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## HOUSING AFFORDABILITY ISSUES IN UKRAINE

*The article is dedicated to the analysis of population's housing provision in Ukraine and its certain regions considering the methodological features of assessing housing affordability indicators, as well as the losses in the housing stock as a result of military invasion. The purpose of the paper is the methodological determination of housing affordability indicator, assessment of its pre-war trend in Ukraine; and determination of an acceptable for modern conditions institutional mechanism for improving housing affordability based on the principle of rent. The novelty of the research is the substantiation of use of permanent housing lease mechanism. These schemes can be implemented at the state and regional levels with the direct participation of investors and local self-government bodies within the framework of public-private partnerships. In the paper the pros and cons of the current mechanisms of housing construction and obtaining are identified; prospective directions and possible financial mechanisms for state housing policy implementation in the current condition of construction industry and population welfare are shown. Research methods are the following: correlational, analog, time series for the analysis of regional differentiation of housing affordability in Ukraine.*

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*Housing affordability has become much more complicated due to the need to restore damaged and destroyed dwellings. In view of current situation, prospective dynamics of living area commissioning indicator aimed at bringing the level of housing provision of Ukrainian citizens closer to the indicators of European countries was determined. In the absence of official housing purchase estimates at the national level, the ratio of median cost per square meter of living area to the median wage was used as the housing affordability ratio. The housing affordability ratio for the regions of Ukraine was calculated. According to the generally accepted classification of housing markets by affordability criterion, the purchase of housing in the country is significantly complicated. The correlation between the housing affordability indicator and the living area commissioning indicator was calculated, which was negative and indicated that the regional programs for providing the population with housing are critically unsatisfactory. The positive and negative features of the financial instruments for ensuring the housing affordability for the population and their compliance with the strategic goals of the housing policy development were determined. The financial and organizational mechanism of lease as a target vector for providing the population with housing was proposed.*

**Keywords:** *housing affordability ratio, economic sentiment indicator, living area, mortgage, housing lease, rent, collective investment institutions.*

**Introduction.** Ensuring housing affordability is an urgent task of social and housing policy of Ukraine. It is because providing the population with living space cannot be ensured only by market financial instruments: joint financing institutions, targeted bonds, construction financing funds, bank mortgages, and others. Therefore, the requirement to manage the offer of affordable housing by various alternative institutional mechanisms in the modern state housing policy cannot be doubted. However, the issues of choosing financial instruments favorable to the population is not sufficiently analyzed. In this regard, the study of solving the housing affordability issue is scientifically appropriate.

**Analysis of recent research and publications.** Scientific developments in the field of housing provision for population can be broadly divided into three analytical blocks: financial and economic, social and statistical, architectural-spatial and domestic.

Publications on financial and economic problems are purposefully presented in a specialized international journal “Housing finance international”. The issue of housing provision development for the population of Ukraine and the problem of financial affordability of housing was covered by V. Novikov and A. Burdiak [1, p. 17—24]. The research revolved around stable conditions of Ukrainian economy’s functioning. Since the publication of this article, there have been radical changes of macroeconomic and socio-demographic situation, which require a new understanding of housing provision issues for the population of Ukraine.

The social and statistical issues of housing provision were investigated in numerous studies, e.g. by W. Adema and M. Plouin [2], K. Dumičić, B. Žmuk [3], which analyze housing affordability in different countries and discuss recommendations for governments to make housing more affordable. Important issues

of housing affordability are the ability of the population to pay for housing and utility services, which are considered in the studies by V. Sarioglo [4, 5], M. Ohay [5], G. Tereshchenko [5].

Issues of housing provision in Ukraine's local territories in terms of architectural-spatial and household arrangement were studied in collective monograph "Housing conditions of the population: factors, current state and regulation policy" [6] by the team of authors from the Ptoukha Institute for Demography and Social Studies of the NAS of Ukraine. Articles on particular issues of comfortable housing in Ukraine were written by L. Cherenko [4, p. 126—139], A. Reut, Y. Kohatko [8, p. 123—144,], L. Holovko [9, p. 103—115], V. Zaiats [10, p. 137—151], V. Shychkin [11, p. 152—165], Y. Klymenko [12, p. 209—217].

**The aim of the article.** The purpose of the paper is the methodological determination of housing affordability indicator, the assessment of its pre-war trend in Ukraine; and determination of an acceptable for modern conditions institutional mechanism for improving housing affordability based on the principle of rent.

**Research methods** are the following: correlational, analog, time series for the analysis of regional differentiation of housing affordability in Ukraine.

**The novelty of the study.** The expediency of using the permanent housing rent mechanism as a tool for providing affordable housing in the conditions of a high-level uncertainty of using market instruments for the majority of the population was substantiated. Such scheme could be implemented at the state and regional levels with the direct participation of investors and local self-government bodies within the framework of public-private partnerships.

**The current state and crucial problems of housing sector.** The situation with housing provision for population in Ukraine in acute martial law conditions is exposed to additional risks associated with requirement to rebuilt destroyed or damaged houses. This situation leads to the threat of slowdown in the total living area commissioning that is required for implementation strategic goals and annual tasks of the state housing policy.

Since 2014 (after illegitimate occupation of the Autonomous Republic of Crimea, the city of Sevastopol, and parts of the Donetsk and Luhansk regions), the unequal recovery of housing sector has been increasing, and the housing provision inequality has been growing both regionally and socially. It leads to growing tension in socio-economic and political relations, which results in decreasing population's trust in measures for formation and implementation of state housing programs. Institutional instruments for financing housing construction and housing sale have been remaining untransparent, and their implementation have not been stimulating the growth of solvent demand for housing.

According to the special study data, as of September 5, 2022, the amount of damaged and destroyed housing was 131.3 thousand houses, of which 15.27 thousand were high-rise apartment buildings. Direct losses amounted to UAH

47.8 billion, for 88,5 % of which accounted high-rise apartment buildings. It has had extremely negative impact on the population's housing provision (Table 1) [13].

