_j}{C_j} - 1$;
- the rate of change in market share $t_j^S = \frac{S'_j}{S_j} - 1$;
- the rate of change in the client base $t_j^c = \frac{c'_j}{c_j} - 1$;
- the rate of change in the client base share $t_j^s = \frac{s'_j}{s_j} - 1$,

where C'_j, S'_j, c'_j, s'_j correspond to analyzed period and C_j, S_j, c_j, s_j - to basic period.

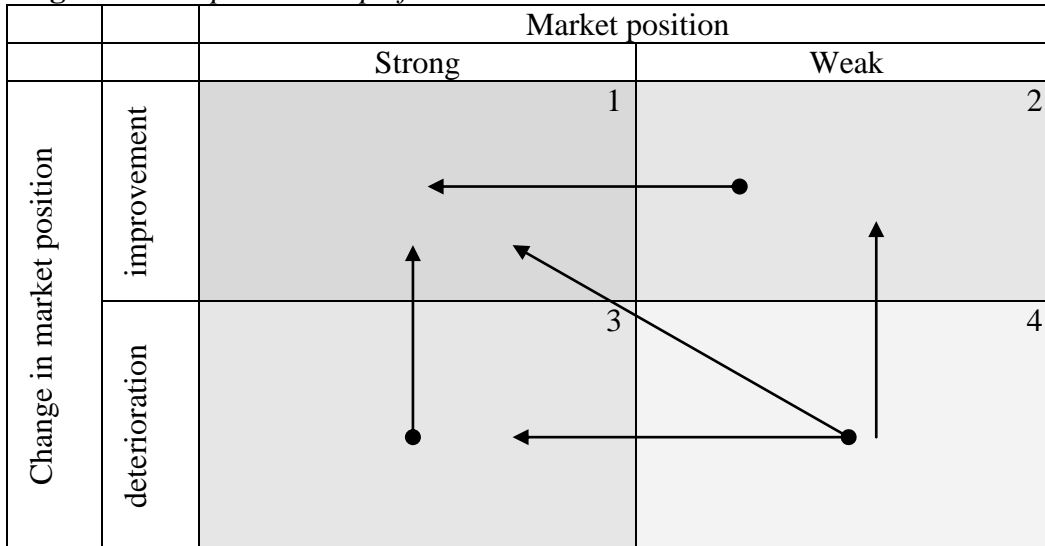
To estimate the market position of the j-th bank we need to compare its market share with the average value: if $S_j \leq 1/N$ the share is low, if $S_j \geq 1/N$ the bank has a high market share.

To estimate the rate of loans volume change we need to match it with the rate of change of the market as a whole. The rate of change in the market as a whole can be calculated by formula $T^C = \frac{\sum_{j=1}^N C'_j}{\sum_{j=1}^N C_j} - 1$. If $t_j^C \leq T^C$ the bank has a low growth rate and the deterioration of market share takes place. If $t_j^C \geq T^C$ the growth rate is high, it shows the improvement of the market position,

By analogy competitive positions may be determined by the client base.

The evaluation of shares and their rates of change for all banks let get the competitive card of the market determining the direction of development for each of the four competitive positions. In Fig. 2 these directions are indicated by arrows.

Figure 2. Competition Map of the Market



Current State of Competition

Execution of the steps of the procedure described above let get the following results.

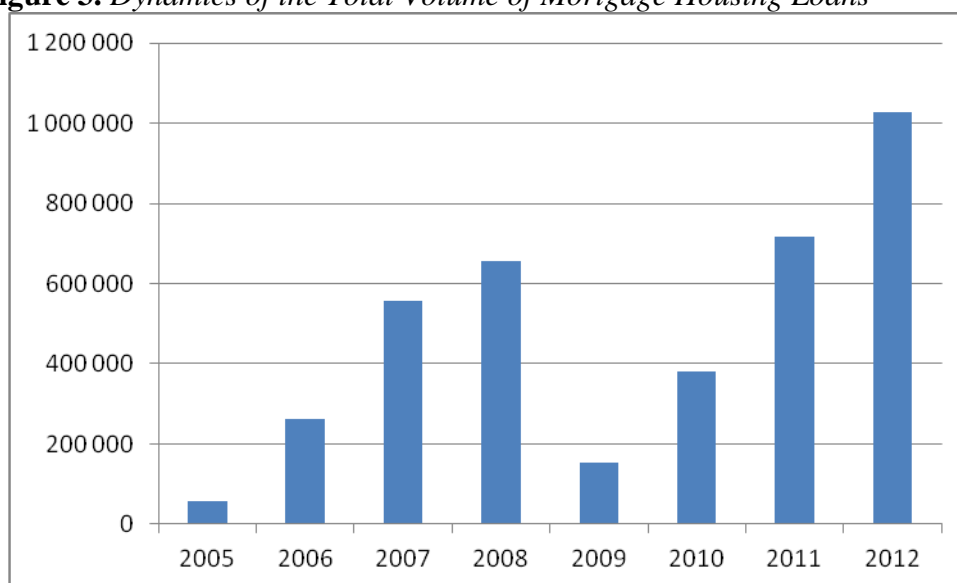
On 01.01.2013 weighted average of the interest rates on mortgage housing loans constituted 12.8% for ruble loans and 9.7% for loans in foreign currency.

