STUDIES

Hidden costs of solidarity: the Ukrainian and Polish rental market at the beginning of the full-scale war in Ukraine

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Keywords:
housing rental,
war,
Ukraine,
real estate,
Poland,
property,
Russia,
invasion,
rental market,
solidarity

The war in Ukraine resulted in an influx of refugees to safer Ukrainian regions and border countries (mainly Poland). In 2022, almost 5 million Ukrainians (primarily women and children) sought refuge in other regions of their country, and more than 7 million moved abroad. Ukraine and Poland are very specific countries in these circumstances, a worldwide phenomenon in which no refugee camps had been set up, with people predominantly taking in refugees in their apartments, apartments for rent or places provided by state or local authorities, e.g. schools, fire stations or hotels. Therefore, the influx of immigrants has significantly affected the housing markets in both countries. This study analyses the short-term change in the residential rental market due to the influx of refugees into safer regions of Ukraine and Poland based on offer data in the largest cities in the first months of the war. The results show a dramatic increase in rents in major cities in Poland and Ukraine, indicating the need for intervention in two dimensions. First, for Ukraine, excessively high rental price rate increases indicate that the economic interests of property owners outweigh the desire to help compatriots in need. Second, city managers and central authorities face a challenge, as increases that are too high could diminish the solidarity sentiments of Poles towards Ukrainians.

Online first publication date: 12 December 2024

Introduction

On 24 February 2022, the Russian Federation invaded Ukraine, and so began the largest and most lethal assault on a European state since 1945 (Cafruny et al. 2022, Mykhnenko et al. 2022). Moreover, this is the first attempt of this magnitude to redraw the map of Europe by force since the end of World War II. However, the fundamental factor that thwarted Russian President Putin's calculations was the strength of the Ukrainian resistance (Kaneva 2022) and the unusual skills of Ukrainian President Zelensky, who invested an enormous of time and effort into garnering the support of the international community and mobilising various leaders to assist the Ukrainians in their fight using different strategies and tools (Pisano 2022, Yarchi 2022). '*If Russia stops fighting, there will be no war. If Ukraine stops fighting, there will be no Ukraine*', is the sentiment used by Ukrainian protesters mobilising support against Russia's invasion. This sentiment signifies the stakes of a war in which Ukraine is a democratic nation-state fighting for its right to sovereignty against a Russian invasion (Voinycha et al. 2023). Meanwhile, Russia is fighting for a version of Ukraine that is subservient to Russia's perception of a nation-state under Russian jurisdiction (Knott 2022).

The stakes of the conflict and Ukraine's resistance have made for an extremely brutal war on the part of Russia, which is committing war crimes by attacking civilians and public infrastructure, such as schools and hospitals (Bufacchi 2022). Russia explains its brutality citing the need for Ukraine's alleged 'denazification' (Person–McFaul 2022). These circumstances have caused massive social and economic turmoil, broad geopolitical tensions and the largest refugee crisis in Europe. According to official statistics, as of 19 April 2022, almost 5 million people (primarily women and children) fled from Ukraine (UNHCR 2022).

Since the beginning of the full-scale invasion, more than 4.8 million Ukrainians (among them, 2.1 million of working age) have found shelter in other regions of Ukraine (see Appendix Table A1). During a discussion on 6 April 2023 (Ednannia 2023) entitled '*Changing the demographic situation in the country: forecasts and challenges for the state*', which was held by the Ptoukha Institute for Demography and Social Studies of the National Academy of Sciences of Ukraine with the support of the Ministry of Social Policy and Civil Society Organisation, 'The Initiative Centre to Support Social Action "Ednannia"', within the framework of the project 'Initiative of sectoral support of civil society', the director of the Institute, Ella Libanova, reported on the current population of Ukraine: 'We tried to estimate the population on 1 January 2023, within the country's borders on 1 January 2022. There is a variation from 28 to 34 million people (see Appendix Figure A1). The main share of this variation is since we do not understand what is happening with migration'. The expert admitted that 'counting the 3 million Ukrainians who crossed the border with Russia' would be extremely difficult.

