Knight Frank

2022 REVIEW 2023 OUTLOOK

COMMERCIAL REAL ESTATE MARKET

2023

INTRODUCTION

The Polish investment market closed the year with a total investment volume estimated at EUR 5.78 bn. Despite negative sentiment in the investment market in the last quarters, the result was comparable to the volume recorded in 2021. The first half of 2022 brought uncertainty to the market due to the outbreak of war in Ukraine, while in the second half 2022, investors became increasingly cautious due to changes in the global economy and the interest rate increases by the central banks.

A similar trend is expected to continue in the first half of 2023, probably until the interest rates in the Eurozone stabilize. At current interest rate increases, the difference in yield between commercial real estate and traditional safe financial investments is the lowest since years. This has temporarily slowed down the inflow of core capital into the Polish real estate market, especially from Germany, as the difference between the yield of real estate and 10-year German government bonds has significantly narrowed. As a result, active investors are mainly private and opportunistic, while institutional capital is waiting in fear of making decisions during a period of falling prices.

Research & Capital Markets Teams

TABLE OF CONTENTS

Office sector

In 2022, developers in both Warsaw and regional cities reduced their activity by holding off on the starting of new investments. This was due not only to the large amount of vacant space offered for lease but, above all, to the persistently high construction and finance costs of new projects.

There was a noticeable increase in tenant activity in almost all major cities, suggesting a return of demand levels for office space to pre-pandemic levels.

Despite the still high availability of office space, asking rents in many office markets increased in 2022.

Office market in Poland

The total existing office stock in Poland at the end of 2022 was approximately 12.7m sq m. For the first time, more than half of that space was to be found in the eight largest regional cities (with Kraków and Wrocław as the leading cities). With 49% of the space, Warsaw remained the largest office market in Poland.

In 2022, more than 642,000 sq m of office space was delivered across Poland. This was 17% higher than in 2021, but still significantly lower than the average in 2016-2020, when a record amount of office space was delivered to the market. Moreover, 37% of the newly delivered space was completed in Warsaw.
It is worth noting that only 185,000 sq m is currently under construction in the capital city. This result is much lower than in 2021 and the pre-pandemic years, when the supply under construction was between 700,000 sq m and 800,000 sq m. Regional cities with the highest developer activity at the moment are Wrocław, where more than 154,000 sq m of office space is under construction, and Kraków, where more than 107,000 sq m is in the pipeline.

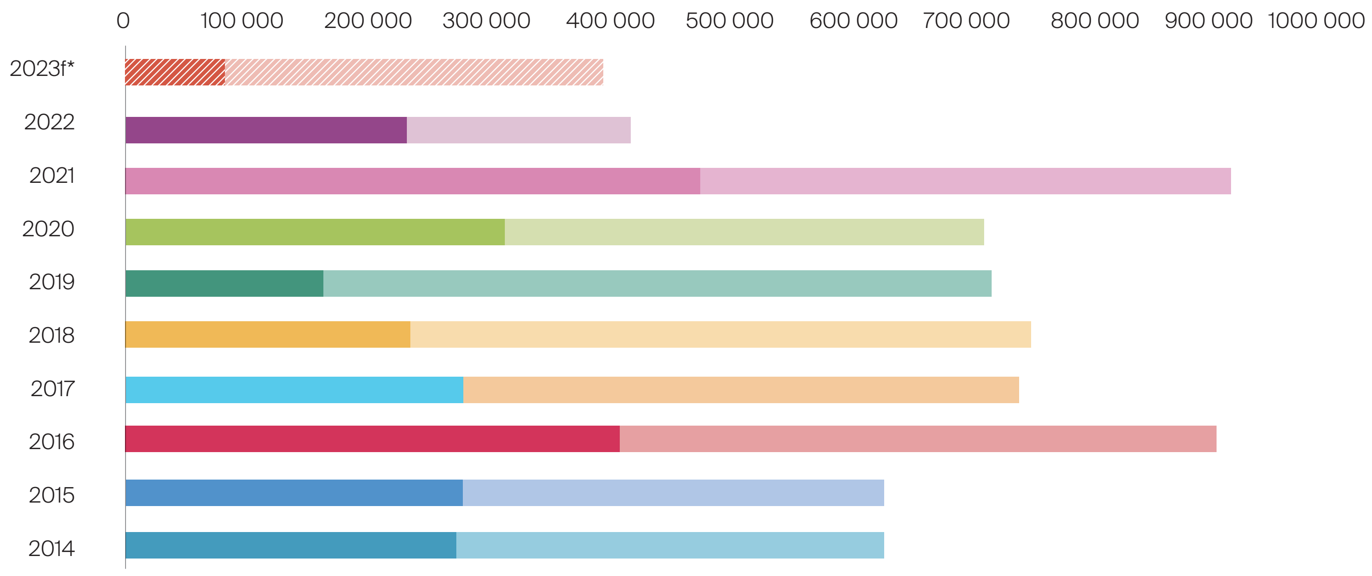
In total, around 567,000 sq m is under construction in the eight largest regional cities - nearly 40% down on 2021. It is important to note that the reduced willingness of investors to start new investments is mainly due to the significantly higher costs of financing office projects and the persistently high construction costs they are experiencing. Tenant activity in the office sector has increased significantly, having recovered after two weaker pandemic years, with 2022 demand approaching pre-2019 levels. From January to December 2022, the volume of lease transactions in the main agglomerations exceeded 1.48m sq m, some 20% higher than in 2021. Just under 60% of demand was registered in Warsaw (over 860,000 sq m, an increase of more than 30% on 2021), with the remaining part registered in regional cities, among which Kraków (over 198,000 sq m of leases), Wrocław (over 137,000 sq m), and the Tricity (101,000 sq m) were the leaders.