The amount of damaged and destroyed housing, according to preliminary data, is 131,3 thousand houses. Direct losses amounted to UAH 47.8 billion (Table 1). About 800 thousand Ukrainians need to repair or rebuild their homes. First of all, compensation will be provided to the categories of citizens determined by the Verkhovna Rada of Ukraine. As of March 2023, the Ministry of Digital Transformation of Ukraine has recorded more than 340,000 applications concerning damaged and destroyed housing [13].

By the end of 2022, it was also planned to introduce financial mechanisms to provide rent support to vulnerable categories of IDPs and those, whose housing was destroyed. From October 1, the Affordable mortgage program at 3 % is to become operational in Ukraine. According to Cabinet of Ministers of Ukraine Resolution No. 856, mortgage loans at a preferential rate of 3 % or 7 % per annum will be issued for 20 years, and the obligatory contribution of the borrower will be at least 20 % of the value of the real estate object. The main obstacle to the housing reconstruction is, firstly, the absence of a single legal regime for land and the building built thereon, which restricts developers from access to bank financing; secondly, the lack of transparent mechanism for the use of the Fund for the Reconstruction of Property and Destroyed Infrastructure. According to experts' estimates, the corruption margin is from 20 to 40 % of the cost of the constructed objects.

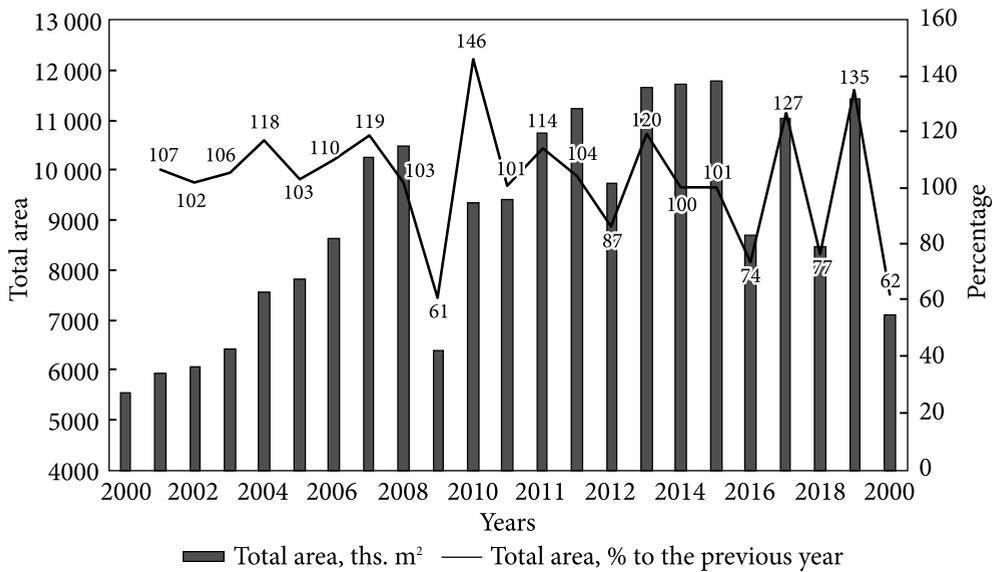
One of the main indicators of population's housing provision is the total area of commissioned residential buildings. From 2014 till 2021, the dynamics of this indicator has been negative in contrast to previous years (Fig. 1).

Thus, from 2000 to 2013, the total area of commissioned housing increased more than twice, while for the period 2015—2021, its index was 0.98. The slow-down in housing growth has negative impact on housing provision of the population. In 2020, there were 24.5 square meters of living area for each resident of Ukraine. This indicator is comparable to similar indicators in other former Soviet countries, but lower than in the countries of the Eastern Europe, for example, Hungary (31.2), the Czech Republic (28.7) and significantly less than in

**Table 1. Losses in the housing sector, September 2022**

Objects	Direct losses, \$ billion	Quantity, units, thousand	Total indirect losses, \$ billion	The total need to restore the sector, \$ billion
Residential buildings:	47.8	131.3	3.5	75.3
private houses	5.4	115.9	—	—
apartment buildings	42.3	15.27	—	—

Source: [13].



**Fig. 1.** Total area of commissioned residential buildings, 2000—2022

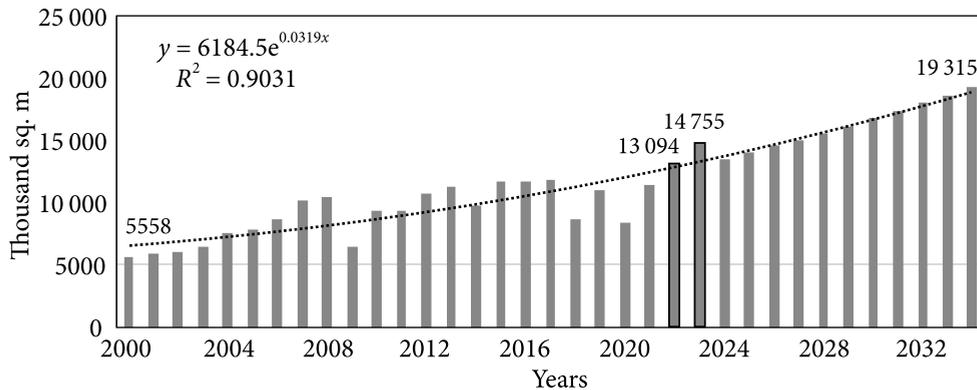
Source: State Statistics Service of Ukraine [16].

EU countries such as Germany (42.9), the Netherlands (41.4), Switzerland (46.6), Denmark (51.4) [14].

In order to get closer to European countries in terms of providing the population of Ukraine with housing up to the level of 35.0 square meters of total living area per person in 10 years (2024—2034), after the restoration of residential buildings destroyed or damaged in 2022 and 2023 (total of 3,322,000 sq. m.), it is necessary to ensure the annual rate of housing construction of at least 3.6 % (Fig. 2).