The areas most affected by this unprecedented exodus were neighbouring countries in Central and Eastern Europe, with Poland alone hosting around 60% of the Ukrainian refugees (UNHCR 2023). Notably, second only to Turkey, Poland has accepted the second largest number of refugees in the world (Wojdat–Cywiński 2022). However, Poland is in a very unique position in this situation, which could be described as a worldwide phenomenon as no refugee camps were established here, and Poles accepted refugees into their own homes, owned rental apartments or into places provided by state or local authorities such as schools, fire stations and hotels. Unfortunately, this has come at a price, particularly considering the poor housing stock in Poland (Bouzarovski–Tirado Herrero 2017, Ulman–Ćwiek 2021). Before the war in Ukraine, the housing situation in Poland was already one of the worst in the whole of Europe; the most critical problem being low supply. In terms of the average number of persons per household, only Slovakia fares worse. In Poland, the average household size is 2.8 persons – the largest in the EU (European Union) – while the EU average is 2.3 (Eurostat 2022). This means that the average number of people per household is more than 20% higher than in the rest of the European Union. The number of rooms is also extremely limited. According to Eurostat, Poland has 1.1 rooms per person, in contrast to the European average of 1.6. Along with Croatia and Romania, Poland's housing is considered the worst in the entire EU (Eurostat 2022). Furthermore, Poland also has the highest apartment occupancy rate.

Therefore, Poland's housing market has responded to this large number of refugees with a drastic decrease in the number of apartments available on the market and much higher rental prices (Trojanek–Gluszak 2022). As the majority of refugees who decided to stay in Poland have found accommodation in the country's main cities, price hikes have occurred, particularly in cities (see Appendix Table A3: Data from Wojdat–Cywiński [2022]). Trojanek–Gluszak (2022) analysed rental price changes in Kraków and Warsaw in March and April 2022, finding that rents had increased by around 16.5% and 14%, respectively.

However, this study examines more cities (eight in Poland and seven in Ukraine) and analyses the circumstances in both countries. The primary objective of the article is to determine how quickly and at what level the free-market economy initially reacted in Ukraine (the country at war) and Poland (the assisting country).

The need for this analysis can be justified by three arguments. First, large cities have the greatest opportunities for finding work or assistance. Second, the largest concentrations of the Ukrainian population are in these cities. Third, large cities have the most significant number of places to stay or rent for accommodation. This implies vast consequences and challenges, particularly as the Polish and Ukrainian housing market was already experiencing considerable supply problems prior to the war in Ukraine.

The main aim of this paper is to analyse the Polish and Ukrainian real estate markets during the early stage (of 2022) of the Russian invasion of Ukraine. The start of hostilities resulted in the migration of the Ukrainian population, mostly women and children, to countries neighbouring Ukraine. The main direction was Poland as a destination or transit country for further migration. The authors analyzed the number of available apartments for sale and rent on the two largest Polish advertising portals and the situation in the Ukrainian real estate market. The study showed a significant decrease in the number of apartments available for rent in the largest Polish cities, along with a several-percent increase in the prices of apartments for rent over the analysed period.

Materials and methods

As noted above, the primary objective of this study is to determine how quickly and to what level the free-market economy initially reacted in Ukraine (the country at war) and Poland (the assisting country).

We compare average rental prices in 7 large cities in Ukraine (Kyiv, Lviv, Odesa, Dnipro, Kharkiv, Ivano-Frankivsk and Uzhorod) between January 2022 and March 2023, based on data from (LUN 2023 and M2bomber 2023). We choose these cities based on the calculations of the share of internally displaced people to the present population of Ukraine prior to the war. We next calculate the rental price changes (in the previous year, quarter and month) from January 2022 to March 2023 in the same list of cities based on LUN (2023) and M2bomber (2023). To support our conclusions, we also compare the results with changes in consumer price indices in Ukraine for the 2021–2022 period (in the previous month) based on State Statistics Service of Ukraine (SSSU 2023a).

For Poland, we analyse the short-term number of available residential sales and rental offers in the 21 largest Polish cities for the first months of the war (February–March 2022) when the proportion of people fleeing war-torn Ukraine was highest (WKP Investments, OLX 2023, Otodom 2023), analysing the short-term impact of the war on the rental property market in 8 Polish cities in the first part of 2022 (OLX 2023, Otodom 2023). We also examine the price of rent per 1 square metre in the 8 largest cities in Poland, and how it increased on average during the Russian aggression, 2 weeks before and one year prior Wojdat–Cywiński (2022).