A common feature of all analysed agglomerations is the dominance of new agreements in the volume of lease transactions (the exception was Szczecin, where 56% were renegotiations). In Warsaw, new agreements amounted to 52%, while in other cities their share ranged from 49% in Wrocław to as much as 74% in Łódź and Poznań, and 93% in Lublin. The high share of renegotiations still observed in the structure of lease agreements should also be noted. In Warsaw, it amounted to 39%, while in other cities the share ranged between 16% (Katowice) and 44% (Wrocław).

The reduced share of pre-lets in the transaction volume (on average, 10% in both regional cities and Warsaw) resulted in buildings being delivered to the market in recent quarters with relatively low leased levels. The decreasing share of expansions in the structure of leases was also significant. These factors had a direct impact on vacancy rates, which have been growing systematically in office markets in Poland since 2019. At the end of December 2022, the average vacancy rate for the nine largest business centres in Poland was estimated at 13.5% (1.71m sq m of immediately available space), an increase of 0.1 pp year-on-year. Over the 12 months of 2022, the amount of immediately available office space fell in Warsaw, Wrocław and Poznań, with the remaining major cities seeing an increase. In all locations (except Szczecin), the vacancy rate exceeded 10% at the end of December 2022. The highest vacancy rate in Poland was recorded in Łódź - 21%, with the lowest in Szczecin (5.8%). In Warsaw, the vacancy rate decreased by 1 pp over the year, influenced by a low new supply and relatively high demand for office space.

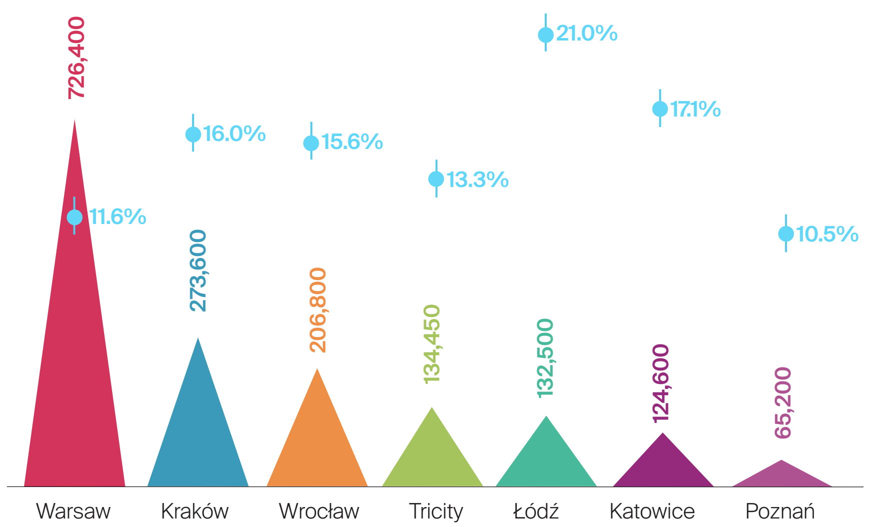
Growth in rentals is noticeable in both Warsaw and regional cities. Asking rents in the Central Business District in Warsaw at the end of December 2022 were in the range of EUR 20 to EUR 26/sq m/month. In other central locations, rents ranged between EUR 15 and EUR 23/sq m/month. Asking rents outside the centre of the capital city ranged from EUR 10 to EUR 16/sq m/month. In regional cities, monthly asking rents ranged from EUR 8 to EUR 16/sq m/month. There is still a noticeable increase in service charges due to the ongoing rises in the price of services and utilities.

Chart 1 Annual supply in major office market in Poland (sq m)



Source: Knight Frank, f*-forecast

Chart 2 Available office space (sq m) and vacancy rate (Q4 2022)



