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Urban Housing Construction: International Experience of Investment Attraction

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Abstract: ***The main hurdle for the expansion of housing construction is the lack of financial resources at the beginning of the investment cycle, thus making it necessary to borrow and take out loans. Housing construction is extensive in developed countries due to well-established and reliable investment mechanisms, primarily through bank loans. Conversely, funds are lent in Russia at high interest rates, while weak risk management technologies and loopholes in the assessment of technical factors of investment construction projects restrict possibilities of domestic banks. The study aims to analyze international experience of drawing investment in urban housing construction. In the article, we analyzed scientific books about how to draw investment in housing construction. We have determined main features of investment models for housing construction and investment models for housing construction that are in use abroad.***

Keywords: ***investment, housing construction, investment system of housing construction, lending, commercial housing, social housing, affordable housing.***

I. INTRODUCTION

Housing Construction (HC) plays an important role in the socio-economic development of a country as a powerful source of the multiplier effect aimed to stimulate related industries, to generate the resource-saving effect by applying eco-technologies, to solve social problems and to expand investment opportunities of the public. A specific feature of HC as a type of investment activities determines peculiarities of its sources, forms and methods of HC investment, among which one of the leading forms is private investment that is based on a bank loan [19].

The HC investment system constitutes diversified multi-level financial relations of its subjects and a broad list of tools. As a matter of fact, construction is an investment activity. It, therefore, requires preliminary accumulation of capital, in particular as personal savings, it is financed by various forms and methods which include internal (self-financing or leverage-free financing) and mixed financing; budgetary, contractual, savings, collective financing and the establishment of joint stock companies. The state plays an important role in HC investment while supporting both developers and households in the efforts to buy homes in order to solve socio-economic problems [21]. Those forms and methods of investment are selected that will return the highest profit, according to the financial and economic characteristics of HC and investment financing rules. Peculiarities of HC as an investment target include the considerable amount of funds drawn and their long payback period, thus making it necessary to carry out thorough financial planning and forecasting of financial flows at separate stages of investment in construction.

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II. LITERATURE REVIEW

Russian scientists such as A.N. Asaul [1], V.V. Buzyrev [2], I.S. Stepanov [3], and A.D. Murzin [4] specify in their articles that until now there have not been any properly unified HC terms which restrict the development of HC financing and make further research in this direction topical.

Under the term "housing construction" M.A. Kotlyarov proposes to understand the creation of new, and also the expansion, reconstruction and revamping of civil construction facilities in order to generate profit and provide people with adequate living conditions, which requires the attraction of significant financial, labor, scientific and technical and administrative and legal resources. [5]

According to the areas of investment, the following can be classified as HC: 1) the construction of new facilities, 2) the expansion, reconstruction, revamping (towards the introduction of environmental technologies) of housing facilities. [6]

Ya.S. Melkunov thinks that an HC peculiarity is its high value, which requires such an amount of funds that can be accumulated during a certain, sometimes quite long period (depending on income generated by the public), and a big socio-economic role because it improves living conditions of the public and has a strong multiplier effect on related industries. Meanwhile, the author believes that at the same time housing construction, which funnels large financial resources into construction, solves urban development tasks aimed to create a network of educational, healthcare, cultural institutions, public utilities and public service, landscaping and area development enterprises [7].

While reviewing the HC investment process, researchers point out that it can be efficient only by balancing supply and demand in the real estate market, which is based on an efficiently operating mechanism for transforming savings into investment. Supply means HC facilities, while demand is above all the supply of financial resources [8, 9, 10]. Consequently, they think that it is necessary to highlight such HC peculiarities as an investment target as:

- a long period of simple and discounted payback period of HC investment, thus requiring careful planning and forecasting of financial flows at all stages of construction;
- the use of the substantial specific weight of borrowed funds because a construction company has to borrow heavily and needs government support due to the constant shortage of own financial sources and the lack of working capital.

