“Impact of the war in Ukraine on the real estate market in Romania: Analysis in geopolitical context”

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IMPACT OF THE WAR IN UKRAINE ON THE REAL ESTATE MARKET IN ROMANIA: ANALYSIS IN GEOPOLITICAL CONTEXT

Abstract

The war in Ukraine has caused profound transformations in the dynamics of the Romanian real estate market, reflecting the impact of a complex combination of economic and financial, demographic and socio-cultural, as well as political and legal factors. In this context, the objective of the study is to analyze the impact of the war in Ukraine on the real estate market in Romania by assessing the influence of determinants to identify measures to support the stability and development of the real estate market within geopolitical crises. Subsequently, based on statistical analysis methods, the econometric model was developed considering as dependent variables the real estate market (measured by average price for housing) and independent variables – the number of Ukrainian migrants, interest rate on mortgage loans, GDP per capita, and inflation rate. The research results reveal that Ukrainian migration has a significant positive impact on the real estate market, leading to price increases for housing in urban areas and increased demand for rental housing. In addition, mortgage interest rates show a significant negative impact, suggesting that lower affordability of financing limits purchases of real estate. Moreover, GDP growth per capita is positively correlated with price dynamics in the real estate market, confirming that a prosperous economy stimulates investments in real estate. Findings provide valuable insights into understanding how geopolitical and economic factors interact to influence the real estate market.

Keywords Ukrainian migrants, real estate market, interest rate on mortgage loans, average price of housing, inflation rate

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INTRODUCTION

In recent years, property prices and demand for property have increased in the global real estate market. This has been affected by various aspects, including increased urbanization, population, economic and financial transformations, and other technological and social changes (Hasanli, 2023). Urban development and population growth significantly contribute to rising prices for real estate and housing. Demand for these properties has increased as people seek more opportunities related to education, employment, and urban living. Financial and economic changes have significantly influenced the global real estate market. Economic expansion led investors to increase prices for real estate. At the same time, analysts believe that the full-scale war in Ukraine, which started in February 2022, has also triggered significant changes in multiple areas, including real estate. Geopolitical conflicts influenced both by international relations and regional economies affected capital flows, labor market dynamics, and demand for residential property (Hodula et al., 2024). Romania, due to its proximity to Ukraine, has become a key player in managing the refugee crisis and an attraction point for investors looking for safe alternatives in regional markets (Ambassade de Grance en Roumanie, 2022).

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In the real estate market, the consequences of what happens, at least in the short term, will be less than in many other sectors that are likely to go through immediate crisis. This is because sanctions imposed on Russia have immediate effects on the global markets and the global economy. On the other hand, the real estate sector responds to market logic based on medium- and long-term cycles, so it is difficult to see a short-term repercussion (Smith Agency, 2022). There are two of the most likely medium- and long-term consequences that will affect the housing market, and various possible scenarios will emerge in response to these effects. The first consequence relates to the expected inflation increase, which could lead people to take action and make more prudent choices, which in turn could have repercussions in the real estate sector. The second consequence is the inevitable rise in mortgage interest rates. Fixed-rate mortgages have increased, which is clearly not good news. This effect will cause more difficulties for those who want to get a mortgage, obviously because of continued increased costs and uncertainty about the future (STC Partners, 2024). Although benchmark rates for fixed and variable mortgages are falling, inflation is likely to affect bank spreads, leading to an overall increase in mortgage costs.

In simple terms, it all depends on inflation, but to get an idea of interest rates and mortgages, one needs to take the cost of a mortgage loan as an example and compare it between a mortgage loan taken out a year ago and one taken out now. For a fixed loan of EUR 126,000 at 70%, to be repaid in 25 years, the best rate (APR) available online on March 1, 2022 is 1.44%, with a rate of EUR 489 per month; 12 months ago, for a similar transaction, the best rate was 1.04%, and the rate was EUR 466. This means that a person taking out a fixed-rate mortgage now pays about EUR 6,900 more in interest over the loan life than a year ago. This is an example based on the current situation; in the future, this situation could be better or worse. In this context, it is interesting to analyze how this military conflict has influenced the Romanian real estate market, focusing on identified determinants of housing prices.

