ASSESSMENT OF MAJOR TRENDS IN THE DEVELOPMENT OF FINANCIAL ECONOMIC INSTRUMENTS IN MOSCOW USED IN PREPARATION FOR THE IMPLEMENTATION OF LARGE-SCALE URBAN DISPERSED CONSTRUCTION PROJECTS

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ABSTRACT

Major trends in mortgage lending are analyzed. The dynamics of mortgage loans issued in terms of value and quantity are reviewed. The dynamics of housing mortgage loans (HML) issued in foreign currency are reviewed separately. Moscow, the Moscow region and St. Petersburg are presented as the main examples of regional mortgage lending markets. The ratio of the arrears volume to the total debt on mortgage loans is also analyzed, as well as the dynamics of the potential housing volume that can be purchased for the annual amount of housing mortgage loans in the Russian Federation in general and in the territories of the specified regions. The downward trend in gross domestic product (GDP), described by a slowdown in the fall rates by the end of 2016, is considered as one of the main macroeconomic factors affecting mortgage lending. The interest rate subsidies are an existing instrument of state support for HML.

Key words: Housing Mortgage Lending, Funding, Securitization, Debt in Housing Mortgage Loans Issued, Arrears in Housing Mortgage Loans Issued, Gross Domestic Product, Mortgage-Backed Securities (MBC), Multiplicative Effect.


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1. INTRODUCTION

HML is an efficient mechanism to support effective demand for housing [1-5]. Mortgage boosts the demand in the housing market, which secures a multiplicative effect: additional load on production capacities of the construction complex, including design, production of building materials, construction, as well as the preparation of real estate for sale [6-11]. The development of the HML market is associated both with the development of the primary mortgage lending market and with the secondary market. The primary market is generally described by the interaction of banks issuing housing mortgage loans (HMLs) with the population showing demand for HMLs [12, 13]. The secondary mortgage lending market is needed for banks to raise resources, i.e. for funding, through the HML securitization. The HML securitization is the issuance of securities, such as mortgage bonds, that secure capital inflows from the stock market to the banking sector. At the same time, if state guarantees are provided, MBC are usually considered as one of the most reliable types of securities, since their security is almost constant during the entire security period (their coverage is secured by a mortgage). At the same time, a reduction in the real incomes may lead to an increase in the number of low-income borrowers, which requires banks to carefully assess risks when issuing HMLs.

2. METHODS

The state is a key economic agent with significant opportunities for the housing policy [14, 15, and 11]. The Open Joint-Stock Company Agency for Housing Mortgage Lending (AHML) was established in 1997 for the real estate market incentivization, with 100 % of shares belonging to the state. The main task of the AHML is to implement the state policy of increasing the housing affordability for the Russian population. The activities of the Agency are aimed at creating equal opportunities for getting mortgage loans for all Russian citizens. The Agency pays special attention to the establishment of the mortgage market in the regions where the housing and mortgage markets are the least developed.

Institutionally, mortgage support at the federal level is built into the strategic planning system as a Strategy for the HML development in the Russian Federation through to 2020 [16]. This document is a goal setting document.

The objectives of this Strategy are the following:

- establishment of uniform guidelines for participants in the HML market regarding the principles, expectations and long-term prospects for this market development;
- identification of the key long-term goals and objectives of the state policy on the HML development until 2020; and
- Identification of priority measures aimed at HML development.

Let us review the HML market on the basis of data from the Bank of Russia and the AHML that describe the key parameters of this market. Preliminary analysis of the data indicates that 3 main regional mortgage lending markets can be identified in most cases: Moscow, the Moscow region and St. Petersburg. Accordingly, the below data on mortgage lending in most cases contain information on these regions. Data on the Russian Federation in general are also provided for comparison. Unless otherwise agreed, indicators describing mortgage lending in monetary terms include both HMLs issued in rubles and HMLs issued in foreign currency (in ruble equivalent).

Tables 1 and 2 present the nominal volumes of the HML market in Moscow, the Moscow region, St. Petersburg, and the Russian Federation: Table 1 shows the volume of mortgage loans issued per year in the territories of these regions and on the scale of the national economy in general; Table 2 shows the amount of debt (including arrears) on the issued HMLs, which is...
the cumulative total of the mortgage loans issued with interest payments (accumulated volume of debt on HMLs, including interest payments on HMLs).