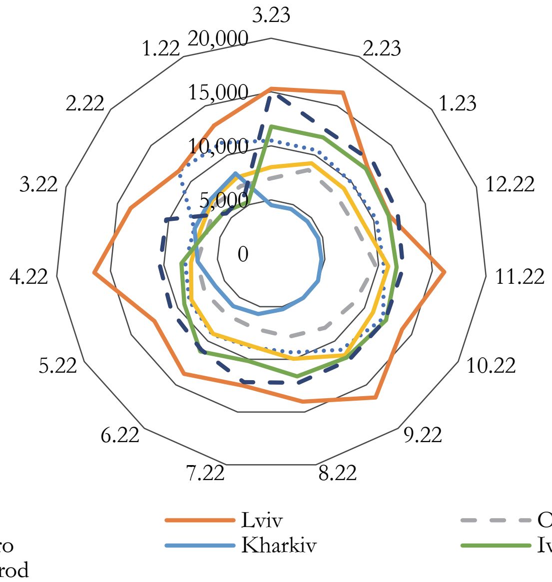
We analyse data from the first months of the war, when the influx of Ukrainians to Poland was greatest to investigate the impact of refugees on Poland's real estate market, contending that extending this analysis for a longer period could distort the data because Poland was struggling with other challenges (such as high inflation and conflicts with the EU). For Ukraine, we used data for a longer period of time because the ongoing war has generated a continuous flow of refugees to large Ukrainian cities.

Ukraine real estate market

The largest influx of internally displaced persons was into large cities and densely populated regions (Kyiv, Lviv and Kharkiv). In addition, many people relocated to the nation's relatively safer and less populated western and central areas. This mass migration caused a rapid increase in the demand for rental housing and increased prices. Figure 1 shows that the general price rate was higher in the centres of the western regions (Lviv, Uzhorod and Ivano-Frankivsk), the capital maintained average prices and the cheapest housing rental was in Kharkiv.

Figure 1

Average rental prices in seven Ukrainian regional centres (January 2022–March 2023)

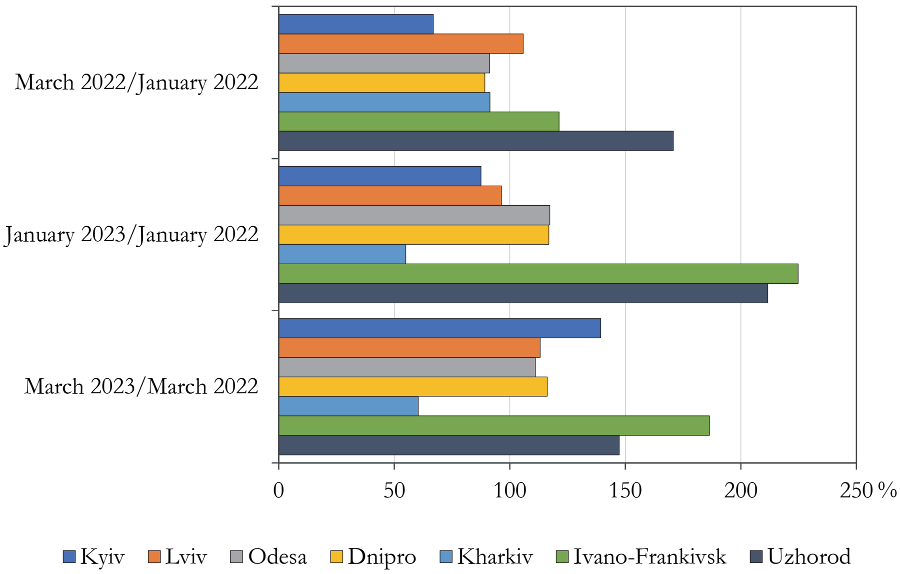


Source: calculated by the authors based on data from LUN (2023) and M2bomber (2023) for one- and two-room apartments.

We next calculate the relative increase in average prices for rent in the regional centres considered above (Figure 2). The data presented in Figure 2 shows 3 sets of data, including between 2 months in 2022 in comparison to annual periods of January 2022–January 2023 and March 2022–March 2023.

