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Problems of ensuring the competitiveness of investment and construction activities under new macroeconomic conditions and approaches to their resolution

The article addresses challenges in the development of the national construction industry, including: hard-to-predict inflation growth, accompanied by an increase in the cost of building materials; a decrease in real disposable income of the population, their purchasing power; lack of the personnel to perform construction work; growth of the benchmark interest rate of the Bank of Russia, accompanied by a decrease in the availability of credit resources, both for the population and construction companies; growing digitalization of the construction industry; the impossibility of not taking into account ESG principles in investment and construction activities. The authors emphasize that the above challenges exacerbate competition between construction companies, especially at the regional level. The following measures are to tackle challenges in the industry to increase the competitiveness of construction companies in the new macroeconomic environment: adjusting the product line with an emphasis on compactness and functionality; using functional cost analysis in conjunction with information modeling technologies to optimize the consumption of building resources; expansion of state support measures in terms of providing land, financial and engineering resources; development and approval by all market participants of the rules that apply to the monitoring of and compensation for the rise in the cost of construction resources; synchronization of the process of creating the utility, transport and social infrastructure with the integrated development of the territory; reducing the labour intensity of construction and increasing its labour productivity; using a client-oriented approach based on the concept of the consensus of interests; a comprehensive balanced approach to the implementation of ESG principles in investment and construction activities.

Keywords: sustainable development, investment and construction activities, competitiveness, efficiency, ESG principles

The construction industry has always been one of the main drivers of development and formed not only the quality of life, but also the tax base, created jobs. Construction, in the system of which investment and construction activities (ICA) are conducted, is a highly integrated, complex industry with a large multiplicative effect. Today, it generates about 12–17 % of all tax deductions to the country's budget, and the key task is to accelerate the development of the construction industry with an emphasis on the implementation, first of all, of the interests of the country's residents. Measures to achieve this goal are specified in the Strategy for the Development of the construction industry and housing and Communal Services of the Russian Federation until 2030 with a forecast for the period up to 2035.

The strategy sets out the following main objectives for the development of the construction complex¹:

- improving the comfort, quality and standard of living of citizens;
- formation of high-tech, competitive sectors of construction and housing and communal services;
- minimization of negative impact on the environment.

The key issue in the development of the country's construction complex is the understanding of a promising settlement system, that is determining the future place of residence of people. According to a sociological survey, about 30 % of the country's population plans to change their place of residence in the next 2–3 years [1].

The authors note that an integrated approach to the development of urban areas will fully realize the urban development potential of urbanized territories and achieve the targets set in the strategy [2]. However, in order to successfully implement the measures laid down in the strategy, it is necessary to take into account the long-term challenges that carry risks for the sustainable development of the construction complex. Among them are noted:

It is difficult to predict an increase in inflation, accompanied by an increase in the cost of building materials

According to Rosstat, consumer inflation in Russia for 2021 amounted to 8.39 %, which was the highest since 2015². At the same time, for 2022, the Central Bank of the Russian Federation predicts consumer inflation at the level of 4–4.5 %, and

¹ Strategy for the development of the construction industry and housing and communal services of the Russian Federation until 2030 with a forecast for the period up to 2035 (draft). Ministry of Construction of Russia. URL: <https://www.minstroyrf.gov.ru/upload/iblock/672/V-Strategiya-na-sayt-i-GASU.pdf>

² Rosstat has tentatively estimated inflation as a record since 2015. Forbes.ru. URL: <https://www.forbes.ru/finansy/451557-rosstat-predvaritelno-ocenil-inflatsiu-kak-rekordnuu-s-2015-goda>

experts at least 5.1 %. But the prices of manufacturers of industrial goods have increased much more significantly — by almost 30 % over the year. This is the so-called “industrial inflation”.

It should be noted that construction materials have risen in price most of all in 2021, by almost 24 %, for certain items (metal, lumber) 35–300 %. However, according to official data, consumer inflation in Russia in 2019 was 3 %, in 2020 — 4.91 %, and in 2021 — 8.39 %.

As a result, due to the increase in the cost of construction materials, the costs of government contracts for construction, repair and reconstruction in 2022–2024 may increase by 23 %. At the same time, the cost of housing in new houses in 2022 will increase by 8–10 %. If construction materials rise in price by 15 % next year, this will add about 5 % more to the cost of a square meter of housing. According to experts' forecasts, steel fittings, cables and electrics, wood and lumber will increase in price the most (by 20 %)³.