In fact, for 2000—2019, the index of total living area of commissioned residential buildings in cities was 1.57, the index of living area (apartments) commissioning was 1.69, which is twice less than required. At the same time, the excess of the growth of residential units over the growth of the living area means a reduction in the rate of the living area commissioning. The reason is the high market prices for dwellings, that leads to reducing the availability of comfortable housing. In terms of socio-demographic policy, it is important to provide the family with comfortable living conditions, that's why the strategy of housing provision for population should focus on two indicators: total living area commissioning (thousand square meters) and the number of residential units and rooms in them, which meets modern housing standards.

The housing stock of Ukraine consists mainly of old buildings. Only 8.7 % of houses were built after 1991. In its remaining part, 40.5 % are houses that were built before 1960 and require capital and current repairs. These include



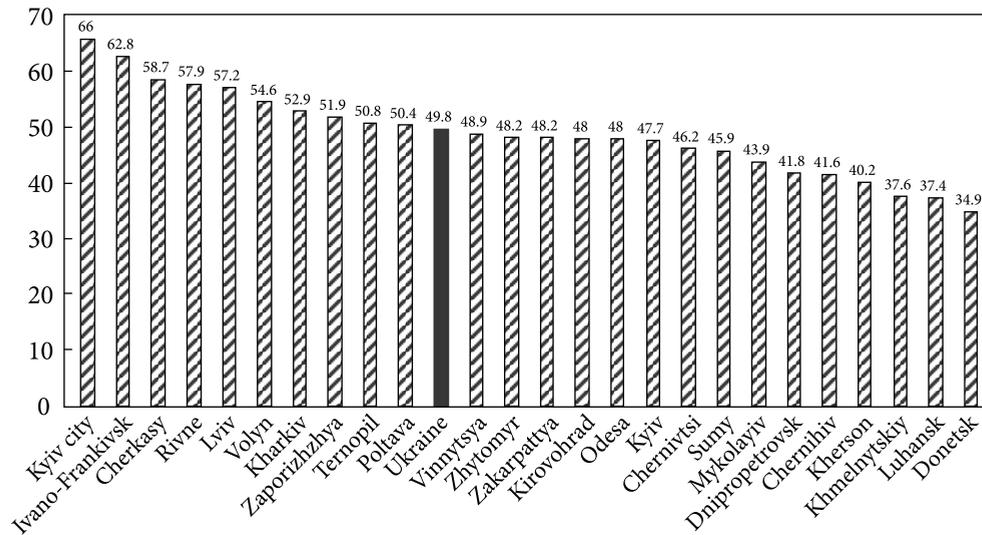
**Fig. 2.** The dynamics of the buildings' total living area commissioning  
Source: [17].

multi-apartment buildings, which have already exhausted their operational resource after several decades of mismanagement and lack of proper repair. According to academic and statistical studies, houses that are repaired every year make up 0.1 % of the housing stock. However, even in them, repairs are limited to urgent works that do not lead to any improvement in living conditions. Almost 0.4 % of the housing stock of Ukraine is dilapidated and wrecked. In such houses live 177.8 thousand citizens.

A consequential aspect of housing affordability is housing overcrowding. The overcrowding rate is defined as the percentage of the population living in an overcrowded household, i.e., a household that does not have at its disposal a minimum number of rooms available, depending on the household's size, family situation and the ages of its members [18].

In 2021 in Ukraine almost 50 % of total population lived in overcrowded housing [18]. The largest share of such individuals lives in Zakarpattya, Ivano-Frankivsk, Lviv, Khmelnytskyi, Ternopil oblasts and the city of Kyiv (Fig. 3). The negative situation in the housing sector is aggravated by the long-standing issue of overcrowded households. According to 2021 statistical data, 7.1 % of households are almost three times behind the national average size of living area per person, they have less than 7.5 square meters per each family member [17].

In the EU 17 % of population lived in overcrowded households in 2021 [18]. The overcrowding rate in Ukraine is comparable with similar indicators in some Eastern European countries, such as Romania (41 %), Poland (35.7), Bulgaria (37.9), Latvia (41.3, but it is inferior to, for example, Hungary (18), the Czech Republic (15.4 and is significantly worse than in the countries of the central EU, such as Germany (10.6), Switzerland (5.8), the Netherlands (3.4 %) [18]. The main reason for the high level of housing overcrowding in Ukraine is low housing affordability and inability of the majority of the population to purchase their own



**Fig. 3.** Share of the population of Ukraine living in overcrowded housing conditions  
Source: [17].

housing of appropriate quality. The limited living space and housing overcrowding make the issue of housing affordability more sharp. Therefore, an important component of housing affordability is increasing the availability of improved housing conditions for households living in overcrowded conditions.