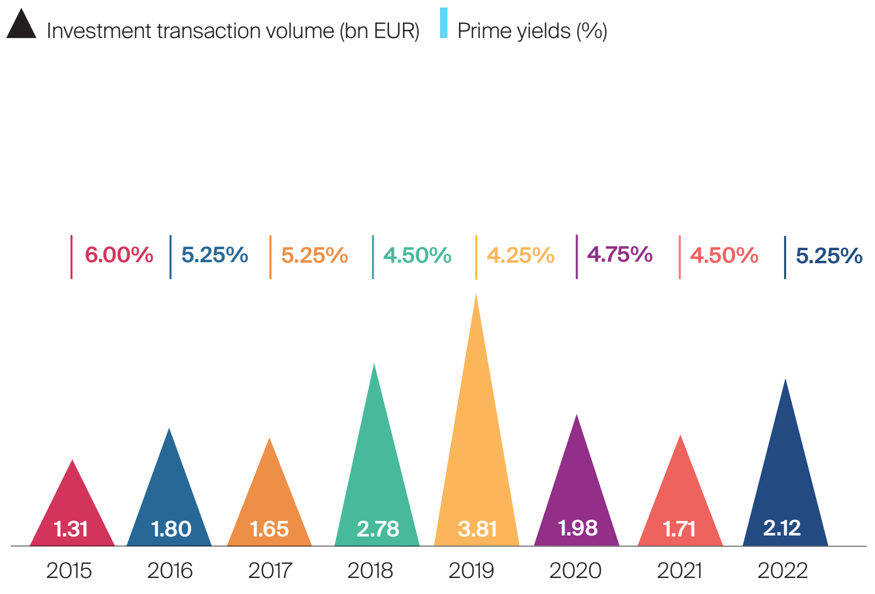
Source: Knight Frank

Investment market

In 2022, as in 2021, investors were mainly focused on the office and warehouse sectors, with these two asset types attracting over 70% of the investment volume in Poland. The office sector took first place in terms of investment volume in 2022, with the amount of invested capital, exceeding EUR 2.12bn, over 25% higher than 2021's figure. This confirms that investors are positively assessing the prospects for the office sector, despite expected changes in work models due to the pandemic. The capital allocated to the office sector was evenly distributed between Warsaw and regional markets. The largest investment transaction in the office sector in regional markets was the acquisition by Lone Star Funds of three office buildings in Kraków and Wrocław from Cavatina.

Subsequent quarters of 2022 brought changing investor expectations and shifting perspectives for the market. As a result, prime yields in the office sector showed significant changes over the 12 months, starting below 4.5% for prime office assets negotiated in the first half of 2022, before experiencing a sharp rise in the second half of the year. Due to tightening monetary policy decisions by central banks, investors are adjusting their expectations, with ongoing negotiations already taking place at higher yields. Prime office assets in Warsaw are currently valued at rates of 5.25-5.50%, while yields for the best assets in regional cities are approximately 6.25-6.50%. This change in sentiment will likely be reflected in transactions signed in the coming months.

Chart 3 Investment transaction volume and prime yields in the office sector



Source: Knight Frank

TRENDS

1

Tenant activity on the Polish office market is high, with demand for office space expected to increase to pre-pandemic levels in the coming quarters.

2

Investors are limiting the number of new investments due to high construction and financing costs. As a result, the annual supply of new offices is set to decrease significantly in the coming years. Due however to projects that are planned to be delivered to the market in the upcoming quarters, further vacancy rate growth is possible in some regional markets. In Warsaw, on the other hand, a decrease in the vacancy rate is to be expected if demand for office space remains at a high level in the approaching quarters.