Figure 2

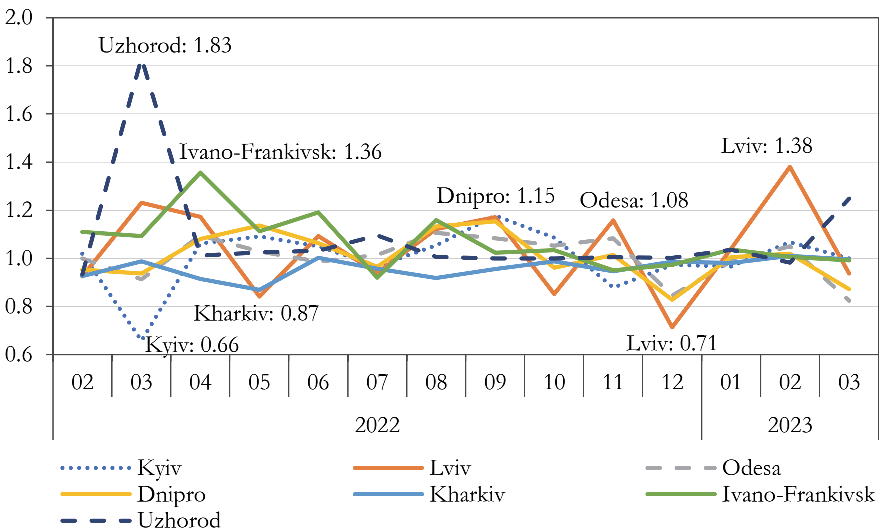
Changes in rental prices (to previous quarter and year)



Note: calculated by the authors based on data from LUN (2023).

Figure 3

Changes in rental prices (to the previous month)



Note: calculated by the authors based on data from LUN (2023).

Figure 3 shows a significant increase in prices in Ukraine's western regional centres, presumably due to the considerable increase in housing demand. The ratio of prices in Kyiv from March 2022 to January 2022 decreased significantly (67% to the January price). Comparing March 2023 with the same month in 2022, the increase was 139.29%. Lviv had seasonal growth in the spring of 2022 and 2023 and a decline in the 2022-year coefficient. After a decrease in March 2022, growth is observed in the average prices for housing rental in Dnipro according to the results for 2022. The price for rent in Kharkiv decreased in March 2022 and March 2023 (compared with 2022). At the end of 2022, average rental prices in the regional centre dropped by almost half, amounting to 55.06% of the previous year's rents. After decreasing by 8.7% in March 2022 compared with January 2022, rental prices in Odesa resumed growth in subsequent periods. The most significant increase occurred in average rental prices in Ivano-Frankivsk and Uzhgorod (over 200% by the end of 2022).

An increase in rental prices was particularly noticeable in Uzhhorod and Ivano-Frankivsk in the first months of the full-scale invasion. Conversely, the most significant decrease was observed in Kyiv.

To explain these circumstances, we must first identify the factors that significantly impact the migration of people from combat zones and areas of increased danger. The crucial element in the decision to relocate will undoubtedly be security issues (i.e. distance from the war zone, mines or air attacks). Notably, other factors may also have an influence, including:

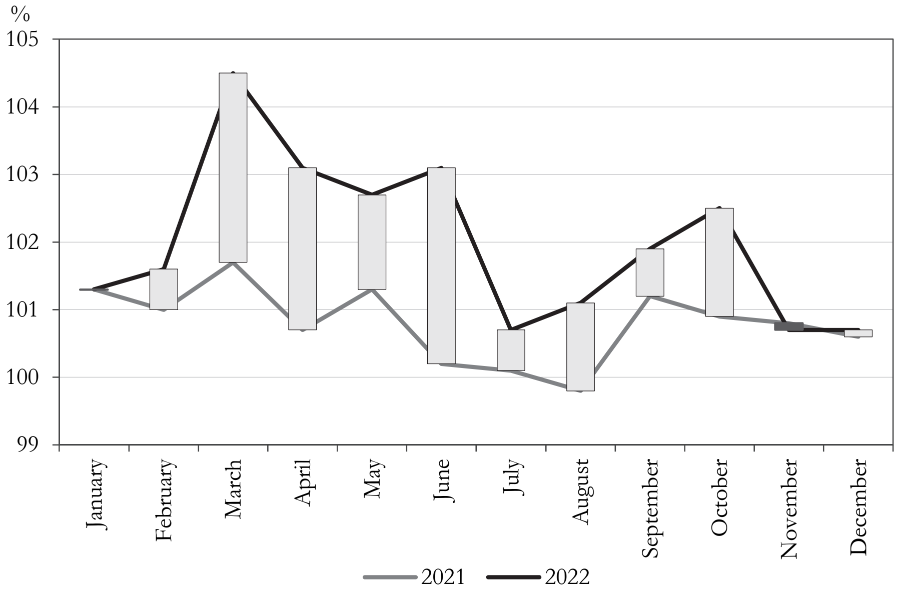
1. availability of contacts (relatives, friends and acquaintances);
2. financial issues (prices, amounts and availability of assistance);
3. opportunities of the settlement (work, transport and housing);
4. comfort of the territory (air alarms, compactness and services);
5. familiarity with the local population (language, customs and mentality).