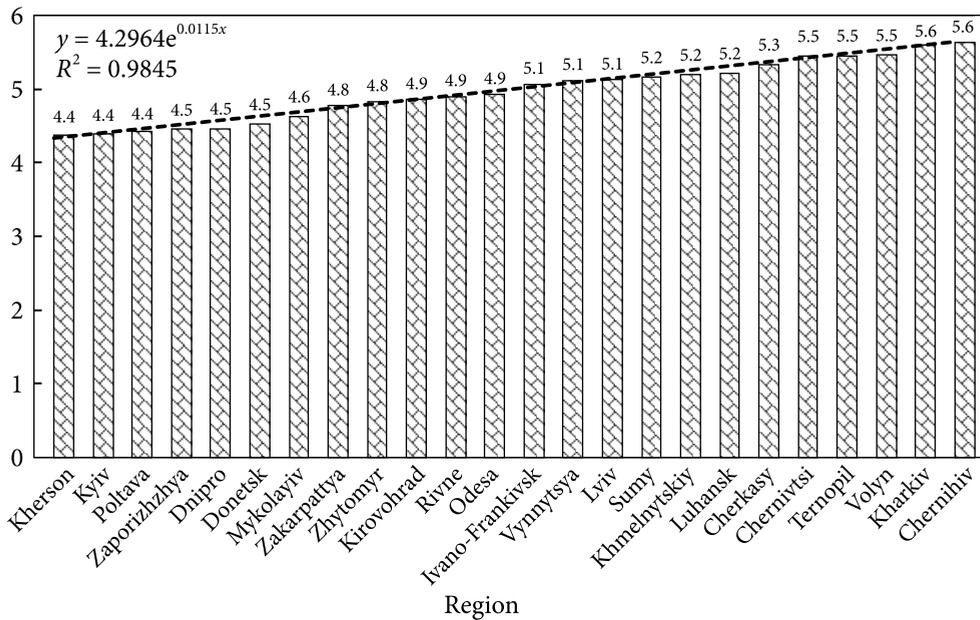
**Housing affordability.** The analysis of housing conditions shows that in the general socio-demographic structure of households there are different groups of households, including those that live in unsatisfactory conditions and require special attention within the framework of the national housing policy. However, at the national level, there are no official assessments of the housing purchases, on the basis of which it is possible to estimate the housing market development and to elaborate the effective financial instruments for housing construction. Meanwhile, housing affordability indicators are regularly calculated in international practice. There is no international agreement on definition or measurement of housing affordability, and there is no single measure to completely reflect all issues around the ability of households to secure decent housing in an appropriate location for an acceptable price. One of such housing affordability measures is the median multiple indicator, recommended by the World Bank and the United Nations, that rates affordability of housing by dividing the median house price (or median cost per

**Table 2. Demographia Housing Affordability Ratings**

Housing Affordability Rating	Median Multiple
Affordable	<3
Moderately Unaffordable	3–4
Seriously Unaffordable	4–5
Severely Unaffordable	>5

Source: [19].

ment of housing affordability, and there is no single measure to completely reflect all issues around the ability of households to secure decent housing in an appropriate location for an acceptable price. One of such housing affordability measures is the median multiple indicator, recommended by the World Bank and the United Nations, that rates affordability of housing by dividing the median house price (or median cost per

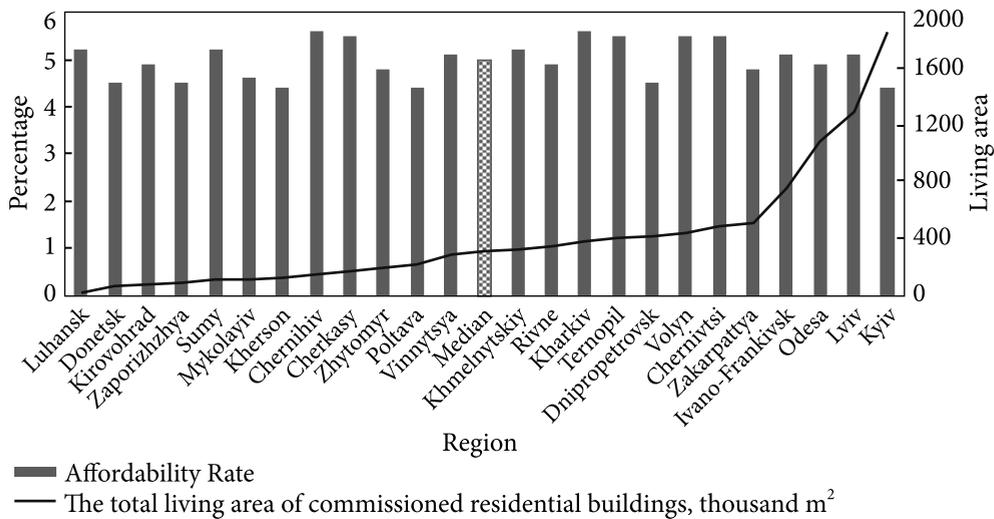


**Fig. 4.** Housing affordability ratio by regions of Ukraine  
 Source: own calculations based on [20].

square meter of living area) by the median household income (or median wage). This indicator characterizes the population’s demand for housing and is measured by the number of years in which family can purchase a dwelling.

According to this methodology there are generally accepted Housing Affordability Ratings (Table 2). This rating rates middle-income housing affordability in 92 major housing markets in eight nations: Australia, Canada, China, Ireland, New Zealand, Singapore, the United Kingdom and the United States.

In Ukraine, research of affordability, construction and diversity of housing is in development stage. There are the results of studies on the housing affordability in Ukraine, which are compared with similar international indicators. Owing to the lack of data on housing prices in local markets in Ukraine, housing affordability was estimated based on average price data at the regional level. The proposed approach is useful but does not particularly solve the problems of comparing the solvent demand and housing construction indicators, their mutual influence, as it relies on “manual” collection of information in the absence of official statistical data. The data show that in one half of the regions the housing purchase is seriously complicated, in the other — it is essentially unaffordable, and there is not a single region where it is affordable. For a more detailed assessment of housing affordability, it is theoretically possible to compare the calculated housing area commissioning index by regions. The results of the calculations are shown in Fig. 5, Table 3.



**Fig. 5.** The population's housing provision in the regions of Ukraine, 2020  
 Source: own calculations based on [17].