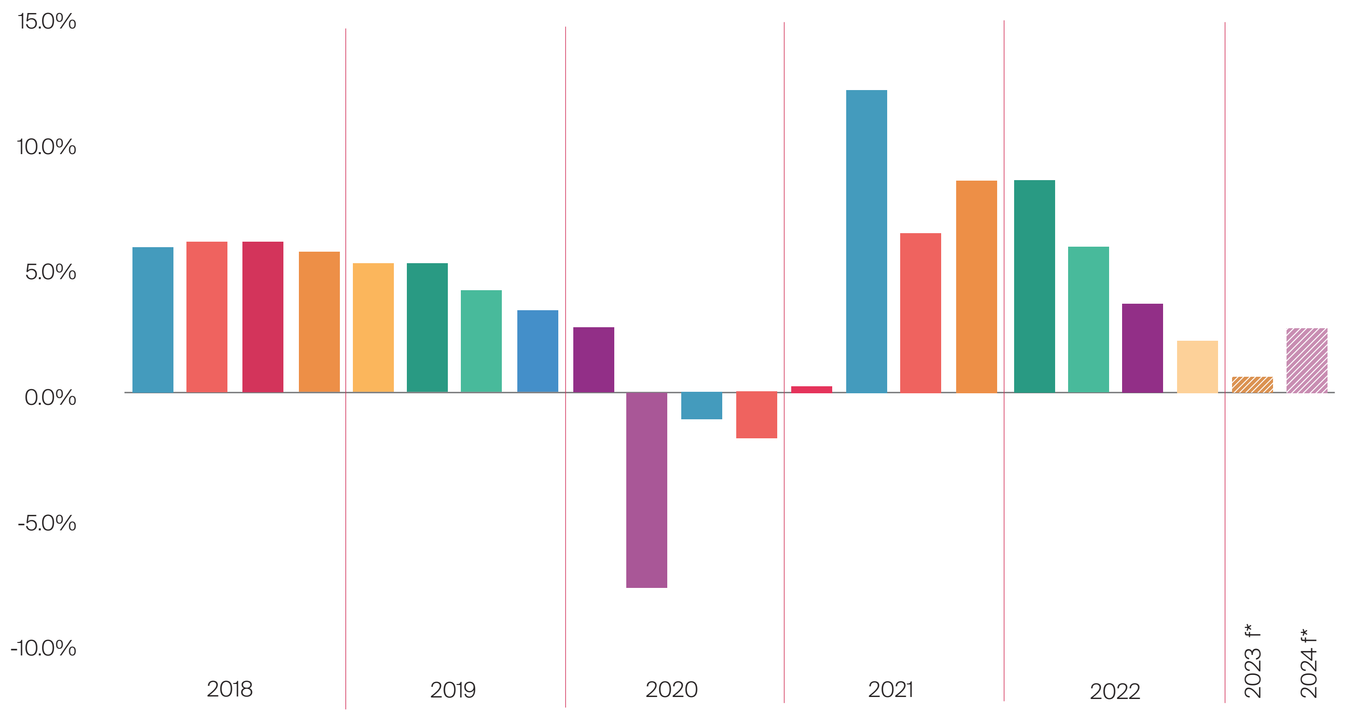
3

High construction costs and growing construction loan servicing costs may effectively inhibit investor openness towards negotiation, particularly in new buildings. In all buildings, however, an increase in operating costs is foreseen, stemming from ongoing increases in the prices of services and utilities.

4

Due to changing regulations and the drive towards climate and carbon neutrality in more and more organizations, ESG is developing a momentum that is increasingly impacting the office market. The resulting changes will affect the building features and systems favoured by developers, and will also influence decisions on cost optimisation for both tenants and landlords by both the owners of older buildings and those undertaking one of the increasingly common office building renovations.

Chart 4 GDP growth dynamics in Poland (y-o-y)



Source: Statistics Poland, f* - forecast of the World Bank, January 2023

Economic indicators

1 Gross Domestic Product growth

According to the preliminary estimate published by Statistics Poland, real GDP grew by 4.9% y-o-y in 2022, compared to a growth of 6.8% for the corresponding figure for 2021. Despite the annual growth of GDP, Poland's economic deceleration is visible, brought on by the unstable geopolitical situation and prolonged high inflation. In Q4 2022, a 2.4% decline in real GDP was noted compared to the previous quarter. The European Commission indicates that GDP growth could also turn negative in early 2023. A continuation of the downward trend in the subsequent quarter will signal the onset of a technical recession. The main drag on GDP growth is a reversal in the inventory cycle. Currently, real economic growth in Poland is forecast to reach 0.7% in 2023, rising to the level of 2.6% over the following year. Such a scenario translates into increased economic uncertainty, tighter financing conditions, and the need for the economy to adjust to higher commodity prices.

2 Unemployment

In December 2022, the rate of registered unemployment was estimated at 5.2%. Compared to December of the previous year, this was a decline of 0.6 pp. Such data indicates that the labour market in Poland is showing resilience to the economic situation brought about by the outbreak of war in Ukraine. Despite the large influx of refugees from Ukraine seeking jobs, the labour market remains on a sound footing. The unemployment rate in Poland at the beginning of 2023 stood at 5.5%.

3 Inflation Rate

Statistics Poland estimates for 2022 indicate the Consumer Price Index has increased compared to the previous year, reaching a level of 14.4%. This is the highest figure recorded in more than two decades. Increases in goods and services prices are particularly influenced by rising energy prices and problems with supply chains. Due to rising global energy costs and food prices, the CPI has remained above the upper limit of deviation from the inflation target since April 2021, reflecting a problem not only in Poland, but across Europe as a whole. According to the European Commission's forecast, the inflation rate in Poland in 2023 will be 11.7%.

Retail sector

2022 in the retail market in Poland was marked by an expansion of the retail offer, predominantly in small-sized cities (with less than 100,000 inhabitants). Approximately 60% of the total new supply was delivered there, making the retail stock in these cities comparable to the stock in the medium-sized cities (100,000-400,000 inhabitants). Furthermore, over 60% of the supply under construction in Poland will be delivered in the smallest cities.

A continuation of investor interest in building small-scale retail schemes (5,000-10,000 sq m), such as retail parks and strip malls, was observed in the last year. Among the new projects completed in Poland in 2022, such small projects accounted for over 70% of output. At the same time, they also represented 50% of the retail schemes under construction.

Despite the pre-Christmas period, deteriorating consumer sentiment due to rising inflation and the country's uncertain economic situation influenced a decline in shopping centre footfall in Q4 2022 (-6.6% in December 2022 compared to December 2019). The consumer confidence index and the advance consumer confidence index indicate, however, that Poles' shopping sentiments were showing signs of improvement at the turn of 2022 and 2023.

Retail market in Poland

More than 300,000 sq m of new retail space was delivered to the market in Poland in 2022 - the highest result since 2018, when 365,000 sq m was completed. Approximately 25% of the new supply volume came in the form of extensions to existing retail projects.

In 2022, the highest level of developer activity was recorded in small-sized cities with less than 100,000 inhabitants. More than 60% of new supply was completed there, the vast majority of which consisted of small projects or extensions (less than 10,000 sq m). Only 28% of the new supply in Poland was delivered in the largest agglomerations. This included two retail parks in Kraków, accounting for half the space delivered to the market in those locations: ATUT Ruczaj and ATUT Galicyjska. The area of the remaining projects delivered did not exceed 10,000 sq m.