Decentralisation reform in Ukraine has opened new opportunities for self-government and development even in small, peripheral territories (Oleinikova 2020, Dmytryshyn et al. 2021, Arends et al. 2023, Voinycha et al. 2023). Having received the necessary powers and financial resources, local residents and opinion leaders also assumed responsibility for their communities' future, and many results began to depend directly on initiative, efforts, new ideas and their implementation (Dmytryshyn 2022). Air warning signals reflect the level of danger in a particular city and region (see Appendix Table A2); thus, the price of housing rent increased the most in the safest regional centres.

Financial issues are an essential concern for 75% of internally displaced persons surveyed by the International Organisation for Migration in January 2023 (IOM 2023). To increase the objectivity of our conclusions, we also analyse the general growth of consumer prices in Ukraine in 2022 (Figure 4).

Figure 4

Consumer price indices (to the previous month)



Note: excluding the occupied territories of the Autonomous Republic of Crimea and the city of Sevastopol.
Source: SSSU 2023a.

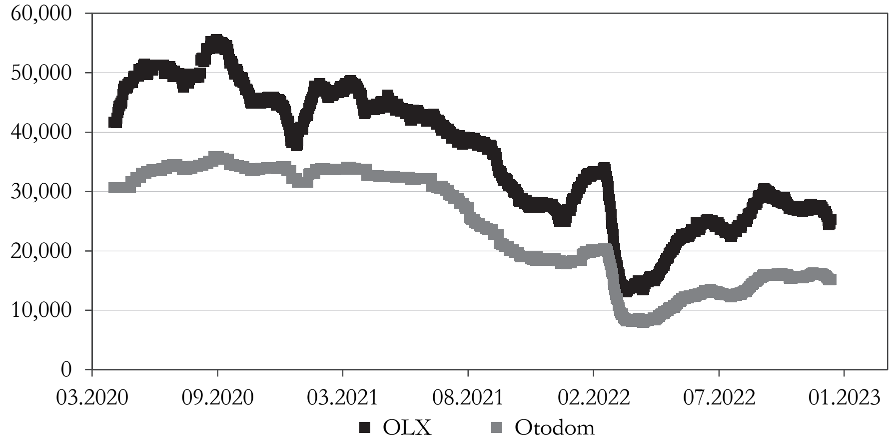
Figure 4 compares the monthly growth of consumer prices in Ukraine (up to the previous month) with the same period last year. According to State Statistics Service of Ukraine (SSSU 2023a), consumer prices rose by 26.6% in 2022. In March–May 2022, according to LUN (2023), the purchase and sale of primary real estate was suspended. Comparing this data to changes in new housing supply in Ukraine according to an Ernst & Young (2023) investigation, we can conclude that stoppages in the purchase and sale of primary and secondary real estate were an additional factor influencing the increased cost of housing rent in Ukraine from March 2022.

Impact of refugees on the Polish rental market

As noted previously, the (quantitative and qualitative) housing situation in Poland has always been a challenge. Moreover, it is considered to be the worst in the entire EU (Eurostat 2022), and the influx of refugees has exacerbated it. This can be seen in the number of advertisements from the most popular rental sites (Figure 5), which fell from 33.7k (February 2022) to 12.7k (March 2022) in one month, revealing that the number of rental adverts fell by as much as 62.3%.