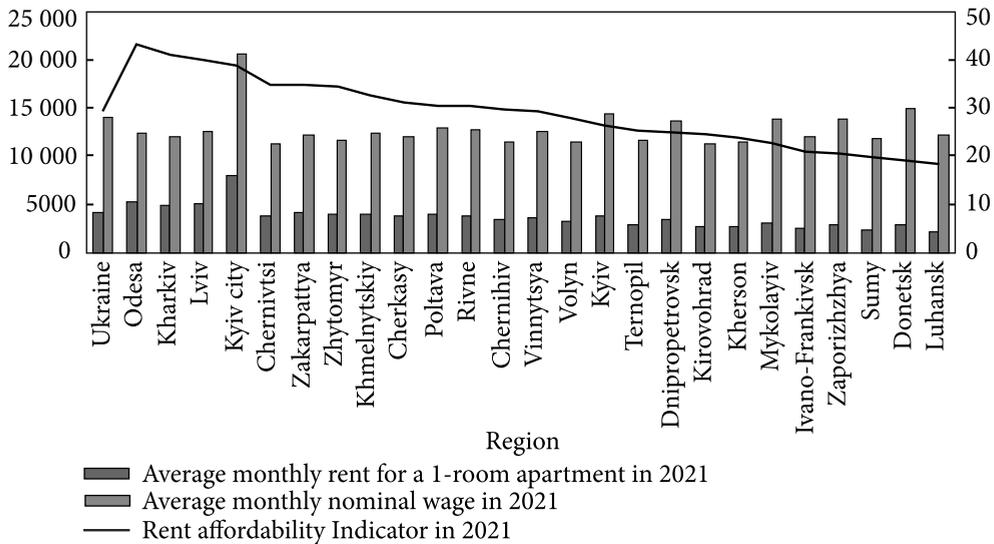
**Table 3. Indicators of the statistical series variation of population's housing provision by the regions of Ukraine, 2020**

Oblasts	Affordability Rate	The total living area of commissioned residential buildings, thousand m <sup>2</sup>
Median	5.0	306
Standard deviation	0.405	440.5
Coefficient of variation	8.1 %	144 %
Correlation coefficient	-0.086	

Source: own calculations based on [17].

Data in Table 3 shows a significant difference in the regional indicators of variation between the housing availability and total living area commissioning. Coefficients of variation characterize the amplitude of deviation of series and show the homogeneity or heterogeneity of phenomena and processes that determine the housing provision to the population.

The coefficient of variation of total living area commissioning is 144 % and exceeds the variation of housing availability by almost 17.8 times. This suggests that the regional population's demand for dwellings, which is to some extent determined by the affordability factor, does not correspond with the indicators of its satisfaction. Regional programs of total living area commissioning, as already noted, differ by 17.8 times from the population's needs in housing and have remained critically unsatisfactory for a long time. The correlation between the two mentioned series is negative and low (-0.086), which confirms the low level of

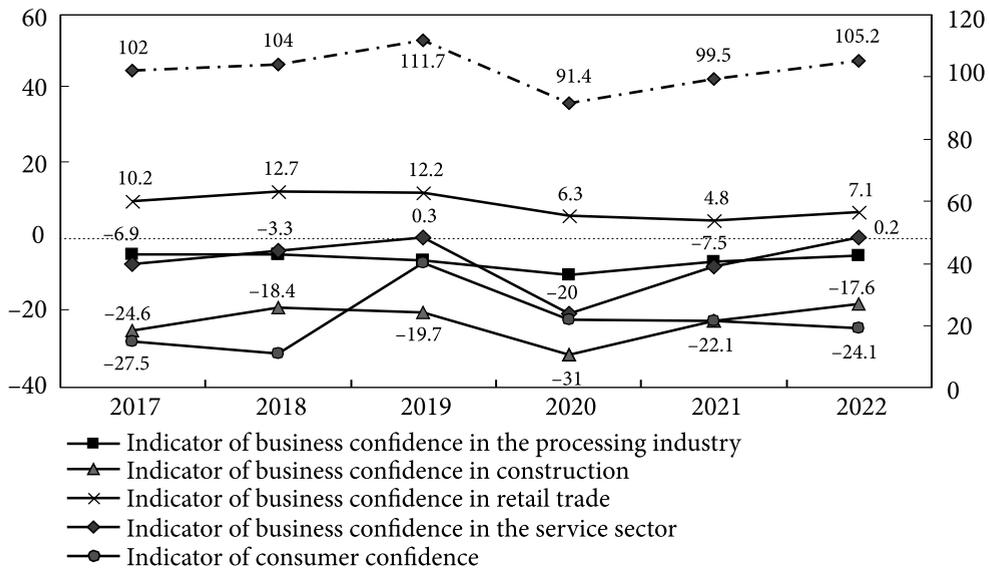


**Fig. 6.** The rent affordability indicator in 2021  
*Source:* own calculations based on [20].

connection density between the two mentioned series and indicates the weakness of the state’s housing policy.

The negative correlation across the country as a whole was the result of the situation in nine regions: namely, in Kyiv, Lviv, Odesa, Ivano-Frankivsk, Zakarpattya, Chernivtsi, Volyn, Dnipro, Ternopil oblasts. In these oblasts, the correlation between the indicator of housing affordability and the indicator of total living area commissioning was negative and amounted to  $-0.487$ , coefficient of variation of total living area commissioning indicator was 1.002 and that of housing affordability  $-0.084$ . In the rest of the regions, the correlation between the analyzed indicators was 0.353 with a variation of 0.084 and 0.083, respectively. The high level of heterogeneity of total living area commissioning indicators by regions clearly indicates that in the first group of regions, the population purchased housing not only at the expense of available wages, but also from other sources of income that were not taken into account by statistical authorities. This trend has been stable for many years.

The rent affordability indicator measures whether a typical salary is enough for a typical rental home at the national level based on the most recent price and income data. It is calculated by dividing the average monthly rent for a 1-room apartment by an average monthly nominal wage [20]. The calculation determines whether rent payments are less than, equal to or more than 30 % of average wage. For Ukraine at the end of 2021, this ratio was at the level of the affordability threshold and stood at 29.4 % (Fig. 6), but for some oblasts it exceeded 40 % (in Odesa oblast rent affordability indicator was 43 % in 2021, in Kharkiv oblast — 41, in Lviv oblast — 40, in the city of Kyiv — 39 %).