### Table 1. Volume of issued HMLs, mln rub.

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<td>556,93</td>
<td>655,80</td>
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<td>380,61</td>
<td>716,94</td>
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<td>25,129</td>
<td>52,263</td>
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<td>152,662</td>
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<td>St. Petersburg</td>
<td>17,717</td>
<td>38,840</td>
<td>44,523</td>
<td>6,716</td>
<td>14,945</td>
<td>35,142</td>
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<td>66,106</td>
<td>94,864</td>
<td>67,034</td>
<td>65,036</td>
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* January – September

### Table 2. Volume of debt on issued HMLs, mln rub.

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<td>1,010,89</td>
<td>1,129,73</td>
<td>1,478,82</td>
<td>1,997,20</td>
<td>2,648,59</td>
<td>3,528,79</td>
<td>3,982,37</td>
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<td>Moscow</td>
<td>52,663</td>
<td>107,175</td>
<td>165,534</td>
<td>156,522</td>
<td>163,472</td>
<td>205,202</td>
<td>253,047</td>
<td>311,102</td>
<td>394,056</td>
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<td>Moscow region</td>
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<td>44,949</td>
<td>81,812</td>
<td>78,681</td>
<td>92,319</td>
<td>119,644</td>
<td>156,097</td>
<td>204,847</td>
<td>297,978</td>
<td>313,878</td>
<td>342,559</td>
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<tr>
<td>St. Petersburg</td>
<td>15,902</td>
<td>42,435</td>
<td>69,530</td>
<td>66,394</td>
<td>67,852</td>
<td>81,751</td>
<td>102,031</td>
<td>130,754</td>
<td>181,654</td>
<td>206,296</td>
<td>230,333</td>
</tr>
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</table>

* January – September

### 3. RESULTS

If the relative indicators in terms of the volume of issued HMLs are reviewed, the share of Moscow corresponded to 12.5 %, the share of the Moscow region corresponded to 7.8 %, and the share of St. Petersburg corresponded to 6.3 % of the total HMLs issued for the same period in the Russian Federation, as of the end of Q3 2016. In January – September 2016, Moscow accounted for the largest share in the structure of the annually issued volume of mortgage loans, the Moscow region was in the second place, and St. Petersburg was in the third place. As of the end of Q3 2016, Moscow accounted for 11.1 % of the HML market of the Russian Federation in terms of total debt (the largest market share of the HML market in the Russian Federation), the Moscow region accounted for 7.9 % (second place), and St. Petersburg accounted for 5.3 % (third place).

Data on the volume of HMLs issued per year are presented in Table 3. As can be seen from Table 3, the largest number of mortgage loans in the Russian Federation (34,814) was issued in the territory of Moscow, according to the data for Q3 2016. The Moscow region is in the second place for this indicator with 30,642 MHLs. The third place is taken by St. Petersburg (30,510 MHLs). If relative indicators are reviewed, it can be noted that for the period from January to September 2016, 5.8 % of the total number of HMLs were issued in the territory of Moscow, 5.09 % in the Moscow region, and 5.06 % in St. Petersburg.
Table 3. Number of issued HMLs, pcs.

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<tbody>
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<td>Russia</td>
<td>349,502</td>
<td>130,085</td>
<td>301,433</td>
<td>523,582</td>
<td>691,724</td>
<td>825,039</td>
<td>1,012,814</td>
<td>699,510</td>
<td>602,403</td>
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<td>Moscow</td>
<td>20,030</td>
<td>7,727</td>
<td>13,596</td>
<td>22,988</td>
<td>33,286</td>
<td>41,711</td>
<td>46,443</td>
<td>37,230</td>
<td>34,814</td>
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<tr>
<td>Moscow region</td>
<td>13,937</td>
<td>3,434</td>
<td>10,386</td>
<td>20,493</td>
<td>29,762</td>
<td>39,207</td>
<td>55,599</td>
<td>34,414</td>
<td>30,642</td>
</tr>
<tr>
<td>St. Petersburg</td>
<td>14,629</td>
<td>3,228</td>
<td>6,857</td>
<td>15,622</td>
<td>21,869</td>
<td>28,183</td>
<td>41,190</td>
<td>32,214</td>
<td>30,510</td>
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* January – September

As such, Moscow is the largest regional HML market in the Russian Federation: 5.8% of the total number of HMLs in the Russian Federation for 3 quarters of 2016 were issued in Moscow, the share of Moscow in value terms of the loans issued during this period was 12.4%, and its cumulative debt on HMLs for 3 quarters of 2016 corresponded to 11.1%. This means that if the anti-crisis policy aimed at supporting effective demand continues, Moscow needs additional attention as the largest regional HML market. Besides, this market is the largest and is closely connected with the mortgage and housing markets of the Moscow region.