1. LITERATURE REVIEW AND RESEARCH ANALYSIS

The war actions in Ukraine have generated significant economic and social transformations in the region, affecting real estate markets in neighboring countries, including Romania, through increased migration and intensified pressures on housing demand. Most studies on migration's impact on the housing market consider the effects of increased demand for housing in urban areas, emphasizing that the influx of migrants can lead to increased prices for housing, especially in regions with limited supply. In addition, economic research has emphasized the role of macroeconomic factors, such as interest rates and GDP per capita, in shaping house prices (Iacoviello, 2005; Saiz, 2007; Gyourko, 2009; Dominese et al., 2020; But, 2024).

Existing scientific research confirms that the war in Ukraine was an important catalyst for changes in the real estate market in Romania. The main changes are related to the growth of demand, infrastructure investments, and socio-demographic shifts. Romania's geopolitical stability and integration into European structures create favorable conditions for the further development of the real estate market.

1.1. Financial challenges of European countries due to migrants – Statistics on Ukrainians in Romania

Financial challenges faced by European countries, exacerbated by the influx of migrants, are highlighted by recent statistics focusing on the significant impact of Ukrainian migrants on Romania's economy, especially in sectors such as real estate and social services.

There are currently over 78,400 refugees from Ukraine in Romania. Within the last two months, the total refugee population from Ukraine in Romania has decreased from 85,000 in December 2023 to 78,400 as of January 28, 2024. UNHCR (2023) and its partners have observed that some of the most vulnerable refugees have left Romania, both to Ukraine and to other European countries, as they cannot continue sustaining their rent and

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Source: Government of Romania (2024).

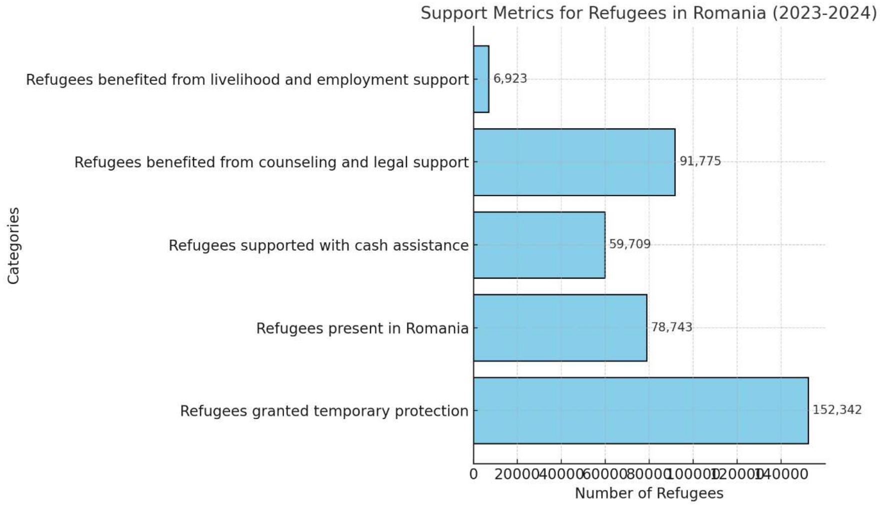

Figure 1. Indicators of support for Ukrainian refugees in Romania (2023–2024)

other expenses without financial support that has been delayed in recent months (ESE, 2024; IOM, 2024). A decrease in support and services provided by humanitarian organizations further aggravates this situation. In addition, seasonal end-of-year movements have affected the overall refugee presence in Romania. UNHCR and partners are monitoring movements in border areas (Figure 1).

The crisis has created huge need for legal support and counseling, reflecting complicated challenges faced by refugees. This indicator suggests the proactive approach in guaranteeing their rights and protection. Lower number of refugees who have benefited from livelihood and employment support services underlines difficulties of integrating refugees into the Romanian labor market, highlighting the required better coordinated employment policies.

There are different views in the specialized literature about the advantages and disadvantages of this migration phenomenon. All European nations suffer from migration issues, yet analysts think that the economy can gain from the flood of refugees and economic migrants (Dominese et al., 2020). According to some academics (Balan & Cozma, 2024; Gluszak & Trojanek, 2024), the current state of migration indicates that European culture is ending. Others (Hasanli, 2023; Hlaciuc, 2023) see the current state of migrants as a sign of the failure of the “managed migration” policy and a reflection of ineffective European institutions and organizational structures designed to control migration flows. For example, although Ukrainians have become part of the European labor force by paying taxes and are already supporting the economies of the countries in which they live, the presence of Ukrainian migrants has also affected real estate markets in their host countries. Even though only a quarter of them could rent housing on their own, rent prices have increased significantly in many cities (But, 2024).

