ANALYSIS OF THE APPROACHES TO STATE SUPPORT FOR HOUSING CONSTRUCTION THROUGH MORTGAGE INCENTIVES: FROM THE USA TO RUSSIA

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ABSTRACT
At the end of 2016, the Russian Government decided to abandon the mortgage rates subsidy program, which, as a result, had survived less than two completed years. In return for it, the development of a mortgage refinancing program through the issuance by the State Agency for Housing Mortgage Lending of mortgage securities, a relatively new for Russia type of mortgage bonds, was proposed by the authorities. The first bonding worth more than 2 billion rubles was held at the very end of last year. What are the possible economic consequences of the decisions taken? Will the implementation of the already launched new state program lead to the next large-scale crisis in the market? Herein, an attempt to answer these extremely relevant questions, based on the experience of organization, development and subsequent collapse of similar programs in the United States of America is made by the author. The study conducted shows that the intention of the Russian Government to take the advantage of the methods of economy incitement through the support of the mortgage lending mechanism, proven in the developed economies, in practice is gradually leading to the same alarming symptoms that less than a decade ago were missed by the US authorities designed to regulate and stabilize the financial market.

Keywords: state support for mortgage lending, mortgage bonds, mortgage securities, mortgage rates subsidy

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Analysis of the Approaches to State Support for Housing Construction through Mortgage Incentives: From the Usa To Russia

1. INTRODUCTION

In the period of economic crisis or, as it is customarily called, "turbulence" in the economy, the state (and, of course, not only the state of Russia) often improves the support for the key economy sectors in order to turn these sectors into the "growth points" or the "driving forces" of the desired egress of the country from the economic downturn. It is generally believed that in this sense one of the most multiplicatively attractive sectors is the civil construction sector. Such assertions as "one job at the construction site gives ten jobs in related sectors" [1, 2] or "one ruble of investments in support of the construction complex brings up to forty rubles of taxes" [3] are regularly used in the speeches of government officials and in the works of government-sponsored economists.

No scientific or other reliable source of such calculations has been found by the author, but on the whole, there is no doubt that, having faced with the crisis phenomena, many states at various periods of their economic history used to take various measures to support and stimulate the housing construction business. In turn, one of the most obvious methods of such incitement is to support the demand for new housing by the households, and this demand, in conditions typical for the crisis periods of falling incomes of the population, can be increased by facilitating of the availability of the mortgage loans to citizens.

No scientifically substantiated methodology for the evaluation of the impact of the state support programs for housing construction through mortgage incentives has been developed in the modern Russian economic theory. However, as it is shown herein, even the availability of the methods, proven in developed economies (particularly, in the USA) in this area during the decades, could not prevent the extremely painful mortgage crisis that erupted in the world in 2008.

That is why the recent steps taken by the Russian federal authorities to adopt or vice versa to curtail the highly expensive state programs in this field excite the impassioned debate among practicing economists, academicians, developers and bankers.

It appears that by analyzing and comparing different approaches to this problem and the economic results of their implementation, it is possible, at least, to identify the dangerous trends in the current development of the situation, and also to propose for the modern Russian economy the directions for development of an actual management methodology for the state support measures for the construction complex, including through the incitement (or other administrative or financial moderation) of the mortgage housing loans.

2. METHODS AND BACKGROUNDS

To study and compare the economic, as well as the institutional or infrastructural measures to support the housing construction and their results, applied by various states, it seems appropriate to analyze only the experience of the United States of America and the Russian Federation. In both cases, the period from the establishment of the mortgage lending as the most important infrastructure component (in the USA – from the 1930s, in Russia – from the 1990s) till the present time, is considered.

A classic positive example of successful implementation of the strategy of economic growth incitement by the state is Roosevelt's New Deal according to which, in order to stimulate the country's egress from the "great depression", the USA Congress adopted the laws aimed at the state support and the introduction of the housing construction at the qualitatively and quantitatively new level through systemic incitement of the mortgage lending development. The essence of the innovations was to create powerful state mortgage agencies, using the budget monetary assets (however, these agencies were privatized later), designed to buy back from banks the mortgage loans, refinancing the bank mortgage and
ensuring the flow of investment resources into housing construction. Such agencies constituted the Federal National Mortgage Association (established in 1938) – FNMA in the English abbreviation, which sounded roughly like "Fannie May" – this slang name became official later, and subsequently – the Government National Mortgage Association (1968, GNMA or "Ginny May") and the Federal Housing Mortgage Lending Corporation (1970, FHLMC or "Freddie Mack"), for more details see [4-7]. The measures taken have been very effective and have long been considered a model for the whole world: the mortgage-backed securities market developed, grew and by the beginning of this century had reached a huge volume of 1,680 bln USD [8].