Reduction of real disposable incomes of the population, their purchasing power

According to the results of the 3rd quarter of 2021, according to Rosstat, there was an increase in real disposable monetary incomes of the population by 8.1 % compared to the same period last year (Fig. 1). However, such an increase is due to large one-time social payments to needy categories of citizens (pensioners, families with children), whose share in the income structure for this period reached 23.1 % [3].

In the second quarter of 2021, real wages increased by 5.5 %. At the same time, in the non-corporate sector during this period, the average income decreased by 18 % compared to the second quarter of 2019 (Fig. 1).

In 2020, there was a decrease in housing affordability in the country, while in 2008–2019 a steady trend was formed to increase it. In the context of the coronavirus pandemic, high price dynamics were observed in the Russian housing market, which affected the decrease in housing affordability. This trend has continued in 2021. Thus, by the end of 2021, the housing affordability coefficient (HAC) was 3.33 years, that is, it increased by 5.8 % compared to 2020⁴.

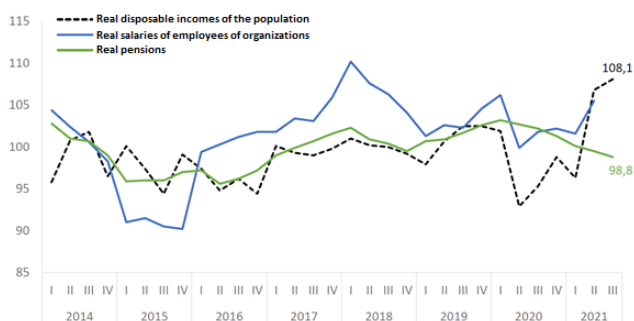


Fig. 1. Dynamics of the real disposable income of the population in 2014–2021 (in % compared to the corresponding period last year)

Lack of personnel to perform construction work

A number of sectors of the Russian economy are currently experiencing a shortage of labor both due to the restrictions associated with the pandemic and due to the increasing competition between the subjects of the country for qualified personnel. According to Rosstat, the number of required employees for vacant jobs in the 2nd quarter of 2021 increased by 59 % compared to the same period in 2020 in agriculture, by 30.2 % in construction, by 49.5 % in manufacturing, by 23.8 % in financial and insurance activities⁵. According to experts, the shortage of labor resources in construction is about 1.2 million people⁶.

Despite the fact that in 2020, the average wage of a construction worker in the country increased by an average of 30 % and amounted to about 59 thousand rubles. The personnel deficit remained at the same level. Against this background, the competition between the subjects of the country for human resources has become especially acute. Due to the fact that the highest average salary of builders is in Moscow (65 thousand rubles), St. Petersburg (55 thousand rubles) and Sochi (54 thousand rubles). With an acute shortage of migrant workers in other cities and regions, the personnel problem is further aggravated, and the commissioning dates for a number of projects are postponed, and the implementation of some remains under threat.

An increase in the key rate of the Bank of Russia, accompanied by a decrease in the availability of credit resources, both for the population and for construction companies

In relation to the construction complex, the value of the key rate affects the amount of interest on mortgage loans for the population and the level of the loan rate when construction companies use project financing.

If earlier the share of housing purchased in apartment buildings under construction with the help of mortgages was about 50–60 %, then with the introduction in 2020 as an anti-crisis measure for housing developers of mortgages with state support at 6.5 % (the maximum loan size for Moscow and St. Petersburg is 12 million rubles, and for other regions — 6 million rubles), the volume of transactions using mortgage loans increased to 80–90 %.

Along with the tightening of conditions for preferential mortgages, there is also an increase in the average rate for all mortgage programs in housing construction (Fig. 2). At the same time, experts note that with a projected rise in housing prices in 2022 by 5 % and an increase in the average mortgage rate from 9.9 to 12 %, the monthly mortgage payment with a down payment of 15 % for 20 years will increase by 21 %, and the overpayment for the entire term of the loan will increase by 32 %. It can be assumed that this will contribute to a reduction in demand for residential real estate and a contraction of the market as a whole. Based on the pessimistic scenario of the real estate market development associated with Western sanctions, the growth rate of the cost per square meter may increase significantly.