4. DISCUSSION

As the share of Moscow declined, the share of debt in a sufficient number of other regions of the Russian Federation increased, which can be seen as a decrease in the regional concentration of the HML market and the emergence of new growth points for this market.

At the same time, the following aspects must be noted in the comparison of Moscow, the Moscow region, and St. Petersburg.

Firstly, Moscow, the Moscow region and St. Petersburg are described by comparable values by the number of loans issued (absolute and relative indicators).

Secondly, cost indicators – the volume of HMLs issued and the volume of debts on issued HMLs (absolute and relative) – largely depend on the price characteristics of the housing stock. Housing prices in Moscow, all other things being equal, are higher than housing prices in the Moscow region, which, in turn, are higher than those in St. Petersburg.

Thirdly, demographic characteristics of these regions also differ. At the same time, HMLs are issued without a strict territorial reference to the acquired real estate objects relative to the region where the HMLs are issued. For example, a Moscow resident can get a HML in a Moscow or non-Moscow (by registration) bank in the territory of Moscow and buy an apartment in the Moscow region. Accordingly, a resident of the Moscow region can do the same, and, on the contrary, get a loan in the territory of the Moscow region to buy property in Moscow. The same applies to the residents of St. Petersburg and the Leningrad region.

Another significant parameter of the HML market is the ratio of the arrears volume to the total debt on HMLs (total volume of mortgage loans issued by progressive total with interest payments). Figures 1-4 show the dynamics of the ratio of the arrears volume to the debt on HMLs in the Russian Federation in general, Moscow, the Moscow region, and St. Petersburg.
Assessment of Major Trends in the Development of Financial Economic Instruments in Moscow
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Figure 1. The ratio of the arrears volume to the total debt on HMLs issued in the Russian Federation [17, 18], %

Figure 2. The ratio of the arrears volume to the total debt on HMLs issued in the territory of Moscow [17, 18], %

Figure 3. The ratio of the arrears volume to the total debt on HMLs issued in the territory of the Moscow region [17, 18], %
According to the data from the Bank of Russia, Moscow (Figure 2) is described by the highest share of arrears in the Russian Federation. As of the end of Q3 2016, the ratio of the arrears volume to the total debt in HMLs issued in the territory of Moscow was 4.1%. Moscow was followed by the Moscow region – this indicator was 3.3% (Figure 3). The ratio of arrears to HMLs issued in St. Petersburg was 1.8% (Figure 4). For the whole of the Russian Federation, the value of the indicator was 1.7% (Figure 1).

The two main reasons for the growth in the share of arrears in total HML debt in 2015 compared to 2014 are the growth of the interest rate and the ruble devaluation, which increased the total arrears resulting from the arrears in HMLs issued in rubles and HMLs issued in foreign currency (in ruble equivalent). At the same time, all four figures show an increase in the interest rate in 2015, which also affected the growth of arrears and their subsequent decrease in 2016.

Let us consider the dynamics of issuing mortgage loans in foreign currency in the regions under consideration and in the Russian Federation in general. 17,461 HMLs in foreign currency were issued in the Russian Federation in 2008, of which 5,865 HMLs in foreign currency were issued in Moscow, 2,762 HMLs – in the Moscow region, and 1,950 HMLs – in St. Petersburg. After the financial crisis, in 2009, the number of HMLs issued in foreign currency fell sharply: a total of 2,081 such loans were issued in the Russian Federation, of which 791 were issued in Moscow, 312 in the Moscow region, and 177 in St. Petersburg. The next stage of a significant reduction in the issuance of HMLs in foreign currency coincided with the beginning of a new crisis – in 2014, only 750 such loans were issued in the Russian Federation, of which 267 loans were issued in Moscow, 137 loans – in the Moscow region, and 56 loans – in St. Petersburg. The number of HMLs in foreign currency tremendously decreased in 2015: 91 such loans were issued in the Russian Federation, of which 51 loans were issued in Moscow, 25 loans – in the Moscow region, and 5 loans – in St. Petersburg. As of the end of Q3 2016, a total of 28 HMLs in foreign currency were issued in Russia, of which 20 such loans were issued in Moscow, 3 loans – in the Moscow region, and 2 loans – in St. Petersburg, which indicates the disappearance of the demand of the population for HMLs in foreign currency.