The system (in its most general terms) functions as follows: the primary mortgage lender (the bank) consolidates a pool of standardized mortgages, usually equal to several tens of millions of dollars, and sells this pool to one of the above-mentioned mortgage agencies. The reliability of loans in the pool at the same time is preliminarily confirmed by some "highly respected" rating agency. The mortgage bank derecognizes the mortgages from its balance sheet, as the agent, servicing the mortgage loans issued by it, that is, monthly or on some other regular basis it collects the payments from the borrowers and, of course, having retained its commission, transfers the funds collected to a mortgage agency. The agency, in its turn, having a very reliable (in theory) instrument for generation of a stable and predictable cash flow, immediately after acquiring a given asset from the bank, releases the securities, backed by the shares in this asset, the new owners of which become in essence the co-owners of a particular pool of mortgages and the ultimate beneficiaries of the above financial instrument. This process is known as securitization, and the emitted securities themselves are generally called MBS (Mortgage-Backed Securities). After several years of turbulent economic and political discussions held in the mid-1990s, the Russian government finally decided to implement in the Russian Federation a model, similar to the one, adopted in the United States, and for the purposes of mortgage lending development the open joint stock company the Agency for Housing Mortgage Lending (AHML), 100% owned by the state in person of the Federal Agency for State Property Management, was established in 1997. It was decided to create this agency within the federal target program "Own Home" with the announced task of reducing the risks of long-term mortgage lending and attracting the required lending resources. In fact, it was AHML that was to become the main lever to support the emerging mortgage market on the part of the state and to provide it with "long" money.

However, despite the importance of the stated goals, AHML was practically inactive during the first four years of its existence. It can be stated that the very idea of creating an agency outstripped both the market and the Russian federal legislation. The economic crisis of 1998, the pulling out from which was long and painful for the Russian banks, had also played its role. In fact, all this time, the agency lacked funding, and the government could not in any way develop a guarantee procedure for the funds attracted by AHML.

In January 2003, AHML was included in the list of 18 strategic priority companies with the state participation. In December 2004, on the basis of the mortgage certificate developed by AHML, the Federal Service for Financial Markets (now its powers are transferred to the relevant divisions of the Bank of Russia) agreed on the standard mortgage certificate form for the mortgages. However, AHML actively joined the development of the mortgage market only in June 2005, when the federal government adopted the "Concept for the Development of a Unified System for Refinancing Mortgage Housing Loans". It was this document that defined the tasks and the stages of the development of the refinancing system, as well as the role of AHML as its operator. Since June 2005, AHML has become the main conductor for the state policy on the establishment and development of a system for refinancing mortgage housing lending and its key institutional element.
Analysis of the Approaches to State Support for Housing Construction through Mortgage Incentives: From the USA to Russia

Since 2006, AHML has been increasing consistently its weight and competitiveness in the market. Since October 1, 2007, the amount of the initial mortgage payment allowed by the agency's standards has been reduced to 10% of the value of the acquired property. In order to become a member of the AHML program, the banks were to become the official partners of the agency.

The crisis of 2008-2009 made serious adjustments to the rapidly developing Russian mortgage lending market. Due to lack of access to long money, many banks either left the market or suspended their mortgage programs, the rates grew up to 14% or higher. As part of the anti-crisis strategy, the government in 2009 established the AHML subsidiary company – the Agency for Restructuring the Housing Mortgage Lending (ARHML), the main task of which was to support the borrowers who were in a difficult situation due to loss of work or a significant part of their income; in 2013, ARHML was renamed to the Agency for Financing the Housing Construction ("AFHC" OAO). On January 28, 2010, the open joint-stock company "AHML Insurance Company" (IC AHML) was registered. The stated goal of its activity was to promote the development of the insurance services market for insurance of the mortgage obligations of the borrower. And finally in 2015, the so-called Unified Development Institute in the housing sector was established on the basis of AHML, which included the main AHML subsidiaries: AHML and IC AHML, as well as the Housing Development Fund, established in 2008. During the whole life of AHML, the state has pumped through it more than 400 billion rubles into the housing sector [9]. With the development of the newest crisis phenomena in the Russian economy in 2014-2015, the authorities made a decision on additional incitement of the housing construction in the country through direct subsidization of the interest rates on loans to mortgage borrowers issued to the end borrowers (in comparison with their market value, for more details see [10]).