There are unmistakable instances where issues arise as refugees search for long-term solutions after departing receiving centers or other temporary housing. In many countries, the majority of Ukrainian migrants could not get access to private renting markets. Many tenants feel insecure about their housing status because rent is sometimes so exorbitant. Rules have not worked in some countries, including Hungary, Poland, Romania, and Slovakia (Habitat for Humanity, n.d.). In addition, rents are particularly high, particularly in metropolitan areas with many job opportunities. Moreover, not trusting the refugees’ ability to pay, both private landlords and real estate companies tend to ignore potential Ukrainian customers (e.g., in Slovakia and Spain) (Eurofound, 2024).

The real estate market is influenced by many economic, demographic, and political factors, each having a significant impact on price and demand dynamics (Gyourko, 2009). In this context, it is essential to unveil these determinants to facilitate

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a comprehensive understanding of the phenomenon. Table 1 presents the main determinants of the Romanian real estate market.

Table 1 highlights that mortgage interest rates directly influence housing affordability and the level of real estate investment, while economic indicators such as GDP, employment, and inflation affect both residential demand and investment segment. Investment opportunities depend on the general economic context, without direct impact on the mass residential market, and the depth of capital markets is mainly relevant for developers and institutional investors. Not to be neglected are government policies, subsidies, taxes, and regulations that can stimulate or discourage transactions and construction, while investor protection has an indirect, more pronounced impact on the commercial segment. The legal framework, through clear and transparent procedures, attracts investors and stimulates large developments. Similarly, demographics, including urbanization, migration, and population structure, directly influence housing demand, while socio-cultural preferences for home ownership have a more subtle but constant impact on consumer decisions (Dragomir & Alexandrescu, 2017; Drăghia et al., 2024). Another critical factor in the current context is a military conflict, which, although indirect, amplifies the effects of demographic, economic, and political factors, playing a cross-cutting role that intensifies pressure on the real estate market (Loza et al., 2024). The other group of determinants can also include geopolitical factors, and in this regard,

Table 1. Determinants of the Romanian real estate market

Factors		Criteria	Impact description	Impact	References
Economic and financial factors	Interest rates	• Mortgage interest rates • Monetary policy • Credit affordability	• Low interest rates stimulate real estate purchases • NBR policy directly influences access to finance for home buyers	High	Mäki (2020)
	Depth of capital markets	• Available funding • Diversity of financial products • Integration with international markets	• Sophisticated capital market allows for the development of large projects and attraction of institutional investors	Low	
	Economic indicators	• GDP • Employment • Wage levels • Inflation	• Inflation GDP growth correlated with real estate market expansion • Higher employment leads to increased demand for housing and commercial space	High	Diaconu and Tiliuta (2023)
	Investment Opportunities	• Real estate investment returns • Availability of capital • Associated risks	• Investments in fast-growing areas can offer high returns. • Favorable legal framework attracts foreign investors	Medium	Hlaciuc (2023)
Demographic and socio-cultural factors	Demography	• Population growth • Age structure • Urban-rural migration • Changes in family dynamics	• Increased demand for housing in densely populated urban areas. • Growth in the working population segment may stimulate housing demand • Population aging influences the demand for affordable housing	High	But (2024)
	Socio-cultural background	• Buying/renting habits • Social and cultural norms • Financial literacy level	• Cultural preference for home ownership influences demand. • Changing social norms may lead to greater demand for compact or modern housing	Medium	Fóti (2024)
Political and legal factors	Government policies/ legislation	• Housing subsidies (e.g., “First home”) • Taxation (e.g., VAT) • Planning regulations	• Government subsidies make home ownership more affordable • Taxation may increase transaction or construction cost	High	Government of Romania (2024)
	Investor protection	• Legislative stability • Respect for investors’ rights • Efficient judicial procedures	• Stable and predictable environment attracts investors	Low	Popescu and Ciora (2015)
	Legal framework	• Procurement regulations • Restrictions for foreigners • Authorization deadlines	• Clear and efficient procedures reduce risks for developers and investors.	Medium	Bird and Amaglobeli (2022)

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government policies/legislation are highly influenced by geopolitical context, as government decisions can reflect the international relations of the nation and strategic priorities (Dragomir, 2017a). Moreover, although less directly, capital markets can be influenced by regional geopolitical stability. For example, in times of international tensions, investor confidence may decline, thereby affecting liquidity and depth of markets. A different indicator/factor that can be included in the geopolitical factors category is investor protection – which is related to the political and legal stability of the country, where geopolitical factors play a key role in ensuring a favorable investment environment.