The share of HMLs in foreign currency from the total number of HMLs issued in the Russian Federation was 0.01% in 2015, in Moscow it was 0.14%, in the Moscow region – 0.07%, and in St. Petersburg – 0.02%. As of the end of Q3 2016, the share of HMLs in foreign currency from the total number of HMLs issued in the Russian Federation was 0.005%, in Moscow it was 0.06%, in the Moscow region – 0.01%, and in St. Petersburg – 0.007%. This means that HMLs issued in foreign currency make up thousandths of a percent in the Russian
Assessment of Major Trends in the Development of Financial Economic Instruments in Moscow Used In Preparation for the Implementation of Large-Scale Urban Dispersed Construction Projects

Federation in general and hundredths of a percent in Moscow and the Moscow region in the total number of HMLs.

In addition to the fact that HMLs are issued without strict territorial reference to the acquired real estate objects, it must be borne in mind that real estate can be acquired using several sources, including own funds. At the same time, situations are possible when high-income borrowers, despite a significantly higher interest rate, may attract borrowings as ordinary consumer loans, since no lien is imposed on the acquired property in this case. Therefore, it is incorrect to completely correlate the volume of mortgage loans issued in the territory of the Russian Federation or in any region with a certain amount of housing purchased in the primary and/or secondary real estate markets. At the same time, the potential volume of housing that can be purchased using the HML funds can be estimated by dividing the volume of annually issued HMLs by the average price of housing (Table 4).

Table 4. Average price of 1 m² of housing [18], rub.

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<tbody>
<tr>
<td>Russia</td>
<td>31,08</td>
<td>44,119</td>
<td>53,253</td>
<td>51,857</td>
<td>53,768</td>
<td>44,816</td>
<td>50,430</td>
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<td>53,931</td>
<td>54,822</td>
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<td>Moscow</td>
<td>81,09</td>
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<td>147,60</td>
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<td>91,916</td>
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* January – September

Figures 5, 6, 7 and 8 demonstrate the dynamics of the potentially possible volume of housing that can be purchased in the Russian Federation for the annual amount of HMLs, as well as in the city of Moscow, the territory of the Moscow region and the territory of St. Petersburg, respectively.

The following trends are clearly visible in Figures 5-8 from 2006 to 2016: until 2008, the potential amount of housing that could be purchased for the amount of issued HMLs had been slightly increasing (a decrease in the indicator under consideration can already be noted in the Russian Federation in general and in St. Petersburg in 2008).

Figure 5. Potentially possible amount of housing that can be purchased in the Russian Federation for the entire amount of HMLs [17 – 19], thous. sq.m.
Figure 6. Potentially possible amount of housing that can be purchased in Moscow for the entire amount of HMLs issued in the territory of the city [17-19], thous. sq.m.

Figure 7. Potentially possible amount of housing that can be purchased in the Moscow region for the entire amount of HMLs issued in its territory [17 – 19], thous. sq.m.

Figure 8. Potentially possible amount of housing that can be purchased in St. Petersburg for the entire amount of HMLs issued in the territory of the city [17-19], thous. sq.m.

The HML market had collapsed in 2009 but then had begun to recover until the value of the indicator ultimately reached its ceiling both in the Russian Federation in general and in the three regional real estate markets under consideration in 2014. At the same time, the observed growth was smoother in Moscow than in the Moscow region, St. Petersburg and the Russian Federation in general. After 2014, amid the economic crisis, a new wave of recession was recorded – quite sharp in the Russian Federation in general and in the Moscow region and smoother in Moscow and St. Petersburg. At the same time, the potential amount of housing that can be purchased for HMLs remained at a higher level in all three regional HML markets and in the Russian Federation in general, compared to the previous peak reached in 2007 for the Russian Federation and St. Petersburg and in 2008 for Moscow and the Moscow region.
Another aspect related to HML is worth noting. Figure 8 shows the GDP growth rate, which has become negative since Q1 2015 (decline by 2.8%). At the same time, a slowdown in the economy’s decline has been observed since Q1 2016, which, other things being equal, can improve the prospects for the HML development. At the same time, without sustainable economic growth and growth of real incomes of the population – the Moscow real estate market depends on the development of the national economy here as well – HMLs will be limited to these factors, which requires special anti-crisis measures to incentivize HML.