Generally, M. Pushkina thinks that HC can be regarded as an aggregate of investment projects with various investment targets that aim to achieve economic, social, innovative and other efficiencies. This has a determinative effect on peculiarities of HC financing in relation to the selection of the relevant sources, forms and methods. [11, p. 139].

Nowadays, there is no unified opinion in modern economic literature about the concept "the investment system for housing construction" (ISHC), objects of its effect, functions, structural characteristics, its elements or tools [20].

According to A.B. Kopeikin, ISHC should be formed taking into account modern globalization processes, the upgrading and institutionalization of the domestic economic system, as well as operating peculiarities of financial markets. ISHC has specific features related to the two-in-one (subjective and objective) basis of its operation. The objective nature of ISHC becomes visible when it is formed taking into account requirements of objective economic laws and increases the impact of finances on public reproduction: production, distribution, exchange and consumption of housing. ISHC is formed by combining investment sources and mechanisms of investment in construction, it keeps reproduction going and, on the contrary, in the course of reconstruction and restoration of housing it promotes redistribution processes, shifting areas of financial stimulation of economic growth from supply to demand [12].

On the other hand, as researchers think, ISHC is subjective because, firstly, it is developed and formed by the state to pursue some goals of economic, particularly financial and housing, policies at a specific stage of the country's socio-economic development. ISHC is an object run by the state while pursuing financial, credit and housing policies in order to ensure financial resources are available for the purchase of residential facilities and to solve housing problems faced by the public. ISHC is a combination of financial, credit, investment relations and those of ownership. [13, 14] The study's hypothesis: main ways of improving the investment component of housing construction relate to the measures aimed to expand the banking system's possibilities to grant loans both to households and developers; to increase government support of investment in housing construction.

III. PROPOSED METHODOLOGY

A. General description

During the study, the authors applied the following methods:

- analysis of scientific literature devoted to HC investment;
- an expert poll conducted in order to determine main features of investment models for housing construction and investment models for housing construction abroad.

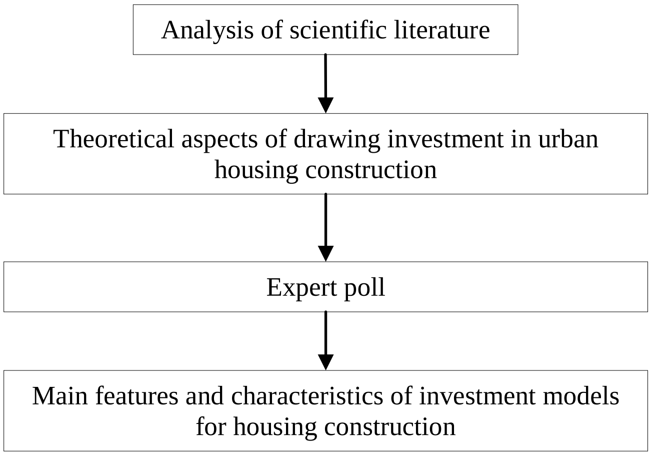
24 experts who work at economics and political studies chairs in universities took part in an online expert poll.

B. Algorithm

At the first stage of the study, the authors analyzed scientific literature devoted to the country's technological, environmental and economic security.

During the second stage, the authors determined functions and components of the state's economic security system and performed comparative analysis of the measures taken in European countries to ensure economic security.

C. Flow chart



IV. RESULT ANALYSIS

The expert poll showed that the efficient operation of ISHC in a separate country is based on the right selection of its model. Under the term "ISHC model", experts mean an aggregate of subjects and relations among them (program and project, credit and financial) for the purpose of providing resources and managing risks, thus uniting various parameters of the system into a single whole.

Essence and main features of ISHC models are given in Table 1.