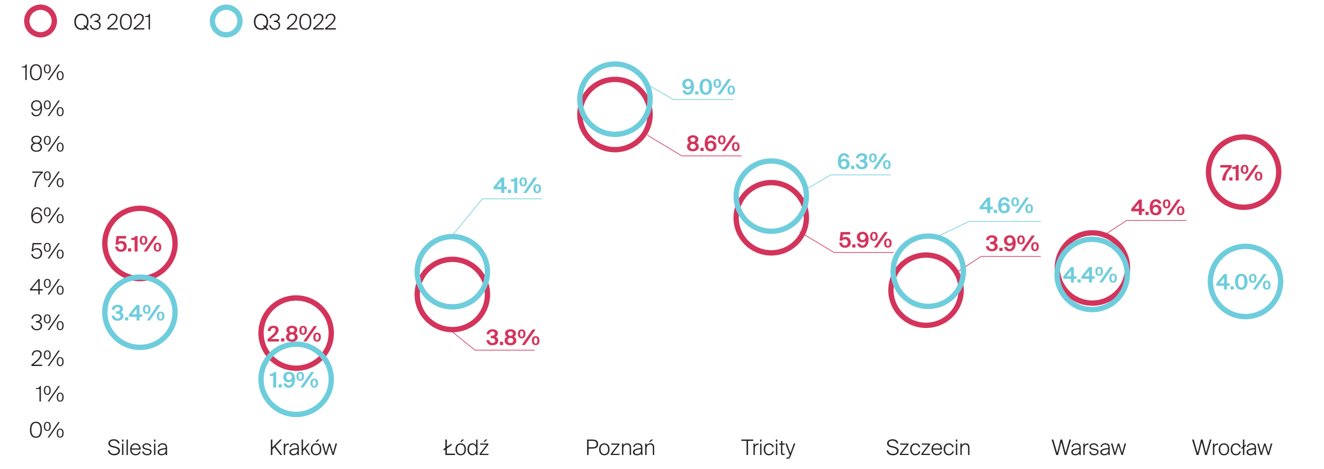
Approximately 300,000 sq m of new retail space was delivered in Poland in 2022, bringing the total stock in the country to an estimated 12.6m sq m. Over half of this stock was located in the eight largest agglomerations. The high level of activity n the small-sized markets has resulted in the supply of retail space in these cities equalling that in medium-sized cities – each taking a market share of 24%. In the coming quarters, as new retail schemes are delivered, small cities are expected to overtake medium-sized cities in terms of stock.

At the end of Q4 2022, there was 162,000 sq m under construction in small cities - 64% of the total construction area in Poland. In medium-sized cities, by way of comparison, there was only 50,100 sq m, with the remaining 43,000 sq m located in the largest agglomerations. The largest projects under construction were Bawełnianka (23,000 sq m, Bełchatów) and Fort Wola (22,000 sq m, Warsaw). The majority of the projects currently under construction are new schemes - 22 investments, with expansions accounting for only 7 investments.

Such a high level of activity in the smallest markets in Poland is due to the already high saturation of retail space in larger cities. It can be expected that in the medium-term perspective, smaller cities will continue to be the main focus of interest for investors.

Vacancy research carried out in July and August 2022 revealed the occupancy levels in major Polish cities. In the 8 major agglomerations, the vacancy rate fell from 5.3% to 4.7% over the previous year. An increase in the vacancy rate was observed in four agglomerations: Szczecin (from 3.8% to 4.6%), Poznań (from 8.6% to 9.0%), Łódź (from 3.8% to 4.1%), and the Tricity (from 5.9% to 6.3%). In the other agglomerations, the vacancy rate decreased, with the largest falls noted in Wrocław (from 7.1% to 4.0%), Silesia (from 5.1% to 3.4%), and Kraków (from 2.8% to 1.9%). The percentage of unoccupied space decreased, among other reasons, due to the lease of the premises previously occupied by the Tesco brand, with part of the space acquired by Netto and Kaufland. In other locations, DIY stores such as Leroy Merlin and OBI have moved in. The condition of these retail properties, however, has deteriorated significantly over the previous six months, and most of them still have high vacancy rates.