As part of the state program to subsidize the mortgage rates for the purchase of housing in new buildings, only in 2016, 304 thousand loans were issued for 556 billion rubles, which is 38% of the total volume of mortgages issued in 2016, and as of December 2016, the total amount of funds spent by the state for such subsidies is equal to 10.7 billion rubles [11, 12]. The incentive effect of the implementation of these measures is clearly visible in Figure 1.

**Figure 1** The share of equity participation agreements (EPA) with the use of mortgages before and after the introduction of the subsidization of the rates
Indeed, the attention should be paid at the fact that the matter under consideration is the support for the construction industry, as against the residential real estate market as a whole, since the program originally intended to subsidize the interest rates on mortgages solely for the purchase of housing under the equity participation agreements (EPA), that is, directly from the developers and most often at the construction stage, rather than in the secondary market.

As a result, the share of EPA concluded with the use of mortgage loans, having decreased more than twofold at the end of 2014 – early 2015, was restored quite quickly with the initiation of the Program (Table 1).

**Table 1** The share of EPA concluded with a mortgage

<table>
<thead>
<tr>
<th>Period</th>
<th>The share of EPA concluded with a mortgage, %</th>
</tr>
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<tbody>
<tr>
<td>1 Q 2014</td>
<td>28</td>
</tr>
<tr>
<td>2 Q 2014</td>
<td>28</td>
</tr>
<tr>
<td>3 Q 2014</td>
<td>25</td>
</tr>
<tr>
<td>4 Q 2014</td>
<td>48</td>
</tr>
<tr>
<td>1 Q 2015</td>
<td>17</td>
</tr>
<tr>
<td>2 Q 2015</td>
<td>22</td>
</tr>
<tr>
<td>3 Q 2015</td>
<td>31</td>
</tr>
<tr>
<td>4 Q 2015</td>
<td>33</td>
</tr>
<tr>
<td>1 Q 2016</td>
<td>33</td>
</tr>
<tr>
<td>2 Q 2016</td>
<td>31</td>
</tr>
<tr>
<td>3 Q 2016</td>
<td>33</td>
</tr>
</tbody>
</table>

In quantitative terms (Figure 2), the effect was even more impressive: the total number of EPAs concluded by Russian buyers of housing under construction (equity holders) increased almost twice during the year (from the 3rd quarter of 2015 to the 3rd quarter of 2016).

**Figure 2** Quarterly amount of EPAs concluded (with and without mortgages) (1 Q 2015 – 3 Q 2016)
Finally, at the end of 2016, when the success of the above-mentioned program became more than obvious, the Government of Russia represented by the Minister of Construction Mikhail Men announced unexpectedly to many people that the program for mortgage rates subsidizing will not be extended for 2017 and the Ministry of Construction is going to use the "disentangled" assets to support the construction complex [13].

To analyze the current situation, it seems advisable to refer to the experience of the United States of America above mentioned herein. The system of the state support for the mortgage housing loans through the state subsidies to mortgage agencies, so well-established in the period of the US egress from the depression of the 1930s, by the turn of the century had become (after privatization and the subsequent "modernization") a virtually uncontrolled conglomerate of banks, mortgage and rating agencies, numerous structural intermediaries, paid appraisers, consultants, insurers, etc.

The result is known: it was the risky investment policy that once practically "breathed a new life" into American housing construction "Fannie May" and "Freddie Mack", carried away by the purchase of insufficiently reliable mortgages and their conversion (securitization) into so-called subprime-bonds [14, 15], was the first catalyst for the American and then the global economic and financial crisis of 2008-2009. The US government had to nationalize these mortgage agencies again in September 2008 to save the situation, which cost the state budget 12.8 trillion USD [16].

Anyway, this direction (that is, the large-scale development of the secondary mortgage bonds market according to American patterns) is currently announced and actively implemented by AHML as a strategic one: at the very end of 2016, new single-tranche mortgage bonds worth 2.1 billion rubles were offered to the market for the first time [17].