3 Khusnullin called the rise in prices for building materials the main threat to the industry. News of the day in Russia and the world — RBC. URL: <https://www.rbc.ru/society/27/12/2021/61c91aa89a794761a939a141>

4 Dynamics of housing affordability in 2006–2020. Foundation “Institute of City Economics”. URL: https://urbaneconomics.ru/sites/default/files/zapiska_po_dostupnosti_zhilya_v_subektah_rf_2020_itog.pdf

5 Federal State Statistics Service. Socio-economic situation of Russia (January–October 2021). URL: <https://rosstat.gov.ru/storage/mediabank/osn-10-2021.pdf>

6 The Ministry of Construction announced a shortage of 1.2 million builders in Russia. Forbes.ru. URL: <https://www.forbes.ru/newsroom/obshchestvo/422961-minstroy-zayavil-o-nehvatke-12-mln-stroiteley-v-rosii>

► Due to the growth of the key rate, not only mortgages are becoming more expensive, but also loans for developers, which increases the cost of construction and housing prices. In 2021 alone, rates on various banking products for developers increased from 6.5–7.5 % to 10.5–11.5 %. According to the Bank of Russia, in the 3rd quarter of 2021, the share of projects in housing construction using project financing exceeded 70 %. The average rate for project financing on September 31, 2021 was at the level of 3.3 %, while the majority of loans (598 billion rubles) issued at a rate of less than 1 %⁷.

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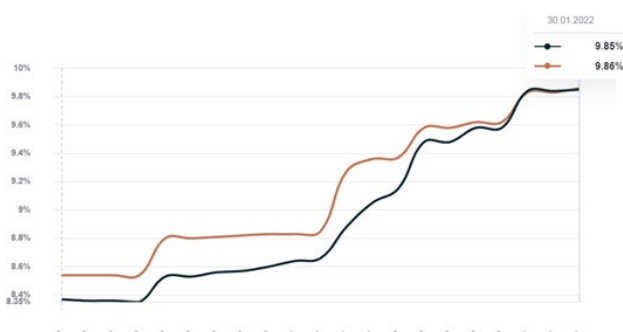


Fig. 2. Dynamics of changes in the average mortgage interest rate according to the top 15 mortgage banks of the Russian Federation from September 2021 to January 2022

Together with the deterioration of housing affordability for the main consumers and the slowdown in sales, the average project financing rate for developers in 2022 may be 12–15 %, which will also increase the cost of construction.

Increasing digitalization of the construction industry

The gradual transition to the examination of project documentation in electronic form, the provision of most services by municipal authorities in a remote format marked the beginning of the digitalization of the construction industry. The pandemic has only accelerated the process of introducing digital technologies into construction. Of particular relevance today is the introduction of information modeling technologies (BIM) into the industry. BIM is an information model of buildings and infrastructure facilities. During the design process, all architectural and design, technological, economic and other information and documentation about the building is worked out on the basis of an information model. It is assumed that the use of the information model will avoid design errors, improve

the overall quality of the project documentation being prepared and reduce the overall construction time.

Since 01.01.2022, the use of BIM for all capital construction projects being built at the expense of budgetary funds is mandatory. And for developers carrying out construction in accordance with the legislation of the Russian Federation on shared-equity construction, the use of BIM will become mandatory from 01.01.2023.

The cost of implementing BIM consists of the following components: re-equipment of one workplace of the designer 400–600 thousand rubles; payment of licensed software — about 200 thousand rubles per year for one workplace. The cost of designing using BIM in the total cost according to companies is no more than 8 %.

Due to the novelty of digital design tools, it is still difficult to talk about the effects of their implementation. Some experts note that a positive effect is possible only as a result of building a system process throughout the construction cycle, and the costs invested in a project designed using BIM are returned by optimizing the costs of construction and maintenance of the facility.

The inability not to take into account ESG principles in investment and construction activities

In recent years, the trend towards responsibility and environmental friendliness has spread to the investment sector. As a result, the concept of ESG emerged. The abbreviation ESG can be deciphered as "ecology, social policy and corporate governance". In a broad sense, this is the sustainable development of commercial activity, which is based on the following principles: Environment — responsible attitude to the environment; Social — high social responsibility; Governance — high quality of corporate governance.

In Russia, some banks are already testing borrowers for compliance with the principles of sustainable development. A business that claims to have a good ESG score must meet development standards in three categories: social, managerial and environmental [4].

At the same time, the main thing for sustainable development is to maintain a balance between all criteria. It is necessary that, if environmental and social requirements are met, the investment costs of their implementation do not reduce the return on investment to an unacceptable level.

The challenges outlined above exacerbate the issues of competition between construction companies, especially at the regional level. The increasing level of competition is one of the three main factors constraining the activities of construction companies [5]. As a result, the current situation in the residential real estate market leads to an acceleration of the withdrawal of weak and small companies from the market, and industry leaders gain an advantage. At the same time, competition between large companies in the market is intensifying, which leads to the need to improve the product they offer [6].