Chart 5 Vacancy rates in 8 major agglomerations



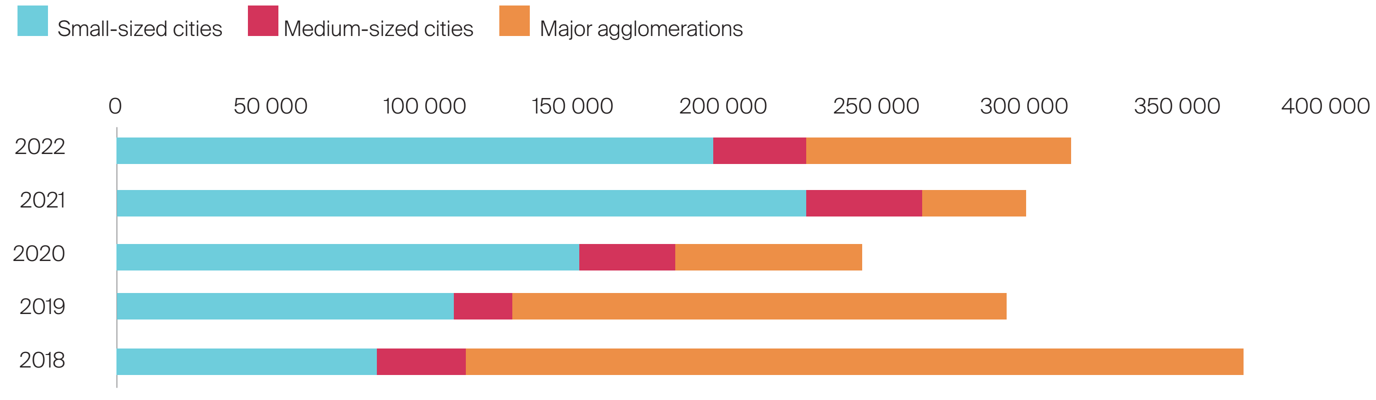
Source: Knight Frank

The difficult financial situation for companies, caused by constantly growing inflation and the energy crisis, has further undermined the condition of some tenants still feeling the adverse effects of the pandemic. In some cases it has accelerated decisions to withdraw from the Polish market. Such tenants included the Sfera chain and Orsay. In addition, Go Sport and TXM S.A. (the owner of Textil Market) went into liquidation. That said, the retail market has benefited from the arrival of some significant newcomers, such as Uniqlo, Jott (LVMH group), Gudi Home, Lovisa, dm drugstore, and Philipp Plein. In addition, the Woolworth brand plans to open its first store in Poland in 2023.

A footfall survey conducted by the Polish Council of Shopping Centres (PRCH) showed that the trend of customers returning to shopping centres, after a period of COVID-19 restrictions, is continuing. To October 2022, the footfall in shopping centres was higher in every month of the year than in the corresponding months of 2019, with only November and December 2022 showing decreases of 3.1% and 6.6% compared to 2019's corresponding months. This latter decrease is likely due to more cautious shopping habits brought on by the unstable economic situation.

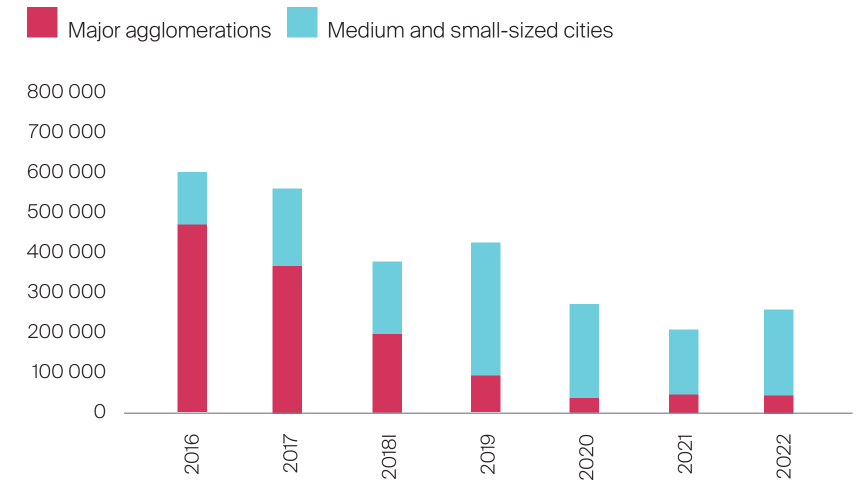
According to the PRCH data, turnover in shopping centres in October 2022 was 16% higher than in October 2019 – a result albeit significantly influenced by the increased levels of inflation. In addition, turnover in shopping centres was boosted by the presence of Ukrainian refugees, whose number was estimated at 3.85m by the end of 2022. PRCH observed an increase in turnover in categories such as catering (34.3% compared to October 2019), home furnishings, electronics and home appliances (23.9%), and clothing (8.4%).

Chart 6 Annual supply of retail space (sq m)



Source: Knight Frank

Chart 7 Retail supply under construction by location (sq m)