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Table 1. Main features of ISHC models

<table>
<tr><th colspan="6">Models of the HC financing system</th></tr>
<tr><th colspan="3">Institutional and structural approach (ISHC levels)</th><th colspan="3">The institutional and resource approach (lending institutions that arrange lending relations and determine the formation of resources for housing construction)</th></tr>
<tr><td colspan="3" rowspan="2">One-level: German/European. One level is in operation, being represented by a specialized lending institution (SLI). An SLI that granted a mortgage loan is able to independently refinance it by issuing bonds. The model is relatively simple and the state plays an important role in its operation.</td><td colspan="3">Deposit model (retail approach). It is executed without a broad financial mediation system, private funds are invested in HC through a credit and deposit institution that integrates in itself representation, credit servicing and risk management functions.</td></tr>
<tr><td colspan="3">Model of mortgage banks. A credit facility is granted and serviced through securities issued by the bank, thus allowing specialized banks to balance out their assets and liabilities, and draw long-term funds from market institutions</td></tr>
<tr><td colspan="3" rowspan="2">Two-level: American Two levels are highlighted: lending institutions and specialized participants. The financial market (through real estate and capital markets), financial intermediaries and the state participate as well. The levels are formed through a combination of links from the lending system and financial market sectors, thus accelerating the formation of monetary capital and the appearance of financial innovation (derivatives)</td><td colspan="3">Model of the secondary mortgage institution (“liquidity institution”, “wholesale approach”).
The state takes an active part. The model is focused on the issue of bonds and the use of such a source of debt in order to refinance loans in the primary market.</td></tr>
<tr><td colspan="3">Model of the secondary mortgage market. This is the most advanced approach towards private investment in HC and the formation of an ISHC institutional structure. It leans on the secondary mortgage market to keep resources growing. Issued mortgage bonds are backed by real assets rather than by the issuer’s general assets, thus reducing its risks. The model has advantages with regard to risk management, interest rate risks and credit servicing</td></tr>
<tr><td colspan="6">Sub-models of the HC financing system</td></tr>
<tr><td colspan="2">Primary and secondary mortgage markets operate efficiently in the countries that have developed lending systems which are focused on exogenous money supply.</td><td colspan="2">While secondary markets are insufficiently developed, broad primary mortgage markets operate in the countries which boast of a developed lending system that is focused on endogenous money supply</td><td colspan="2">Secondary mortgage markets develop at a faster pace in the countries where lending systems are poorly developed</td></tr>
</table>

The expert poll also showed that, according to the above scheme of the HC investment model structure, three country models can be differentiated (American, German and Chinese).

Table 2. HC investment models in foreign countries

<table>
<tr><td>HC investment models</td><td colspan="2"></td></tr>
<tr><td>American</td><td colspan="2">- a component of instant improvements in life (the so-called American dream);
- high dependence on financial market conditions;
- subjects of lending (mortgage and commercial banks, cooperative banks, credit unions);
- the interest rate ranges from 2.5% to 8%;
- loans for up to 70% of a home’s value are granted for a term of 3 to 30 years;
- the condition: high development of the financial market’s structure and infrastructure; standardization and insurance procedures for mortgage loans, thus reducing risks faced by market participants</td></tr>
<tr><td>German</td><td>The economically lending principle of operation; opacity reducing its dependence on fluctuations in market conditions. Building savings banks (BSB) of two types with the participation of a bank, without a bank</td><td>- the bank takes an active part in verifying a client’s creditworthiness;
- it is necessary to accumulate 30% of a home’s value during three years on a special account, to which funds are deducted from wages and other sources of income, with a loan to be granted for the remaining amount;
- the lending period varies from 10 to 36 years, with loans issued at the rates of 5% to 7%</td></tr>
</table>

		- BSB use own assets without external borrowing. De jure, BSB are mutual credit societies. - the period of subscriptions is five years, with subscriptions ranging from 30% to 40% of a home's value. - the longest lending period is 12 to 18 years; there is no minimum lending period, no fines for premature loan repayment. - the rate starts from 3% to 5%; subsidies are provided to privileged categories of residents and young families of public servants
Chinese	- the presence of housing joint stock companies (HJSC); - commercial organizations which are independent of the state, to which state-run enterprises assigned their housing assets; - the enterprise does not bear any home maintenance costs, which allows it to raise wages of employees to offset their housing expenses. Subjects are the state, commercial banks, housing savings funds to which an enterprise deducts three wages of an employee (5% per month)	