For the specific case of Romania, literature sources are limited, but market reports and economic analysis provide valuable clues about the secondary effects of the conflict in Ukraine. These include a sharp increase in housing prices and diversified demand for residential property.

1.2. Migration impact of the Ukrainian population on the European real estate market

Real estate market regimes in Europe are characterized by variety and fragmentation. Most of 27 EU Member States have their own fund structures and legislation. This fragmentation of the European market contrasts with the situation in financial markets of the United States or Asia, which have one and the same real estate equity regime in each state, allowing development of the real estate equity market that is currently larger than all national real estate equity markets in Europe put together.

In Central and Eastern Europe (CEE), which includes Poland, the Czech Republic, Hungary, Slovakia, and Romania, commercial real estate investment totaled EUR 5.1 billion in 2023, marking the lowest level in the decade. This decrease was influenced by restrictive financial conditions and economic uncertainties. In Romania, the volume of real estate investments was around EUR 500 million in 2023, down 47% compared to an average of the last five years. However, in the first three quarters of 2024, the market recorded a significant increase, with a total investment volume of almost EUR 655 million, representing an increase of 169% compared to the same period in 2023.

The real estate business in accordance with IAS 40 and IFRS 13, however, has some specific characteristics. Large proportion of investment property on the balance sheet normally signifies long life cycle of properties, which creates considerable uncertainty about the value of a real estate portfolio and makes the chosen valuation procedure highly significant in terms of the income statement, and also in terms of the balance sheet (Mäki, 2020).

In general, the European real estate market has been affected by the negative effects of the restrictive monetary policy implemented in an attempt to limit rising inflation. According to Wallut (2023), director of real estate research and sustainable investments at La Française Real Estate Managers, the war between Ukraine and Russia is one of the factors contributing to inflation (rising prices of commodities, including food and energy), but not the only one: "Even before the invasion of Ukraine, inflationary pressures were building up. Historically, high government spending plans during the COVID-19 crisis to support economic growth led to a massive savings glut and very high employment rates worldwide. Excess savings led to increased demand once the world reopened after COVID-19, which in turn led to inflation."

Discussions with experts revealed that geopolitical instability is influencing investor perceptions, with many investors preferring to invest in safe properties, which contributes to price increases in certain segments of the market (Table 2).

Table 2. Commercial real estate investment trends in Europe in 2022

Source: Liuni (2023).

Country	Change in investment volume (%)	Comments
Germany	–17%	Significant fall
The United Kingdom	–5%	Slight decrease
France	+2%	Marginal increase
Belgium	+115%	Sharp increase
Spain	+35%	Strong increase
Ireland	+20%	Moderate increase

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Also, according to Wallut (2023), “the volume of commercial real estate investment for 2022 amounted to almost EUR 245 billion at the end of December 2022. Investment volumes declined slightly (4%) year-on-year due to a particularly weak fourth quarter. In fact, investors have been marked by a wait-and-see attitude due to the lack of convergence between sellers and buyers on prices, particularly for asset classes where yields have been lower. In addition, as funding costs have risen, debt investors have been squeezed out of the market, creating opportunities for cash investors.” According to the experts of La Française Group on the European commercial real estate market, a rise in risk-free interest rates has naturally translated into increased yields of real estate, which to some extent has been offset by rent indexation to inflation (as, for example, in many European countries with commercial real estate) (Mondo Alternative, 2023).

Major geopolitical events significantly influence real estate markets through several mechanisms (Yuni et al., 2024). Even the studies (Dragomir, 2017b; Gluszak & Trojanek, 2024) conducted in the context of the 2008 financial crisis have highlighted the sensitivity of the real estate market to global economic fluctuations, while research on forced migration has emphasized the impact of refugee flows on housing demand and price dynamics. Gluszak and Trojanek (2024) demonstrate that population influxes temporarily increase housing prices in destination areas, the phenomenon explained by short-term demand growth. In addition, JLL (2020) on the European real estate market during the COVID-19 pandemic shows how rising costs of building materials and economic uncertainty can influence investment decisions.

Therefore, the present study aims to assess the relationship between average house prices and determinants such as interest rates, depth of capital markets, investment opportunities, demographics, socio-cultural environment, government policies/legislation, investor protection, and legal framework.