**Fig. 7.** Economic sentiment indicators (ESI)  
 Source: [21].

In the near future, the ratio between the housing affordability rate and total living area of commissioned residential buildings will be influenced by the condition of construction industry. The Economic sentiment indicator (ESI) in construction has a negative value, is unstable and inferior to the indicators of other industries (Fig. 7). In this paper the ESI is calculated by the method of business expectations indicators calculation, approved by order of the State Statistics Service of Ukraine of December 3, 2021 No 301. Indicators of business confidence, depending on the sector, are evaluated on the basis of surveys on the current level of orders and finished product stocks, changes in sales amounts over the past three months, forecast of changes in production/sales amounts and the number of employees in the next three months. The slowdown of the ESI in construction has a similar effect on housing construction. During 2017—2020, housing construction indices decreased from 22.5 to 14.6 (Fig. 7).

In the conditions of military invasion, the negative dynamics of the economic sentiments indicator in construction will intensify. Already in the first quarter of 2022, it was 17.6. Accordingly, the total living area commissioning will also slow down. To revive business activity, developers should take measures to reduce the housing cost per square meter. This can improve the housing affordability ratio. However, in housing stock structure, a significant share will still belong to poor households, whose housing needs remain unsatisfied. Measures to restore destroyed and damaged housing can have a positive effect on the housing affordability ratio, since the owners of such housing are mostly low- and middle-income households. According to the Government, the demand for hou-

sing in coming years will increase. About 800,000 Ukrainians are already in need of home repair or reconstruction. Due to the state housing policy, measures of social support will be implemented to meet their needs. First of all, compensation will be received by categories of citizens determined by the Verkhovna Rada of Ukraine. As of March 2023, the Ministry of Digital Transformation of Ukraine recorded more than 340,000 applications concerning damaged and destroyed housing [14]. Under these conditions, it is necessary to revise and improve the mechanisms of housing construction financing.

**Financial instruments and strategic aims of housing development.** Before the full-scale invasion, a wide system of institutional instruments for housing construction financing has been developed in Ukraine, that includes: housing and construction cooperatives; joint financing institutions; targeted bonds; venture fund options; funds for financing construction; bank mortgage; preferential housing financing programs (state, regional, corporate, bank); state mortgage; financing at the individuals' own expense.

However, before choosing the housing construction financing method during the period of war, attention should be paid to a number of important issues. It is of primary importance for investors, developers and customers of construction to determine the risks of certain financing method.

In fact, housing and building cooperatives (HBCs) were a massive and only way of housing construction financing before the transition of the economy to market relations. HBCs as a traditional way of purchasing housing have been integrated into the market economy and are used by the population along with other methods to improve housing conditions. With the cooperative method of financing, the HBCs act as the customer of the construction, and the buyer becomes a member of the HBC and concludes an agreement on share participation. According to the document, buyer makes a share contribution to the HBC and, after the construction is completed, receives an apartment.

The advantages of HBCs as non-profit organizations are that together with individual entrepreneurs, who provide various services for HBCs, they significantly optimize taxes for their own benefit. However, cooperative method of financing housing contains some limitations for the development of urban infrastructure. Thus, if the construction project provides for the placement of commercial premises (shops, cafes, restaurants, etc.) in a residential building, then their obtaining by individuals through the housing association is complicated, as this would be contrary to the statutory goals of the housing association, where housing is defined as the main object.

For dwellings' buyers the main risk of housing construction financing by HBCs is that in case of discontinuation of construction for any reason (including as a result of financing cessation, the obstacles in the approval of project documentation by state bodies, etc.), no one is responsible for the termination of construction and, accordingly, the return of funds to investors (buyers of apartments).

The legal specifics of HBCs consist in the fact that buyers of apartments combine their financial and other resources and carry out construction independently. In fact, the developer as such does not exist in the usual sense, because the developer is the HBC as a legal entity, the members of which are the buyers. In this regard, two legal entities are combined in one subject of economic relations. When problems arise during construction, a conflict of ownership manifests itself: the members of the cooperative do not lose the legal basis for solving them through their cooperative organization, of which they are members.

The problem could be solved through the so-called associate membership, which is provided for by the Ukrainian legislation. For many years, in practice real developers act as founders of the HBCs and become their members with the right to vote and make any decisions. All apartment buyers investing in housing construction are accepted exclusively as associate members, not full members. The main difference between them is that the associated members have the right to only an advisory vote, which does not allow them to vote and make decisions on the activities and functioning of HBC. Therefore, membership in HBC does not provide any real privileges to investors (associate members).

The economy stagnation in 2012 and the deep recession since 2013 became the main obstacles on the way to the renewed development and implementation of housing policy. In addition, Ukraine faced serious challenges in 2014 due to occupation of parts of the Donetsk and Luhansk oblasts and the annexation of the Autonomous Republic of Crimea and the city of Sevastopol. Under these conditions, the search for the institutional forms of state support for housing construction became an urgent task. In view of this, the Law of Ukraine "On Collective Investment Institutions" [22] was adopted in 2013. Collective investment institutions (CIIs) are investment funds that accumulate financial resources for gaining further profit by investing them in securities of other issuers, corporate rights and real estate. In Ukraine such institutes are defined as corporate or mutual funds, that operate in the construction industry as CIFs (corporate investment funds) or UIFs (unit investment funds). The essence of joint investment consists in joint investment both by the founders of CIFs / UIFs, and by individuals and legal entities that purchase securities issued by such funds.

When investing with the participation of CIFs / UIFs, two schemes are used: sale of property rights to apartments by the fund; or selling derivatives (forward contracts).

According to the first investment scheme, the property rights to the apartments are transferred by the developer to the CIF / UIF, which further transfers the full property rights to the apartments to the future owners on its own behalf.

According to the second scheme, the developer issues forward contracts for the purchase of property rights to apartments. The CIF / UIF buys these contracts on the stock exchange and further concludes contracts of purchase and sale of derivatives (forward contracts) with housing buyers, who pay the CIF/ UIF the

certain price of the contract. After concluding the contract, the buyer gets the right to conclude a contract for the purchase and sale of property rights to the apartment with the developer in the future.