Figure 9. Dynamics of the Russian GDP [20], % to the corresponding quarter of the previous year

The data in Table 1, where the volumes of issued HMLs were presented, reveal that these volumes amounted to 94.3% of 2015 volumes in Moscow for Q3 2016, 92.6% in the Moscow region, 97% in St. Petersburg, and 88.4% in the Russian Federation in general. As such, it is likely that the volume of HMLs issued in 2016 should exceed 2015 figures. This is due to both the slowdown in the economy’s decline and the anti-crisis measures to incentivize HML. In particular, the Government of the Russian Federation adopted Resolution No. 220 dated March 13, 2015 "On approval of the Rules for granting subsidies from the federal budget to Russian credit organizations and the Joint-Stock Company Agency for Housing Mortgage Lending for compensation of under-received income on issued (acquired) housing (mortgage) loans", in accordance with which the interest rate subsidies for HML from the federal budget were introduced in the Russian Federation. This regulation introduced interest rate subsidies on HMLs up to 13%. Resolution of the Government of the Russian Federation No. 225 dated March 20, 2015 "On Amendments to the Rules for granting subsidies from the federal budget to Russian credit organizations and the Joint-Stock Company Agency for Housing Mortgage Lending for compensation of under-received income on issued (acquired) housing (mortgage) loans" adjusted the interest rate subsidies for HML to 12%.

Further support and promotion of housing mortgage lending will be implemented using the priority project "Mortgage and rental housing" currently under development [21]. So far, the charter of the priority project "Mortgage and rental housing" has been approved. A more active use of the secondary market for HML is proposed through the issuance of MBS with the AHML guarantee. It is assumed that MBS with the AHML guarantee will provide banks with equal access to sources of long-term financing of mortgage loans and management tools for credit risk (by exchange) of mortgage loan portfolios for securities with the AHML guarantee). Increase in liquidity and decline in credit risk with banks should lower interest rates.

Given the close relationship between Moscow and the Moscow region, the key parameters of the housing mortgage market in the Moscow region can be considered. As of the end of Q3 2016, the debt of the Moscow region on HMLs totaled 821.5 bln rub. (19% of the total national...
debt on HMLs). The volume of HMLs in the Moscow region for Q3 2016 amounted to 208.1 bln rub. (20.2% of the volume of HMLs issued in the Russian Federation). In total, according to the results of 3 quarters of 2016, 65,456 HMLs were issued in the Moscow region (10.9% of all HMLs issued in the Russian Federation). At the same time, the share of arrears in HMLs in the Moscow region would be 3.8%.

The HML is currently the main institutional mechanism for supporting the effective demand for housing. Mortgage secures additional capacity utilization in the construction industry and output in other industries due to multiplicative effects, etc., which describes the economic aspects of HML. Social aspects of mortgage are associated with improving the living conditions of the population through market and quasi-market instruments.

5. CONCLUSION

Despite the fact that the further HML development will primarily depend on the macroeconomic situation, the HML market incentivization amid the falling GDP has stabilized the HML market in Russia in general, as well as in the regional mortgage lending markets under consideration. At the same time, the growth of the HML market is likely to be expected in 2016, compared with 2015. The continuation of the state support for HMLs seems to be quite likely as well and may be extended for 2017 (the interest rate subsidies are currently valid until March 2017). At the same time, a promising area in the HML market development is the issuance of MBS with the AHML guarantees, which, all other things being equal, should secure long-term funding for HMLs.

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[18] Calculated according to the Unified interdepartmental information statistical system (UIISS). https://www.fedstat.ru/


[21] Government of Russia, the charter of the priority project "Mortgage and Rental Housing" (adopted by the Presidium of the Council under the President of the Russian Federation on Strategic Development and Priority Projects (Minutes No. 8 dated October 19, 2016))