Source: Knight Frank

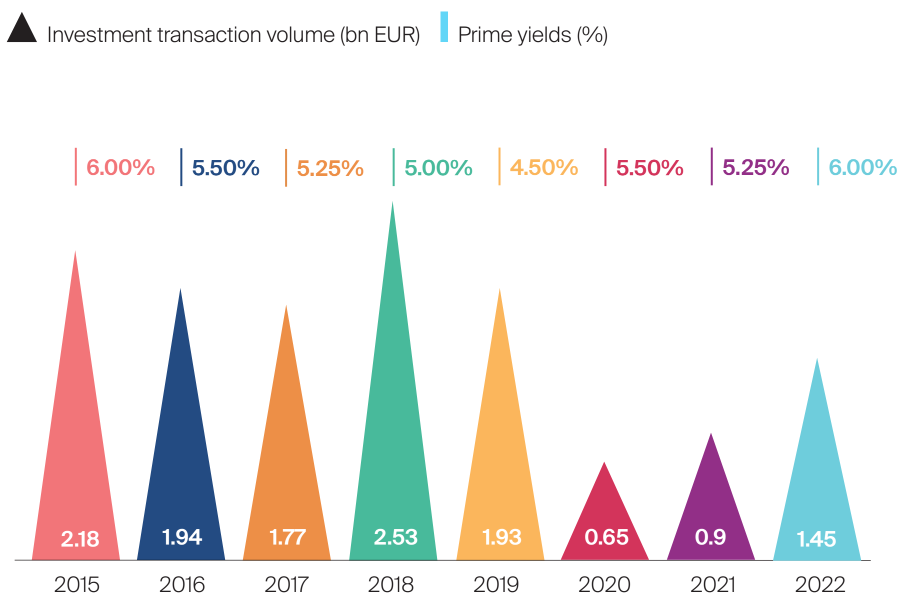
Shopping attitudes among consumers in Poland improved in December 2022. The consumer confidence index survey makes it possible to assess individual consumption trends by analysing the economic and financial situation of households. In December 2022, the index stood at -41.9, which is 2.1pp. higher than in November 2022. The biggest contributors to the month-on-month increase in the index in December 2022 were the assessment of future individual household financial situation and Poland's future economic situation (up by 4.2pp. and 2.5pp. respectively). The 3.1pp. m-o-m increase in the advance consumer confidence index in December 2022 suggests that a climate of mild optimism may continue in the coming months.

Investment market

After two years of constrained demand for retail assets from capital investors, the retail sector has been gradually regaining its share in the investment market. In the past 12 months, retail assets have attracted capital of approximately EUR 1.45bn. Compared to 2021, the retail investment volume increased by over 60%, although the result remained below pre-pandemic levels, when it averaged around EUR 2bn annually. A significant impact on last year's result was made by two portfolio transactions by EPP (totalling EUR 653 million), and the acquisition of two shopping centres by NEPI (Forum Gdańsk purchased for EUR 250 million and Atrium Copernicus for EUR 127 million). The remaining volume was invested predominantly in small retail parks with areas of up to 5,000 sq m, and in stand-alone grocery shops.

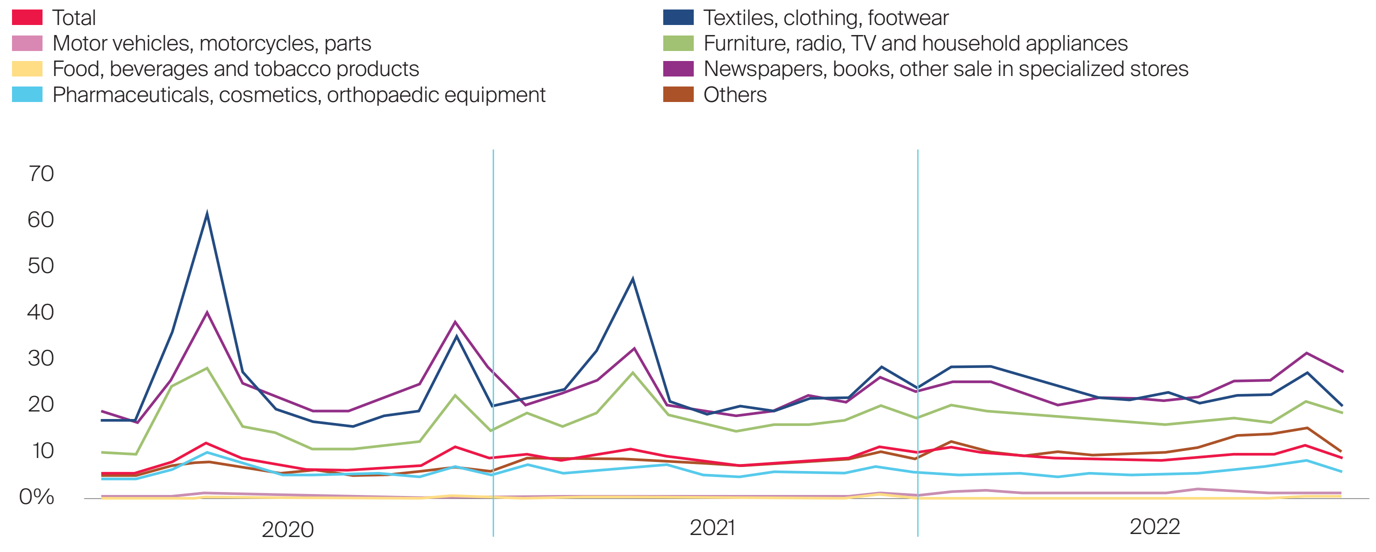
In recent years, there had been no prime asset transactions on the Polish investment market in regional cities, until the acquisition of Forum Gdańsk at a yield of around 6% in Q4 2022. The retail assets sold in recent months have mainly been in smaller projects (small-scale retail parks and convenience shopping centres), priced at 7.50%-8.50%, For such assets, yields have remained stable.