The main advantage for the developer is tax optimization. CIF / UIF acts as a wallet for the developer, where the net profit from the sale of dwellings is accumulated. According to the second scheme, the buyer concludes two contracts — with the CIF / UIF and with the developer company. The buyer pays part of the funds to the CIF / UIF, which due to its special status does not pay income tax, and the other part — to the developer company, which spends the funds directly on the construction.

The disadvantage of these schemes is that if the CIF / UIF buys property rights or derivatives from the developer exclusively with the funds received from apartment buyers, then such operation does not correspond to the essence of joint investment, which involves funds from both CIF / UIF founders and third-party buyers. Accordingly, there is a risk that such transactions will be recognized as fictitious by the court at the request of the tax authorities with the corresponding imposition of taxes and fines.

According to the Law of Ukraine “On financial and credit mechanisms and property management during housing construction and real estate transactions” (as of January 1, 2004) [23], developers and intermediary investors lost the mechanism of attracting funds for housing construction through investment contracts. The new law on housing financing provides for raising funds through targeted bonds, which are debt securities, the purchase of which allows to obtain goods or services. The developer issues targeted bonds, the repayment of which occurs through the transfer of real estate objects. Usually, the redemption of issued bonds is carried out by mutual investment institutions (CIF / UIF). The advantage of the bond transaction for CIFs / UIFs is that they are not subject to VAT, and they don't have to pay income tax, which is very important in an unstable economic situation.

However, the institution of targeted bonds reveals certain contradictions in practice. Key condition for the issuance of targeted bonds in accordance with the legislation is the redemption of such bond issue in full at nominal value. Since the bonds are issued for the entire area of the construction object, it is quite problematic to carry out their full redemption, even at the expense of the construction costs, due to the need to attract a large amount of funds.

Usually, with this investment scheme, the buyer will purchase bonds, to each of which a certain number of square meters is assigned without detailing the accommodation. In addition, the developer and the buyer sign a contract for the reservation of accommodation, with the characteristics of the apartment, which is to be transferred to the buyer in the future. However, such reservation agreement does not impose real legal obligations on the developer, and as a result, the buyer will purchase square meters of an unspecified property. In addition,

the reservation is made for the projected apartment number, therefore, after completion of construction the numbering of the apartments may be changed.

Along with the mentioned law, the Law “On financial and credit mechanisms and property management during housing construction and real estate transactions” (2003) [23], which is in force in Ukraine, defines the general principles, legal and organizational principles of attracting funds of individuals and legal entities to management for the purpose of financing housing construction and the peculiarities of managing these funds, as well as legal principles and peculiarities of issuing, placement and accounting of certificates of real estate transaction funds.

The common financial mechanism for the purchase of housing is a mortgage, which is regulated by the Law of Ukraine “On Mortgages” (2003) [24]. A mortgage is a targeted bank loan for housing, that is beneficial for several reasons: no costs for renting temporary housing; no need to accumulate significant sums of money; a way to avoid inflation as real estate rises in value. After paying the initial payment, people become the owners of housing, which is gradually paid off. Banking programs also extend to land plots and shares in residential complexes under construction. This makes the mortgage even more profitable because at the zero cycle, prices are lower than at the stage of putting the house into operation. Interest rates on mortgages are generally lower than on other types of loans. Creditors could offer a variety of mortgages, and a mortgage with affordable options could be found [24].

Disadvantages of mortgage lending include the risk of remaining in debt even after many years, and possibility of losing dwelling in the event of non-compliance with payment requirements. The mortgage system may involve various fees. In addition to the interest rates, the fee for real estate appraisal, insurance, commissions could be added. Interest rates on mortgage loans may increase depending on the market situation. Significant general costs are another disadvantage of mortgage. The amount paid during the entire term of the mortgage can be equal to the value of the dwelling that becomes the property of the mortgagee.

A mortgage with state financial support has a great social importance. The advantage of this way of housing provision is the low interest rate, that makes mortgages available to more people. There is a possibility to encourage the borrower for payments in preferential mortgage programs. In particular, if the loan is not paid within three months, the borrower generally loses the privileges for compensation. There are methods in the practice of banks that do not allow zeroing of funds that are intended for housing construction. They allow banks to write off funds, and this procedure does not depend on interruptions with budget funding.

The issue of subsidized mortgage is its financial dependence on state support. With its reduction or termination, the mortgage program loses its effectiveness. The crisis trends of 2014—2017 had a negative impact on the implementation of

state programs for providing for housing needs of citizens who are partially compensated for the cost of housing construction. The three most common housing programs: “Affordable housing”, “Program to reduce the cost of mortgage loans”, “State program for providing housing for youth for 2013—2017” [25, 26, 27] were reduced due to lack of funds since 2013. State funds were used only to fulfill obligations under previously concluded contracts.

This method of housing financing has certain advantages. According to the Tax Code of Ukraine, art. 173 [28], a person who owns real estate for up to three years pays 5 % personal income tax and 1.5 % military levy for its sale. The cost of notary services is about 2 %. Thus, the tax burden on the natural person (a construction customer) is only 8.5 %. This scheme is especially common in the Kyiv oblast, where there are low-rise buildings with small living area.

The analysis of the main methods of housing financing in Ukraine shows, that they mostly have an entirely market orientation and are aimed at the high-income population. The sustainability of these financial mechanisms is closely related to the financial stability of the economic system. The stronger it is, the more efficiently the institutional mechanisms in the housing sector work. A stable and effective system of financial methods for purchasing housing, which citizens trust, is a necessary condition for the development of the housing sector. The National Bank of Ukraine, which has a wide range of instruments for ensuring financial stability, pays insufficient attention to the effectiveness of housing financing mechanisms, their qualitative analysis and informing and warning about the detection of risks. It is necessary that the National Bank, which adheres to the recommendations of the European Systemic Risk Board (ESRB), clearly and publicly defines the goals and tools of macroprudential policy in the area of construction and purchase of housing by the population. It is important that this is done and publicized in macroprudential strategies. They should focus on solving two urgent tasks: restoring destroyed housing and creating a modern, civilized housing market for the future.