In the current conditions, the increasing demands of consumers, including those caused by the need to spend more time in their apartments due to epidemiological restrictions, are also leading to an increase in the quality of the product created by construction companies. Currently, buyers' demands are growing for the location of the house, the layout of apartments in it, the decoration of common areas, the provision of parking spaces, social infrastructure and the services presented in the project for future residents. An adequate assessment of consumer preferences and their

⁷ On project financing of housing construction in the third quarter of 2021. The Central Bank of the Russian Federation. URL: https://cbr.ru/Collection/Collection/File/39315/pf_2021_Q3.pdf

⁸ Dynamics of housing affordability in 2006–2020. Foundation "Institute of City Economics". URL: https://urbaneconomics.ru/sites/default/files/zapiska_po_dostupnosti_zhilya_v_subektah_rf_2020_itog.pdf

effective implementation in a development project will allow the company to resist in conditions of increased competition [7].

Summarizing the above, the authors propose the following measures to respond to modern challenges in ICA to increase the competitiveness of companies in new macroeconomic conditions:

1. Adjusting the product line with an emphasis on compactness and functionality is not just reducing the area of a commodity unit, but designing the space and volume of an apartment while maintaining the basic functions necessary for a comfortable life. As measures to optimize the functionality of the apartment in practice are used — the built-in furniture of the apartment, the use of modern household appliances and others. When forming a product line, it is proposed to allocate the largest share of space for full-fledged 1-room apartments and 2-room studios of moderate size. As a result, it will be possible to increase the availability of housing with minimal losses in its functionality.

2. The use of functional cost analysis (FCA) in conjunction with BIM to optimize the consumption of construction resources. Variant design based on information modeling using various design schemes, construction technologies and materials will allow for a sharp change in the cost of building materials to replace them with analogues with identical physical properties. The use of the FCA is advisable not only at the design stage, but also throughout the life cycle of an investment and construction project (ICP). At the same time, it is necessary to decompose key functions by levels of development in urbanized territories - an apartment, a residential building, a micro-district (quarter), a city, an agglomeration, taking into account age and changing needs by groups of main consumers for effective design of the living environment.

3. Expansion of state support measures in terms of providing:

- land resource — free municipal land plots; preferential tax rates for complex development of the territory; equivalent exchange of the developer's land resource provided for social facilities; provision of compensatory land plots with participation in projects with low marginality.
- financial resources — infrastructure budget loans; 100 % prepayment for joint implementation of projects within the framework of public-private or municipal-private projects; gratuitous subsidies for socially-oriented companies of the construction complex; ensuring an acceptable marginality of development projects at the level of at least 15 % in the complex development of the territory.
- engineering resources (water supply and sanitation, electricity, heat supply) — the formation of comprehensive programs for the development of engineering infrastructure, taking into account long-term housing construction plans; to provide for the obligation of natural monopolies to finance the development of engineering infrastructure primarily in areas of integrated development of territories; to include the costs of engineering infrastructure in the tariff and thereby distribute them evenly among all users.

Additionally, in this block it is proposed to expand the measures of state support in terms of the formation of preferential conditions when providing mortgage loans to citizens when purchasing housing directly from construction companies. In particular, it is necessary to increase the maximum size of the loan provided to borrowers to 12 million rubles throughout the country, to set the interest rate at a level of no more than 50 % of the size of the key rate of the Central Bank of the Russian Federation. At the same time, it is necessary to keep the rate on previously developed mortgage

programs ("family mortgage" — up to 6 %, "rural mortgage" — up to 3 %, "Far Eastern mortgage" — up to 2 %) at the same level. It is also necessary to develop new mortgage programs for certain categories of the population (young families, teachers, doctors, etc.) and for certain regions of the country with a high level of migration (for example, "Siberian mortgage").

4. Development and approval by all market participants, both government customers and commercial companies, of the rules for monitoring and compensation of the rise in the cost of construction resources in the process of construction works. In conditions of a long construction cycle during the construction of capital construction projects (2–3 years or more) and a difficult-to-predict increase in market prices for construction resources, it is necessary to compensate for the resulting increase in the cost of construction and installation work. In accordance with the proposed rules, the difference in the price of resources at the time of conclusion of the contract compared with the price at the time of calculations for the construction and installation work performed should be compensated by the customer, developer or investor.

5. Synchronization, primarily on the part of state authorities and resource-supplying organizations, of the process of creating communal, transport and social infrastructure in the complex development of the territory. To create not just residential complexes, but residential ecosystems, including public spaces, workplaces, places of leisure and recreation, social and transport infrastructure, taking into account the interests of all population groups, as well as mechanisms and management system of the residential complex.