It should be clarified that the agency has previously acted as the organizer of the corporate bonds issue: the first issue of them was placed in the stock market section of the Moscow Interbank Currency Exchange in 2006 (the issuer then was OAO Mortgage Specialized Organization GPB-Ipoteka [18]. In the period from 2007 and till the beginning of the implementation of the above-mentioned new program, AHML initiated 11 series of mortgage-backed bond issues, while in all cases the issuers of the securities were the specially established companies – the mortgage agents. In addition to the securities issued by these agents, a considerable share of the mortgage securities market is occupied by the emissions issued by the banks, which are the mortgage lenders. As of the end of the third quarter of 2016, there were a total of 189 issues of housing mortgage securities worth 388 billion rubles in circulation, with about 77% of them represented by the bonds issued by AHML mortgage agents [19]. According to the new AHML bond program with a total volume of 30 billion rubles, registered in December 2016 by the Central Bank of the Russian Federation, the bonds were issued under the security of the mortgage portfolio of the Housing Finance Bank, and the newly created mortgage agent, the AHML subsidiary company "MBS Factory" (the abbreviation MBS here refers to "Mortgage-Backed Securities"). The mechanism proposed by AHML for the implementation of the new program (which is called innovative on the AHML website [20] for reasons unclear to the author), in general terms is the following: the bank issues the loans to the borrowers and transfers the mortgages to them to a mortgage agent who, after obtaining the guarantees from AHML (with payment of a commission) on an expedited basis produces and registers the single-tranche mortgage bonds in the Bank of Russia. The bank can leave the securities, obtained from the mortgage agent, on balance or sell them to the third party investors, thus obtaining the refinancing (Figure 3).
The rate for the first coupon on the issued bonds is set at 9.35% per annum. In practice, this means that, taking into account the issuer's margin as well as the incomes of the issuing banks, service providers, etc., the funds attracted in this way can be offered to mortgage banks at no less than 10% per annum, and the end borrowers will get them under 12.5-13%. At the same time, the average rate for the issued mortgage loans was about 12.6% in 2016, according to the report of the Agency for Housing Mortgage Lending [21], and 11.7% for the 1st quarter of 2017 [21]. Thus, the reduction in mortgage rates and the increase in the availability of housing through the introduction of the proposed mechanism are impossible in the near future. In contrast, the mortgage rates are actually declining in fact and are likely to continue to decline in parallel with the decrease of the key rate by the Bank of Russia (it has been reduced four times from 10.00% to 8.50% during 2017) and the estimated subsequent decline in the cost of credit money in the Russian economy.

In the mortgage market forecast to 2020 [22] published by the Analytical Credit Rating Agency (ACRA) in June 2017, it is stated that following Sberbank, which reduced the mortgage rates three times since the beginning of the year, other large players with relatively inexpensive funding (here the largest Russian banks with the state participation) are forced to take part in the price competition. As a result, the decline in mortgage rates today outperforms the dynamics of the key rate and the rate on the deposits of the population. The forecasted strengthening of the interest of the banking sector in the segment (Table 2) creates the prerequisites for maintaining this trend, which, on the horizon of three years, will lead, in accordance with the forecast, to a tangible reduction in the average margin of banks on mortgages.

Table 2 Forecast of the mortgage market indicators to 2020

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Actuality</th>
<th>Assessment</th>
<th>Forecast</th>
</tr>
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<tbody>
<tr>
<td>The volume of issued mortgage housing loans, billion rubles</td>
<td>1,764 1,161 1,473</td>
<td>1,723 2,016 2,319 2,597</td>
<td></td>
</tr>
<tr>
<td>Growth rate (year-by-year), %</td>
<td>-34.2 26.9</td>
<td>17.5 17.1 15.2 12.3</td>
<td></td>
</tr>
<tr>
<td>Portfolio of mortgage housing loans, billion rubles</td>
<td>3,528 3,920 4,490</td>
<td>5,074 5,683 6,308 7,001</td>
<td></td>
</tr>
<tr>
<td>Growth rate (year-by-year), %</td>
<td>11.1 14.5 13.1 12.2 11.4 11.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mortgage share in the retail loan portfolio, %</td>
<td>31.1 36.7 41.6</td>
<td>42.3 43.1 43.4 43.3</td>
<td></td>
</tr>
</tbody>
</table>
In turn, following the decrease in rates for the end borrowers (according to the ACRA forecast – up to 8.5-9% by the end of 2020) and the decrease in the bank margin amid growing competition for the client, the easing by the banks of their demands to the mortgage borrowers is almost inevitable. It is expected, that the issuance of risky loans (both mortgage and any other) should be restrained by the reserve requirements set by the Bank of Russia, but the opposite is true actually: the effective quite low requirements for the accountancy of the mortgage loans when calculating the adequacy of the own funds, allow the banks to increase the share of more risky loans without a significant increase in the burden on the capital.