Historical minimum and maximum of the weighted average interest rates are, respectively, for loans in rubles 11.9% (Q4 2011) and 14.6% (Q3 2009), while for loans in foreign currency 9.6% (Q3 2011) and 13.5% (Q3 2009).

As the current interest rate is near to the lower limit of the historic range it is possible to make the conclusion about increasing competition in the market. This conclusion is consistent with the data on the dynamics of the credit organizations number and the proportion of banks involved in the mortgage housing credit market cited earlier.

In fig.3.the dynamics of mortgage housing loans volumes is represented. After a sharp decline that occurred in 2009, in 2011 the volume of loans exceeded the pre-crisis level, and continued its growth in 2012.

Figure 3. *Dynamics of the Total Volume of Mortgage Housing Loans*



The growth of the total mortgage housing loans issue in 2012 compared to the previous year is 43.5% and the increase in the number of loans is equal to 32.1%. During the lifetime of the mortgage housing credit market, contraction took place only in 2009, when the volume of loans has decreased compared to the previous year to 76.7%, while the number of loans - by 62.7%. The average growth rates calculated for the period 2006 - 2012, are equal in terms of volume to 129.7%, while in the terms of loans number to 61.1%. These data characterizes the situation as a positional growth with a moderate level of competition.

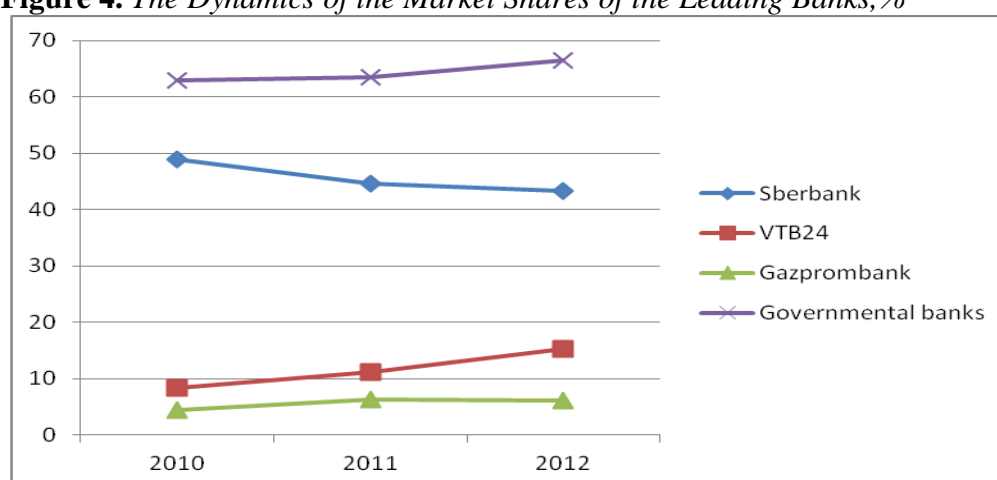
Indicators of the competition intensity by market shares are negative. This fact lets to conclude that the market has oligopolistic structure characterized by the presence of the leading group. This group differs sharply by market shares and by shares of client base from the most market participants.

The volatility of the leading group of 10 banks is as follows: update ratio constituted 50% in 2010, 40% in 2011 and 30% in 2012. It confirms the conclusion about the existence of oligopolistic group and reflects the stabilization tendency. In the past three years the top three positions remained unchanged. The largest market shares and the shares of client base belong to Sberbank, VTB24, and Gazprombank. Note that these banks have a higher level governmental participation in their capital.

Sberbank is the leader for the entire period of the market existence, but its share has tendency to decline. In 2010, its market share was 49% in 2011 it was equal to 44.7% and in 2012 - 43.3%.

Fig. 4 shows the evolution of the market shares of the leading banks.

Figure 4. *The Dynamics of the Market Shares of the Leading Banks, %*



The calculations of market shares were held for 45 banks on the data for 2010 and 2011. Table 2 shows the share of the market leaders and concentration indices, reflecting the total shares of the two and three leading banks.