Figure 5

Number of apartment rental advertisements

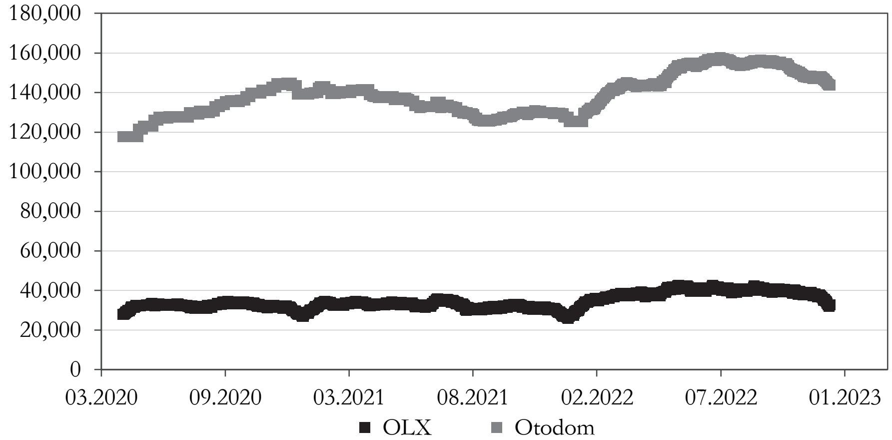


Source: OlxData 2023.

In the case of apartment advertisements after the Russian invasion in February 2022, a small drop in open apartments occurred, and after 3 to 4 weeks, the number of existing offers began to rise (Figure 6). This might be explained by rising apartment prices due to the decreasing number of rentals and greater potential profitability from renting. This indicates that people who bought apartments to sell later at a profit decided that the time was right. The second reason could be panic associated with the outbreak of war and long-term stagnation and decline in housing prices.

Figure 6

Number of apartment advertisement sales



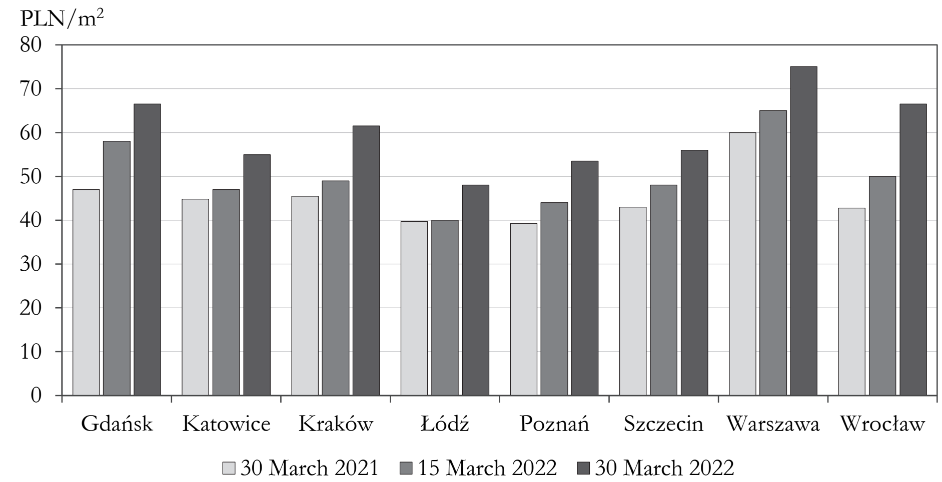
Source: OlxData 2023.

The changes in the number of apartments offered for rent occurred quickly. Just 4 weeks after Russia attacked Ukraine, the number of unique advertisements (after removing duplicates) fell by almost 50%. Clearly, apartment sales were slowing down. The main reason and challenge for the future is a substantial decline in Poles' creditworthiness and high loan instalments that will continue to rise as more interest rate hikes are expected to combat high inflation (Soroka et al. 2023). The war in Ukraine has indeed been blamed for the rising inflation, but the war itself is not the only cause. Before the war, rising housing prices – in the absence of significant rental price changes – made it less attractive to buy an apartment for rent and rental profitability was falling. Since the war began, much has changed; however, the high demand for rentals not only includes refugees from Ukraine but also Poles, who have been thwarted by rising interest rates and falling creditworthiness. As a result, they are not buying owner-occupied apartments but returning to the rental market.