V. DISCUSSION

During expert discussions, the authors reviewed separate types of ISHC models whose criterion is objects of investment. Experts think that in many countries main HC investment subjects are households who are financed by banks which accumulate personal and corporate savings and provide these resources as loans to those who intend to invest in HC. This is the so-called "deposit model".

The basis of another ISHC model, as experts point out, is formed by specialized mortgage institutions that issue mortgage loans for the purchase of residential and commercial real estate. Such mortgage institutions independently arrange the provision and the servicing of a loan that is financed by the issue of financial instruments, e.g. as mortgage-backed bonds. Issuance terms of these bonds may vary from country to country. Such financial instruments are mainly bought by institutional investors that need to make investment for the long term (e.g. pension funds and insurance companies).

Even though the ISHC mortgage model is considered to be reliable, relatively simple and transparent, it has, however, been losing popularity gradually in developed countries especially after the 2008-2009 crisis. This is so because the model's efficiency is limited to the specialization of banks, which should place sizeable bonded loans in order to maintain their liquidity and keep loan refinancing levels at a moderate level. [15]

Experts note that most developed countries formed an ISHC investment model on the basis of the secondary mortgage market whose main participants are secondary mortgage banks. The main type of their activities is to assign for a fee the rights of claim under a pool of mortgage loans and to buy/sell financial instruments, the execution of which is backed by mortgage loans. It is supplemented by the model of a secondary mortgage bank, in which the state takes an active part, setting up institutions and organization for the special purpose of ensuring solvent demand for financial instruments issued.

Experts believe that ISHC models, which are based on the operation of mortgage institutions and the secondary mortgage market, have become widespread mainly in developed countries. In most developing countries, these models lack favorable conditions for development or are at the initial stage of development. Experts note that the 2007-2008 crisis showed that these models are dangerous due to overly high risks faced by an issuer of financial instruments that were placed to securitize mortgage loans.

Experts are of the opinion that the main criterion standing the above models apart is the dominating mechanism of accumulating savings and transforming them into investment or lending institutions, and the mortgage market. In practice, these ISHC models, as a rule, do not purely exist, they are adapted to the peculiarities of the financial system in a certain country. For this reason, primary and secondary mortgage markets efficiently operate in the countries which are focused on the use of market-based accumulation and financing mechanisms. Countries, which have developed lending systems with banks prevailing, are marked by the presence of developed primary mortgage markets against relatively weak development of secondary markets. As for the countries, in which the lending system is poorly developed, banks dominate, although financing is rolled out quite extensively through the issue of bonds in secondary mortgage markets. For instance, as experts point out, the experience amassed by Singapore, Croatia, Brazil, Chile and Mexico showed that it is possible to encourage development of the primary mortgage market by speeding up development of the secondary mortgage market, thus forming a long-term resource base, guaranteeing the presence of strategic investors (above all, private pension funds) in the economy.

Speaking about peculiarities of HC investment in specific countries, experts note that in developed countries funds are quite often invested in HC with the support and under control of the state thanks to the regulation of the lending capital market, banking activities, in particular measures taken to prompt banks to issue loans for specific types of housing, direct administrative control over the use of funds provided, etc. Incentives for HC investment are often created as part of anti-crisis programs and measures taken to develop the stock market.

Experts believe that international experience related to HC investment varies depending on a facility (commercial, social or affordable housing). Funds are invested in commercial real estate on the basis of market principles. The state takes part in the investment in social housing which is designed for the poorest categories of the population (10-15 %) and in affordable housing (it is used by 70% of the public and can be bought only with state support) [22].