Table 2. *Shares of the Leading Banks and Concentration Indices, %*

Year	Leading banks			Concentration indices	
	1	2	3	CR2	CR3
	Sberbank	VTB24	Gazprombank		
2010	49.0	8,3	4,4	57.3	61.7
2011	44,7	11,2	6,4	55.9	62.3
2012	43,3	15,3	6,2	58.6	64.8

The growth of concentration indices shows the reduction of competition and supports the conclusion on the formation of the oligopolistic group in the market.

This trend is more clearly manifested in the evaluation by client base: in 2010 and 2011 the concentration ratio CR3 constituted respectively 80.3% and 81.5%.

The tendency is not confirmed by the dynamics of Herfindahl-Hirschman Index by market shares and by client base shares as reported in Table 3. However, the dynamics of Herfindahl-Hirschman index can be explained by the redistribution of shares inside the leading group, which is more significant than the changes in the shares of small market participants.

Table 3. *Values of Herfindahl-Hirschman Index*

Type of indicator	Year		
	2010	2011	2012
By market shares	3610	3095	3066
By shares of client base	4643	4216	3871

Analysis of changes in market shares and the shares of client base has shown that for all banks, except for the top three, both positive and negative changes are determined by decisive impact of the external factors. The influence of the internal factors is weak. From the standpoint of the research the main internal factors are the access to long-term credit resources, which became more difficult for most medium-sized and small banks due to financial crisis, and risk policies.

The situation in the top three is following. Decline of the Sberbank's market share can be explained to a greater extent by external factors contributing more than 55% of the change. Increasing market share of VTB 24 by 88% occurred due to internal factors. The increase of Gazprombank's market share can be explained by internal factors by 93%. The change of the client base share of Sberbank decreased due to external factors by 66%, while the changes of client base shares of Gazprombank and VTB 24 can be explained by internal factors by 90% and 96%, respectively.

In drawing up the competitive map of the mortgage housing credit market only the banks included in the top ten were taken into account. Table 4 shows the results of the calculation of market shares of these banks and the rates of their changes in 2012.

Table 4. *Market Shares and the Growth of the Top 10 Banks in the Mortgage Housing Credit Market in 2012*

Bank	Market share in 2012, %	Market share in 2011, %	Change of market share	Loans volume growth in 2012 to 2011, %
1. Sberbank	43,31	44,73	-1,42	38,96
2. VTB24	15,32	11,21	4,11	96,07
3. Gazprombank	6,24	6,37	-0,13	40,51
4. Deltacredit	2,20	2,53	-0,33	24,75
5. Rosbank	1,71	1,82	-0,11	34,80
6. Cviazbank	1,50	1,3	0,2	60,25
7. Uralsib	1,36	1,34	0,02	45,56
8. Vozrozhdenie	1,15	1,28	-0,13	28,97
9. Ak bars	1,02	0,66	0,36	18,84
10. Khanty-Mansiy Bank	0,98	0,93	0,05	17,49

It should be mentioned that the net assets size of the leading group differs significantly. In the rating of 2012 the leading banks have positions in the range from 1 (Sberbank, 13 823 199.61 mln. rub.) to 68 (Deltacredit, 79 988.90 mln rub.).

On the basis of Table 4 it can be concluded that a strong competitive position in the currently available only for Sberbank and VTB 24, as their market shares exceed the average. In drawing up the competitive map Gazprombank was conditionally assigned to the strong position because its share is almost three times higher than that of the next bank - Deltacredit.

In 2012 all the leading banks increased the amount of credit issue, but only VTB24, Svyazbank, Uralsib, Ak Bars and Khanty-Mansiy Bank improved their competitive positions compared to the previous year.

The resulting competitive card is presented in Fig. 5.

Figure 5. *Competitive Map of the Leading Banks in the Russian Mortgage Housing Credit Market on the Results Of 2012*

		Market position	
		Strong	Weak
Change in market position	improvement	VTB24 1	Svyazbank Uralsib Ak Bars Khanty-Mansiy Bank 2
	deterioration	Sberbank Gazprombank 3	Deltacredit Rosbank Vozrazhdenie 4

Conclusions

The Russian market of mortgage housing credit despite the limited client base currently is a new growing market.

A pronounced oligopoly is formed in this market. An oligopolistic group constitutes of three government-owned banks, which compete with the use of non-price methods. It results in redistribution of their market shares against the general increase of concentration in the market and maintenance of the high level of interest rates.

The possibility of outsiders, whose aggregate market share is less than one third of the market volume, to control their positions and to influence the market characteristics are quite insignificant.

The current competitive situation in the Russian market of mortgage housing credit does not provide increasing the affordability of mortgage loans, and potentially contributes to the launch of the mechanisms of adverse selection.

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