3. RESULTS: SUMMARY
Summarizing the results obtained based on the above analysis, the following can be concluded:

• since the 1930s, the USA have created the world's largest infrastructure of state support for mortgage lending, based on a system of federal mortgage agencies, purchasing the standardized mortgage pools from commercial banks, and then securitizing these assets on the open market;
• the described system played an extremely positive role in the egress of the United States from the Great Depression and functioned steadily until the middle of the 2000s, which, among other things, pushed the US federal authorities to a decision on the privatization of the mortgage agencies and ultimately led to a dramatic decrease in the reliability of the system and the appearance of high-risk and under-secured assets in its structure;
• in 2008, the infrastructure, ensuring the functioning of the mortgage market in the USA, collapsed, which was the main catalyst for the global financial crisis and required the US government to spend huge amounts of money from the federal budget to rectify the situation, including through the reverse nationalization of the mortgage agencies;
• in the Russian Federation, the mortgage lending formally appeared only at the end of the 1990s with the adoption of the corresponding federal law and the creation of the State Agency for Housing Mortgage Lending; thus, the American mortgage development model was essentially implemented in Russia;
• from 2003 to 2007, there has been a fairly rapid growth in the development of mortgage lending in Russia (both in terms of the volume of loans issued, and in terms of strengthening and improving the mortgage infrastructure at all levels of the financial mechanism);
• in 2008-2009, the global financial crisis (caused, as shown above, in many respects by the collapse of the US mortgage market) resulted in Russia in a sharp decline in the volume of mortgage loans issued by banks against a backdrop of an equally significant increase in rates to an almost 'prohibitive' level of 15-18%,
• the restoration of the world financial markets in 2010-2012 launched a downward trend in the Russian mortgage market, but the growth was not significant and was not long: the adoption by some developed countries of financial and other economic sanctions against Russia in 2014 again sharply slowed down the activity on the domestic financial markets, including in housing mortgage lending;
• in 2015, the Government of the Russian Federation launches a state program to subsidize the mortgage rates for the purchase of housing in new buildings; the increase in the number of issued mortgage loans as a result turned out to be more than twofold;
• at the beginning of 2017, the program for mortgage rates subsidizing was curtailed in Russia; currently, the reduction of the bank rates (including mortgage) is ensured due to the policy of the Bank of Russia, which consistently reduces the key rate;
• as a result of a decrease in the key rate and an increase in the competition for the customer (mortgage borrower), the Russian banks reduce both their internal margin and requirements for reliability of the borrowers and security of the issued loans; in accordance with the forecasts given herein, this trend is assumed to be long-term;
• In parallel with the described processes, AHML actively develops the securitization tools for its (and controlled by it) mortgage portfolios by creating the so-called "MBS Factory" (mortgage securities).

4. DISCUSSION
According to the author, the adoption by the state management authorities of the decisions, unsupported by any distinct economic calculations, while the Ministry of Construction does not publish such calculations at all, and moreover, it does not even declare their availability, is quite a dangerous tendency. The normative documents on the subject (in particular, the Resolution of the Government of the Russian Federation "On the Procedure for Selecting and Coordinating the Implementation of Priority Investment Projects" [23], "On the Procedure for Control over the assets of the National Welfare Fund" [24], do not contain any clear economic criteria for the selection of the specific projects, while the choice of certain tools to support the industry in crisis conditions, as already mentioned above, is performed without a full feasibility study and agreed rules. It seems necessary to develop a scientifically grounded methodology for control over the measures of state regulation of the investment in the construction industry (and, in particular, the housing construction) in a volatile economy.

5. CONCLUSION
Thus, since 2017, Russia has confidently turned to a dangerous strategy, so deplorably implemented by the USA less than ten years ago [25, 26]. The important problem for modern Russian economic science is to take into account this negative experience in the formation of new guidelines for the state support for the construction industry in Russia. The Russian state, at both the federal and subfederal levels, is actually investing huge amounts of money in support of the construction complex. The Federal Budget for 2017 provides for the expenditures on the state program "Provision of Affordable and Comfortable Housing and Communal Services for the Citizens of the Russian Federation" are envisaged in the amount of more than 105.8 billion rubles [27], while according to the budget of Moscow for the current year [28-30] only 101.9 billion rubles have been allocated for the program "Housing" (without taking into account the newly adopted decisions in the framework of a large-scale renovation program for dilapidated and obsolete housing stock).

In view of the economic risks and threats described in this paper, it seems absolutely necessary for the author to develop a practically-based scientific methodology for control over the state support for the construction complex at all budget levels to ensure their synchronization with the integrated development of real estate.

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