Rents started to rise much faster than housing prices. Comparing 14 March 2022 to 30 March 2022, rental rates in the biggest polish cities have increased by as much as 10% on average (Figure 7). The average yield on a 50-metre apartment with one month of vacancy is 4% (as recently as February 2022, it was 3.5%). Considering all the costs, investing in an apartment for rent at today's lending rates is no longer profitable. Despite this, the rental rate increase means interest in buying remains, which applies to both primary and secondary markets. With all the fuss about credit and rising house prices, the increase in rents has saved purchases for rent, but these primarily include those who have cash or take out a loan with a high deposit.

Figure 7

Changes in new apartment rentals (as of 30 March 2022)



Source: Bankier 2022.

Rising rental yields are a common phenomenon in all major markets. We find that a current shock may be temporary, and rental rates may fall slightly once the government's refugee-related financial support programme expires (currently 60 days). However, a return to 2021 levels is unlikely due to higher interest rates and presumed additional demand from Ukrainians wishing to stay longer in Poland, even after the situation in Ukraine stabilises.

Overshadowed by the shock caused by the war in Ukraine, another crucial factor determined rates and yields in the rental market; namely, the cycle of interest rate rises. Since May 2020 till September 2022, the National Bank of Poland's loan reference rate increased by 575 bps, significantly reducing lending capacity. A fundamental constraint on the availability of apartments for purchase is the recommendation of the Polish Financial Supervision Authority to apply a five-point buffer to interest rate increases when calculating creditworthiness. As a result, some people considering an apartment purchase will be diverted to the rental market, at least for some time. Considered from the landlords' perspective, the rate increase justifies the expectations of a higher rental yield.

The situation of rising rental prices for apartments described here, which has partially exposed the difficult circumstances on the Polish property market, may result in a number of challenges for the Polish authorities. The large number of refugees may not only result in challenges for the rental market but also for many socio-economic factors (see, e.g. [Trojanek–Gluszak 2022, Duszczyk et al. 2023, Gluszak–Trojanek 2023]). According to Gluszak–Trojanek (2023), a 1% increase in a Polish city's population due to the influx of Ukrainian refugees led to a 0.67% increase in rental prices.

Conclusion

The expansion of the Russian war in Ukraine in 2022 has been much more significant than the operations conducted since the seizure of Crimea in 2014, due to a significantly larger scale of hostilities in many border locations. In total, about 12 million Ukrainians (primarily women and children) left their homes and relocated to safer areas of Ukraine and neighbouring countries (mainly Poland). Both countries have adopted approaches characterised by solidarity and compassion and have not created special towns or camps for refugees, which has directly impacted the Ukrainian and Polish property markets, predominantly in major cities. Rental fee increases in major Polish cities rose dramatically, from 15% to 33% in just a few weeks, and increases in the Ukrainian real estate market were even higher. In just 2 months, an increase from 67% to as high as 171% was recorded. This clearly shows that if a country that generates refugees and one that receives them decides to show solidarity, both countries must recognise that this will generate costs for the indigenous receiving populations. Such sacrifice and solidarity cannot be a given. As such, city managers and central authorities face a challenge, increased prices that are too high may diminish the solidarity attitude of Poles towards Ukrainians. For Ukrainians, the excessively high growth of rental prices indicates the predominance of real estate owners' economic interests over the desire to help compatriots in need.

Future research

This study primarily illustrates the pre- and post-war rental and rental property purchase circumstances in Poland and Ukraine to begin a discourse on how changes in rental/housing prices during the later stages of the war could change attitudes towards refugees in an extremely short period of time, not only in Poland but also in Ukraine itself. However, we cannot formulate such conclusions as this requires more in-depth and thorough research. Although it seems reasonable to propose such a hypothesis, in our opinion, such research is highly advisable, since such circumstances can be repeated in other countries, and the initial compassionate attitude of solidarity can be jeopardised very easily. Conducting thorough sociological research on this consideration would be most appropriate.

Acknowledgements

This work was funded by research subvention no. 16.16.150.545 at AGH Universit.