Further, to achieve the research objective, the following hypotheses were formulated:

H1: *Increase in the number of Ukrainian migrants leads to increased housing prices.*

H2: *Increase in the interest rate has a negative effect on the real estate market.*

H3: *Increased GDP per capita leads to increased pricing for housing due to higher demand and increased affordability.*

H4: *Increased inflation can lead to higher prices for housing, especially if they are perceived as inflation-protective investments.*

2. METHODOLOGY

The mixed methods approach is used in the study, combining quantitative analysis with qualitative methods. Thus, using statistical data taken from official sources (National Institute of Statistics, World Bank, Eurostat, etc.), statistical analysis methods were used to develop the model to assess the relationship between economic and financial factors, demographic and socio-cultural factors, and political and legal factors on the real estate market as reflected in housing prices in Romania. The model is based on multiple linear regression and is of the form:

$$REM\_i = \alpha + \beta 1 \cdot NUM\_i + \beta 2 \cdot IRML\_i + \beta 3 \cdot GDP\_i + \beta 4 \cdot IR\_i + \varepsilon, \quad (1)$$

where *REM* – Real Estate Market – Measured by average house price (€/m^2); *NMU* – Number of Ukrainian migrants (X_1): Represents additional pressure on housing demand; IRML – Interest rate on mortgage loans (X_2): Represents costs of housing finance; *GDP* – GDP per capita (X_3): Indicator of purchasing power of local population; *IR* – Inflation rate (X_4): Affects the real value of money and, therefore, purchasing decisions in the housing market.

For this purpose, the data were collected from official sources such as the Ministry of Labor and UNHCR for the number of Ukrainian migrants; interest rate data were collected using the National Bank of Romania (NBR); GDP per capita and inflation rate data were collected through INS and Eurostat for February 24, 2022 – May 30, 2024. Thus, the average house price was calculated by averaging the sales prices reported in the country’s main cities. The number of real estate transactions has been taken from the reports of the National Agency for Cadaster and Real Estate Publicity. The interest rate on mortgage loans was calculated based on the monthly average provided by the National Bank of Romania. Quantity of refugees was obtained from data provided by UNHCR and the Ministry of Internal Affairs.

3. RESULTS AND DISCUSSION

The war in Ukraine has significantly impacted the real estate market in neighboring countries, particularly Romania. The impact is felt through several key factors related to geopolitical, economic, and social aspects. Table 3 presents the results of the econometric model used to analyze factors influencing the housing market.

Regarding statistical results, according to the summary model, there is a moderate to strong correlation between the independent and dependent variables. The Durbin-Watson (1.8395), being close to the reference value of 2, indicates very low autocorrelation of the residuals, confirming their independence and ensuring the reliability of the obtained results. Next, applying OLS, the following results were obtained (Table 4).

Statistical results suggest that interest rates have a significant negative impact on housing prices. During geopolitical crises, increased economic uncertainty leads central banks to adjust monetary policies, often by raising interest rates. This increases costs for mortgage financing, discourages house purchases, and reduces demand, especially for speculative investments. In this context, higher interest rates may increase pressure on the domestic capital market and limit its depth.

The results of this study provide an in-depth understanding of how geopolitical and economic factors interact to influence the Romanian real estate market in the context of the Russian war in Ukraine. Regarding hypothesis 1, the migration of Ukrainians has a significant positive impact on the real estate market, leading to decreased prices for housing in urban areas and increased demand for renting housing. This result is in line with Saiz (2007), who showed that the influx of migrants can lead to additional pressures on housing demand, thus contributing to price increases, especially in areas with developed infrastructure and economic opportunities. A rise of 1% in a city's population usually results in a commensurate 1% increase in rents and housing prices, according to academics (Wharton University of Pennsylvania, 2024), who examine the relationship between immigration and housing. Federal data show a 21% increase in overall consumer costs since 2020. According to Saiz (2007), rising home prices and rents have been driven primarily by remote work, which has increased demand for larger homes with office space and more homes outside of major coastal cities.

Regarding hypothesis 2, the results show a significant negative impact of rising mortgage interest rates on housing prices. This is consistent with the literature, which emphasizes that interest rates

Table 3. Model summary

Model	R	R Square	Adjusted R Square	Std. error of the Estimate	Durbin-Watson
1	0.781	0.6085	0.6027	12.45	1.987

Note: Predictors: (Constant), *NMU* (Number of Ukrainian migrants), *IRML* (Interest rate on mortgage loans), *GDP* (GDP per capita Romania), *IR* (Inflation rate); Dependent Variable: *REM* (Real Estate Market).