Meanwhile, the state can choose two areas for HC support. Firstly, the state can encourage public demand for housing by subsidizing mortgage rates, issuing loans for down payment, etc., and secondly by granting targeted loans to developers. [16]

As experts point out, as regards a positive stimulating effect on HC development, macroeconomic consequences of this support and the sequence, at which these consequences emerge, can be slightly different. Housing prices can grow when stimulating demand for housing through low-interest loans issued to households. Home builders benefit from this. When stimulating housing supply by lending construction companies, the housing market can become overheated and prices can drop marginally, thus finally having a slight socio-economic effect. To determine whether it is economically reasonable to select the first area (to stimulate demand) or the second area (to stimulate supply), it is necessary to analyze experience gained by foreign countries.

The international experience has shown that stimulating housing demand or supply in most cases concerns the so-called social housing. Experts point out that the state spends sizeable resources on the construction of social housing (1.9% of GDP in France, 1.2-1.4% of GDP in Finland, Denmark and Austria, and 0.3% of GDP in Italy). In line with foreign sources [17], the portion of affordable housing in new construction in European countries is quite big, with Austria and Denmark maintaining new construction at 24% and 28%, while affordable housing in France has recently increased to 20% of total homes built.

Experts note that 17% of families live in social housing in France and private home builders enjoy tax benefits when building housing of this kind. In Great Britain, it is the competence of local public bodies to keep the poor supplied with social housing. The construction of social housing is commissioned by the state, with private companies provided with government subsidies, grants, loans and tax benefits. Experts note that France makes wide use of the special type of regulated loans for the public (Prets (CCA)). This is the so-called social affordable mortgage loans designed for low-income households. In addition, experts point to the need of considering the possibility of applying foreign countries' experience when state-owned housing banks are used. This scheme has become widespread in Brazil, Indonesia, Jordan (as of today most banks are privately held) and Thailand. A state-run housing bank can become a driving force for the development of home lending in developing countries which have not yet created conditions for the development of mortgage lending or their banking systems face difficulties. The main problem is to ensure the operation of a state-run housing bank is efficient. If a bank operates as a state-run entity, then administrative expenses and losses related to bad loans will become a burden for the state budget. Furthermore, such banks face high political risks. As experts pointed out, the experience generated while operating state-run housing banks showed that after a positive stimulating effect they began to negatively influence the state budget because funds spent to support lending do not pay off. Experts believe that positive examples are only Thailand because its Housing Bank encouraged private lenders to issue loans to the poor, and Jordan where a state-run bank operates on commercial terms.

VI. CONCLUSION

The investment system for housing construction constitutes diversified, multi-level lending relations among its subjects and a broad list of tools (specific measures taken to deepen investment relations); objects of influence are mainly lenders and borrowers (developers, households). Moreover, such subjects as the state, associations and public organizations (associations of appraisers, realtors, self-regulatory organizations, building savings banks), as well as lending institutions play an important role in HC investment.

In foreign countries, HC investment is carried out by means of both market-based mechanisms and lending institutions, as well as various mechanisms for the accumulation of public savings in the form of private institutions and organizations. The American model is based on market accumulation and savings investment mechanisms, the German model exploits the mutual credit (BSB) mechanism with the participation of banks, and the Chinese model applies accumulation mechanisms when enterprises transfer funds to housing joint stock companies and housing savings funds. In fact, diverse institutional structures of HC investment models reflect an essential feature of HC investment systems, i.e. specific features of the mechanism of accumulating savings and their transformation into investment. The American system is based on savings through investment and the issue of securities (titles), the German one is focused on the use of credit and savings institutions, which are banks and mutual credit societies, and the Chinese system is a mechanism implying the formation of specialized funds using public money with the participation of the initial link (enterprises) under state control. Thus, the study's results confirmed the hypothesis that main ways of improving the investment component of housing construction are related to the measures aimed to expand the banking system's possibilities to grant loans to both households and developers; to increase government support of investment in housing construction.

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