Appendix

Table A1

Share of internally displaced people to the present population of Ukraine before war

Regions	Present population as of 1 January 2022 (mln)[a)]	Internally displaced person as of 29 March 2023 (mln)[b)]	Share, (%)
Ukraine	41,167,336	4,845,761	12
Vinnytsia	1,509,515	170,089	11
Volyn	1,021,356	54,457	5
Dnipropetrovsk	3,096,485	454,780	15
Donetsk	4,059,372	529,955	13
Zhytomyr	1,179,032	100,689	09
Zakarpattia	1,244,476	143,672	12
Zaporizhzhia	1,638,462	208,115	13
Ivano-Frankivsk	1,351,822	133,790	10
Kyiv	1,795,079	332,031	18
Kirovohrad	903,712	92,601	10
Luhansk	2,102,921	276,794	13
Lviv	2,478,134	239,463	10
Mykolayiv	1,091,821	119,542	11
Odesa	2,351,392	218,516	9
Poltava	1,352,283	213,263	16
Rivne	1,141,784	54,636	5
Sumy	1,035,772	81,271	8
Ternopil	1,021,713	141,246	14
Kharkiv	2,598,961	474,808	08
Kherson	1,001,598	34,135	03
Khmelnytskyi	1,228,829	141,246	11
Cherkasy	1,160,744	154,387	13
Chernivtsi	890,457	86,764	10
Chernihiv	959,315	70,858	7
City of Kyiv	2,952,301	379,016	13

a) Excludes the occupied territories of the Autonomous Republic of Crimea and the city of Sevastopol.

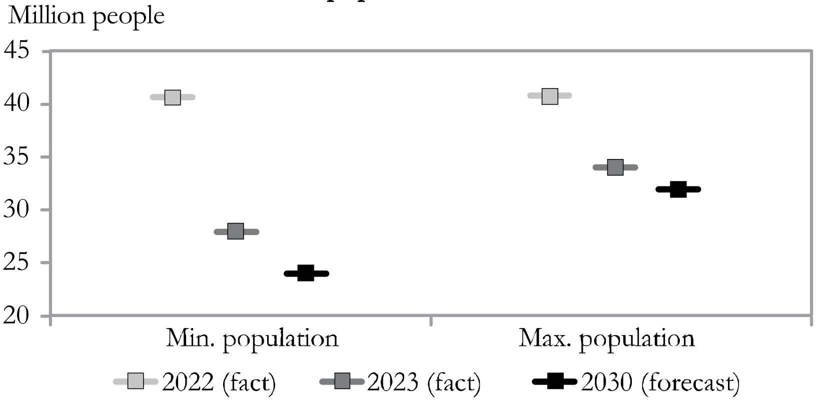
b) Response of the Ministry of Social Policy of Ukraine to the request of the Chesno.org (2022) civil movement dated 29 March 2023 (registered only).

Note: the fourth column was calculated by the authors.

Source: Chesno.org 2022, SSSU 2023b.

Figure A1

Present population in Ukraine



Note: developed by the authors based on data from the State Statistics Service of Ukraine and the Ptoukha Institute for Demography and Social Studies of the National Academy of Sciences of Ukraine.

Table A2

Statistics of air alarms and explosions in Ukrainian regional centres under consideration

Region	Number of air alarms, units	Duration of air alarms, hours	The number of explosions reports, units
Kyiv	1,735	1,244	147
Lviv	327	348	37
Odesa	736	680	145
Dnipro	1,802	1,419	287
Kharkiv	1,982	1,666	502
Ivano-Frankivsk	329	359	9
Uzhorod	258	309	1

Source: Air-Alarms 2023.

Table A3

Polish cities' expansion dynamics (estimates based on night-time population)

City	Central city inhabitants before the war	Central city inhabitants before the war + number of all Ukrainians (04.01.2022)	Percentage of Ukrainians in central city population (04.01.2022), %
Gdańsk	470,805	628,592	25
Katowice	290,553	387,015	25
Kraków	779,966	957,531	19
Łódź	672,185	757,860	11
Poznań	532,048	616,660	14
Szczecin	398,255	457,829	13
Warszawa	1,794,166	2,061,061	13
Wrocław	641,928	829,209	23
All UMP central cities	6,756,179	8,125,246	17
Poland	38,265,013	41,451,907	8

Source: Wojdat–Cywiński 2022.

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