Table 4. Descriptive statistics

Regression indicator	Coefficient	Standard Error	t-ratio	p-value	Mean of the dependent variable	1.4328
NUM	0.4501	0.3823	5.71	< 0.0001	S.D. dependent var	0.7523
IRML	−0.2320	0.2587	5.87	< 0.0001	Sum of squared residuals	1543.26
GDP	1.0264	0.2188	−4.67	< 0.0001	R^2 off-center	0.6101
IR	0.15025	0.250	5.11	< 0.0001	F(4, 353)	85.23
Hannan-Quinn criterion	913.4589	Schwarz criterion	2945.83	–	P-value (F)	0.0510
Log-likelihood	−1456.2384	Akaike criterion	2924.462	–		

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strongly influence the housing market. In this respect, Iacoviello (2005) showed that increasing interest rates reduces credit affordability, thereby limiting demand for housing and leading to stagnating or falling house prices. In addition, Duca et al. (2010) suggest that interest rates significantly affect housing purchases, given that most buyers depend on financing for real estate purchases.

The data show a positive correlation between GDP growth per capita and house prices, confirming that a prosperous economy stimulates real estate investment. This is supported by literature sources, which highlight that economic indicators such as GDP per capita play a crucial role in supporting the housing market. According to Glaeser and Gyourko (2002), economies with higher GDP per capita generate higher demand for housing due to the increased financial capability of the population. Furthermore, Muellbauer and Murphy (1997) argue that GDP per capita reflects both the purchasing power of households and their ability to invest in real estate.

Regarding hypothesis 4, Salisu et al. (2024) found that migration increases inflation in the short-run but reduces it in long run. In addition, high interest rates help to dampen inflationary effect of migration in the short-run relative to low interest rates.

The results underline the need for public policies to support balance between supply and demand in the housing market, especially in migration crises. At the same time, interventions on interest rate regulation and increased affordability of mortgages can contribute to more stable housing market.

The research results reveal that Ukrainian migration has a significant positive impact on the real estate market, leading to increased prices for housing in urban areas and increased demand for rental housing. Interest rates on mortgage loans show a significant negative impact, suggesting that lower affordability of financing limits purchases of real estate. At the same time, GDP growth per capita correlates positively with price dynamics in the real estate market, confirming that a prosperous economy stimulates investment in real estate. This can be explained by the fact that instability generated by geopolitical crises has amplified forced migration and economic uncertainty, leading to increased demand for housing in some regions but also to higher construction costs amid supply chain disruptions and restrictive economic policies (Bas, 2024). This analysis contributes to a better understanding of the housing market dynamics within geopolitical and economic crises.

CONCLUSION

This paper focuses on geopolitical changes in the aftermath of the war in Ukraine and how they have influenced real estate markets, with a particular focus on the adaptability of emerging economies such as Romania. In particular, it analyzes the effects of mass migration on housing demand, its interaction with local economic and financial factors, and its impact on the stability of the real estate market, given economic volatility and regional political uncertainties.

It is difficult to create precise estimates regarding potential future scenarios for the housing market because there are many variables. The real estate market should consider inflation and the anticipated rise in mortgage interest rates, which may cause it to slow down and buyers and sellers to become more cautious. However, many people might choose to “shelter” their funds in their homes, which have long been seen as secure investments for Europeans. Prices will rise due to inflationary issues that affect every area of the economy. However, it should be stressed that the capital market changes very quickly, and therefore, changes in investment policies could occur from one day to another without any special anticipation.

It is expected that while new properties will be more affected than existing ones in the short term, both categories will eventually be impacted. Cheaper and used properties may become more popular in the short to medium term, especially if they have undergone seismic and energy retrofits. Rising costs of construction materials and raw materials will undoubtedly have a detrimental impact on the green field of real estate investment and development, raising the costs of erecting new structures. Given numerous current projects that will be completed in coming years, it is undoubtedly regrettable for the European real estate market, which is heavily investing in this kind of real estate development.

AUTHOR CONTRIBUTIONS

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Data curation: Cristina Gabriela Cosmulese.
Formal analysis: Cristina Gabriela Cosmulese, Artur Zhavoronok.
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