It could be implemented through the housing lease mechanism as a targeted providing of population with housing in the system of public-private partnership. In the updated housing policy, the particular importance has a system of rental apartment houses construction in the regions, that ensures the housing affordability for population. Such schemes can be implemented at the state and regional levels with the direct participation of investors and local self-government bodies. Financing of rental apartment houses should become the main source and organizational mechanism for the development of residential construction in the medium term.

Rental housing on the basis of non-commercial hiring would give an opportunity to provide housing for households with incomes insufficient to purchase dwellings and will offer possibility to improve the situation with housing overcrowding.

The development of affordable rental housing construction is possible if the following measures are implemented [29]:

- gradual increase of the share of rental housing to 5—10 % of the total volume of newly built housing;
- ensuring of affordable commercial housing rents for families with average incomes;
- development and implementation of typical construction projects for rental buildings with economy-class apartments;
- creation of a specialized state body with the functions of an investor and owner of rental housing;
- deshadowing of rental operations due to a reduction in the tax rate on rental income.

Creating social prospects for improving living conditions for all strata of the population without balanced functional-spatial development of territories and improving the quality of the urban environment carries the risk of losing the sustainable spatial organization of settlements. In the conditions of military operations, changes in the housing market, internal migration of the population and free movement of capital, it is necessary to calculate the prospects of complex socio-economic development of urban and rural areas. Expanding the spectrum of opportunities in this direction will not only prevent negative consequences in the disposal of land during housing construction, but will also contribute to the implementation of new planning solutions.

**Conclusions.** The issue of housing affordability requires coordination of the goals and objectives of the housing policy with the goals and objectives in other areas of regulation, for example, financial. In Ukraine, the study of the availability and diversity of housing construction mechanisms in relation to household income is just beginning, which is mainly due to the lack of necessary statistical data. The article uses housing affordability coefficient — the ratio of the median cost of square meter of living area to the median wage, which makes it possible to characterize the population's demand for housing. Sixteen regions of the country are the most deficient in terms of housing affordability: Kirovohrad, Poltava, Chernihiv, Sumy oblasts and others. According to the generally accepted classification of housing markets according to the criterion of affordability in Ukraine in general, the purchase of housing is seriously complicated. The value of the housing affordability factor is equal to five. Above this threshold, housing is considered unaffordable. In the article, the affordability of housing is considered as a tool to increase the solvent demand of the population for housing construction. Monitoring and evaluation of the existing institutional mechanisms for attracting public funds for the purchase of comfortable housing was carried out. Their potential was determined in relation to the cost of housing and the availability of the involved financial resources of the population. When interpreting the obtained results, it is important to keep in mind that the investment value

of each of these market mechanisms at each moment of time is very conditional and cannot serve as a universal measure of housing affordability.

To ensure the availability of housing, the concept of non-commercial rental houses is proposed. This approach makes it possible, in accordance with social standards, to provide housing to citizens who have low incomes and need to improve living conditions. The mechanism for the development of non-commercial rental houses is focused on the possibility of subsidized rent at below-market rates. A positive attitude towards the lease mechanism is based on European practice. More than 50 % of households in European countries live on the basis of rent.

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### АКТУАЛЬНІ ПИТАННЯ ДОСТУПНОСТІ ЖИТЛА В УКРАЇНІ

У статті здійснено аналіз забезпечення населення житлом у масштабах країни та в розрізі окремих регіонів з урахуванням методологічних особливостей оцінки показників доступності житла, а також втрати частини житлового фонду внаслідок воєнних дій. Метою статті є методологічне визначення показника і основного тренду доступності житла в Україні та обґрунтування прийнятого для сучасних умов інституціонального механізму доступності житла на основі принципу оренди. Новизна дослідження полягає в обґрунтуванні використання механізму безстрокової оренди житла. Така схема може бути реалізована на державному і регіональному рівнях за безпосередньої участі інвесторів і місцевих органів самоврядування в рамках державно-приватного партнерства. Методами дослідження є кореляційний, аналоговий, варіації динамічних рядів для аналізу регіональної диференціації доступності житла в Україні. У статті визначено позитивні та проблемні питання чинних механізмів будівництва і придбання житла. Показано перспективні напрями та можливі фінансові механізми реалізації державної житлової політики в умовах сучасного стану будівельної галузі та добробуту населення. В Україні 2000 р. спостерігалось пожвавлення житлового будівництва, проте проблема забезпеченості громадян України житлом не вирішена. Питання забезпечення житлом значно ускладнилось у зв'язку з необхідністю відновлення пошкодженого і зруйнованого фонду. З огляду на такий стан речей визначено перспективні показники динаміки введення житлової площі в експлуатацію з метою наближення рівня забезпеченості громадян України житлом до показників європейських країн. В умовах відсутності на національному рівні офіційних оцінок придбання житла використано коефіцієнт доступності житла як відношення медіанної вартості квадратного метра житлової площі до медіанної заробітної плати. Розраховано коефіцієнт доступності житла по областях України. Відповідно до загальноприйнятої класифікації ринків житла за критерієм доступності, придбання житла в країні суттєво ускладнено. Розраховано кореляцію між показником доступності житла та показником введення загальної площі житлових будівель в експлуатацію, яка виявилася від'ємною. Негативне значення коефіцієнта кореляції свідчить, що регіональні програми забезпечення населення житлом є критично незадовільними. Відповідно до розрахованого індикатора економічних настроїв, на неузгодженість між двома зазначеними показниками впливатимуть значні ризики в будівельній галузі. Визначено позитивні і негативні риси комплексу фінансових інструментів забезпечення доступності житла для населення і їх відповідність стратегічним цілям розвитку житлової політики. Запропоновано фінансово-організаційний механізм оренди як цільовий вектор забезпечення населення житлом.

**Ключові слова:** коефіцієнт доступності житла, індикатор економічних настроїв, житлова площа, іпотека, житлова оренда, інститути спільного фінансування.