6. Reducing the labor intensity of construction to increase labor productivity. It is necessary to improve design solutions and use digital technologies as a tool to significantly reduce time costs in construction. According to expert estimates, an increase in labor productivity in construction by 20 % will reduce the number of necessary workers by 1 million people. In addition to the use of innovative materials, equipment and mechanisms, it is also necessary to form a new ecosystem of personnel training in the construction industry in the digital economy.

7. Using a client-oriented approach based on the concept of consensus of interests. The concept of respecting the interests of the main subjects of interaction will allow us to get away from the principle of "the consumer is always right" and develop the construction complex more effectively. It is assumed that a consensus of interests of economic entities, the absence of which causes an unbalanced development of both urbanized territories and the construction complex as a whole, can be achieved by taking into account and harmonizing the goals pursued by all development entities. The creation of showroom apartments, including in digital form, the offer of various options for the purchase of objects (subsidized mortgage, installments, trade-in, etc.), variable finishing of apartments, etc. can be used as measures to maximize the satisfaction of the interests of consumers.

8. A comprehensive balanced approach to the implementation of ESG principles in ICA. The trend towards sustainable development, taking into account ESG principles representing responsible attitude to the environment, high social responsibility and high quality of corporate governance, is becoming dominant in the development of the economy in general and ICA in particular. Banks and investment funds are beginning to take it into account when deciding on financing investment projects. Objects built on these principles are in great demand among buyers. Accordingly, the selling price, for example, of apartments in such objects, is always higher than in ordinary houses.

▶ An integrated approach ensures the balance of all three components of sustainable development: environmental, social, and economic. For example, the ecological component assumes, when implementing investment projects, the obligatory organic interaction of natural and urban planning systems, the preservation of urban forests, parks, water bodies, coastal strip, natural landscape. The social component can be provided by the preservation of historical monuments; renovation of the historical center of the city while preserving the original architectural appearance. It is also important to form a high-quality urban environment with sufficient landscaping, public spaces, a developed road network, the necessary number of parking lots, social infrastructure, etc. The economic component is the provision of reasonable profitability in the implementation of investment projects. When building valuable urban areas, a significant part of the urban rent should be invested in the formation of a high-quality environment, the construction of social and engineering infrastructure. If the built-up area is less valuable, then the municipality must compensate part of the costs so that the developer receives a minimum sufficient return and the integrated development project of the territory takes place.

Taking into account environmental principles has been called green construction. The first national standards of green construction have been developed and approved. They outline the ultimate goals of "green" construction — minimizing the level of consumption of energy and material resources throughout the life cycle of the investment object — from design to demolition, improving the quality of real estate and comfort, environmental safety for people and nature⁹. The main thing is to find a middle ground in

the implementation of ICA, which will allow you to comply with both the principles of profitability and the principles of ESG.

The measures proposed by the authors as a response to future challenges will contribute to improving the competitiveness of companies engaged in ICA and the construction industry as a whole.

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Проблемы обеспечения конкурентоспособности инвестиционно-строительной деятельности в новых макроэкономических условиях и подходы к их решению

В статье подробно раскрыты перспективные вызовы для развития строительного комплекса страны, среди них: труднопрогнозируемый рост инфляции, сопровождающийся увеличением стоимости строительных материалов; снижение реальных располагаемых доходов населения, их покупательской способности; отсутствие кадров для выполнения строительных работ; рост ключевой ставки Банка России, сопровождающийся уменьшением доступности кредитных ресурсов как для населения, так и для строительных компаний; возрастающая цифровизация строительной отрасли; невозможность не учитывать ESG-принципы в инвестиционно-строительной деятельности. Авторами отмечается, что обозначенные выше вызовы обостряют вопросы конкуренции между строительными компаниями, особенно на региональном уровне. В качестве актуальных мер реагирования на вызовы в отрасли для повышения конкурентоспособности строительных компаний в новых макроэкономических условиях предлагаются следующие мероприятия: корректировка продуктовой линейки с акцентом на компактность и функциональность; использование функционально-стоимостного анализа в совокупности с технологиями информационного моделирования для оптимизации расхода строительных ресурсов; расширение мер государственной поддержки в части предоставления земельных, финансовых и инженерных ресурсов; разработка и утверждение всеми участниками рынка правил мониторинга и компенсации удорожания

стоимости строительных ресурсов; синхронизация процесса создания коммунальной, транспортной и социальной инфраструктуры при комплексном освоении территории; снижение трудоемкости строительства и повышение производительности труда; использование клиентоориентированного подхода на основе концепции консенсуса интересов; комплексный сбалансированный подход к внедрению в инвестиционно-строительную деятельность принципов ESG.

Ключевые слова: устойчивое развитие, инвестиционно-строительная деятельность, конкурентоспособность, эффективность, ESG-принципы

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