Chart 8 Investment transaction volume and prime yields in the retail sector



Source: Knight Frank

Chart 9 Share of on-line sales in retail sales (total and in selected retail categories)



Source: GUS

TRENDS

1 As a result of the price increases experienced over recent months, and due to the habit established during the pandemic of customers making quick and secure purchases, the popularity of convenience centres, retail parks, discount stores and outlet centres has remained high.

2 With the growing interest in small-sized retail centres among consumers, investor activity is primarily focused on this market segment. This is evident in both the new supply being brought to the market and that which is under construction, primarily in small-sized cities.

3 It is predicted that online shopping, along with growing interest in live commerce, cross-border e-commerce, and re-commerce purchases, will continue to supplement traditional shopping channels. At the same time, the dynamic growth of discount brands will continue, with new formats and concepts of existing stores appearing in shopping centres.

4 Increased data usage and the growth of omnichannel sales are driving the digitisation of retail sites, including sales through both physical stores and online marketplaces.

Economic indicators

1 Retail sales

In 2022, the easing of restrictions on the operation of shopping centres led to improved sentiment among both shopping centre owners and consumers. From the middle of the year, however, consumers exhibited a steadily reduced inclination to spend due to deteriorating economic conditions and the highest inflation levels for years. Despite December being a month of increased shopping due to the holiday season, retail sales in Poland only increased by 0.2% y-o-y, and by 5% in 2022 compared to the same period in 2021. Higher prices and spending by Ukrainian consumers contributed to a higher volume of retail sales over the year, while high inflation and the economic crisis have caused customers to exercise caution in their purchases, thus limiting their purchasing power.

2 Online sales

The share of online sales in total sales decreased from 11.9% in November 2022 to 9.5% in December 2022, with an average annual level of 9.6%. It is expected that the coming months will see the e-commerce sector's share in retail sales remaining at a comparable or higher level due to the degree of online shopping habits established during the pandemic. The beginning of 2022 brought significant changes in the e-commerce area due to a need to implement EU directives. This includes consumer sales in both regular and online stores, the method of delivery of digital content and services, and issues related to warranty conditions.

Warehouse sector

The very high level of tenant interest shown in modern warehouse space, which has continued for another successive year, is leading to further dynamic growth in the Polish warehouse market. The total volume of space leased in 2022 was an impressive 6.8m sq m, the second-highest result ever.

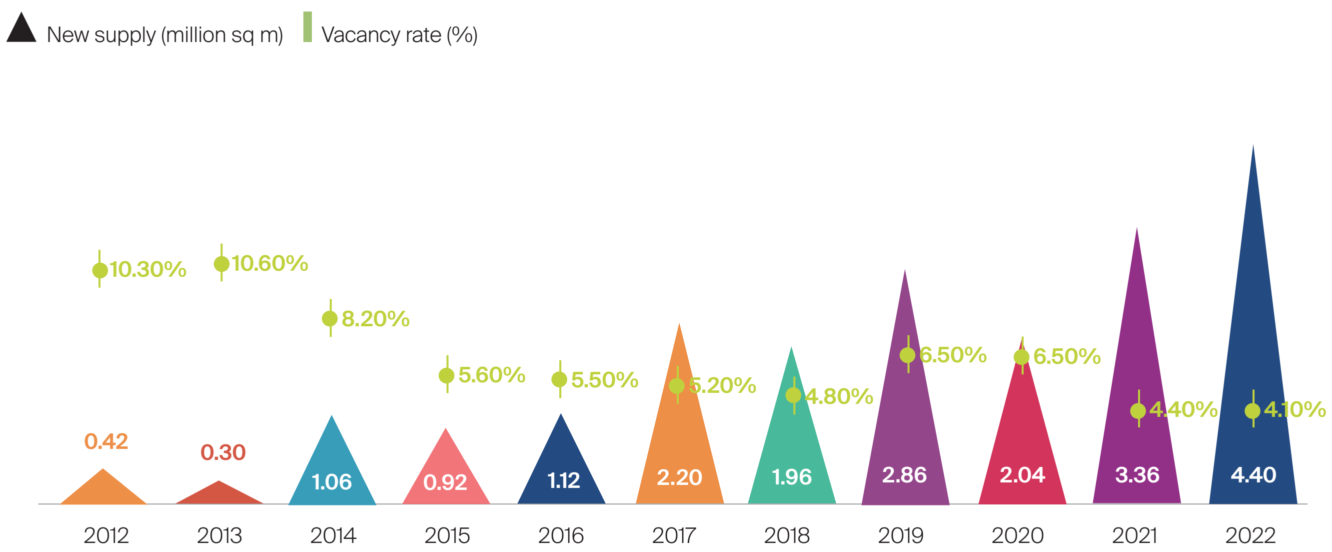
Despite lower developer activity than the previous year, the warehouse market continues to witness a significant volume of space under construction. At the end of December 2022, there was 3.4m sq m under construction, representing a decrease of 30% compared to the record-breaking figure recorded at the end of 2021.

Developers responded to the continued high demand for warehouse space by delivering a record volume of new supply in 2022. Developers completed 4.4m sq m in 2022, breaking the previous year's record by more than 1m sq m. The high level of tenant activity also led to a decline in the vacancy rate, which stood at 4.1% at the end of 2022.

Warehouse market in Poland

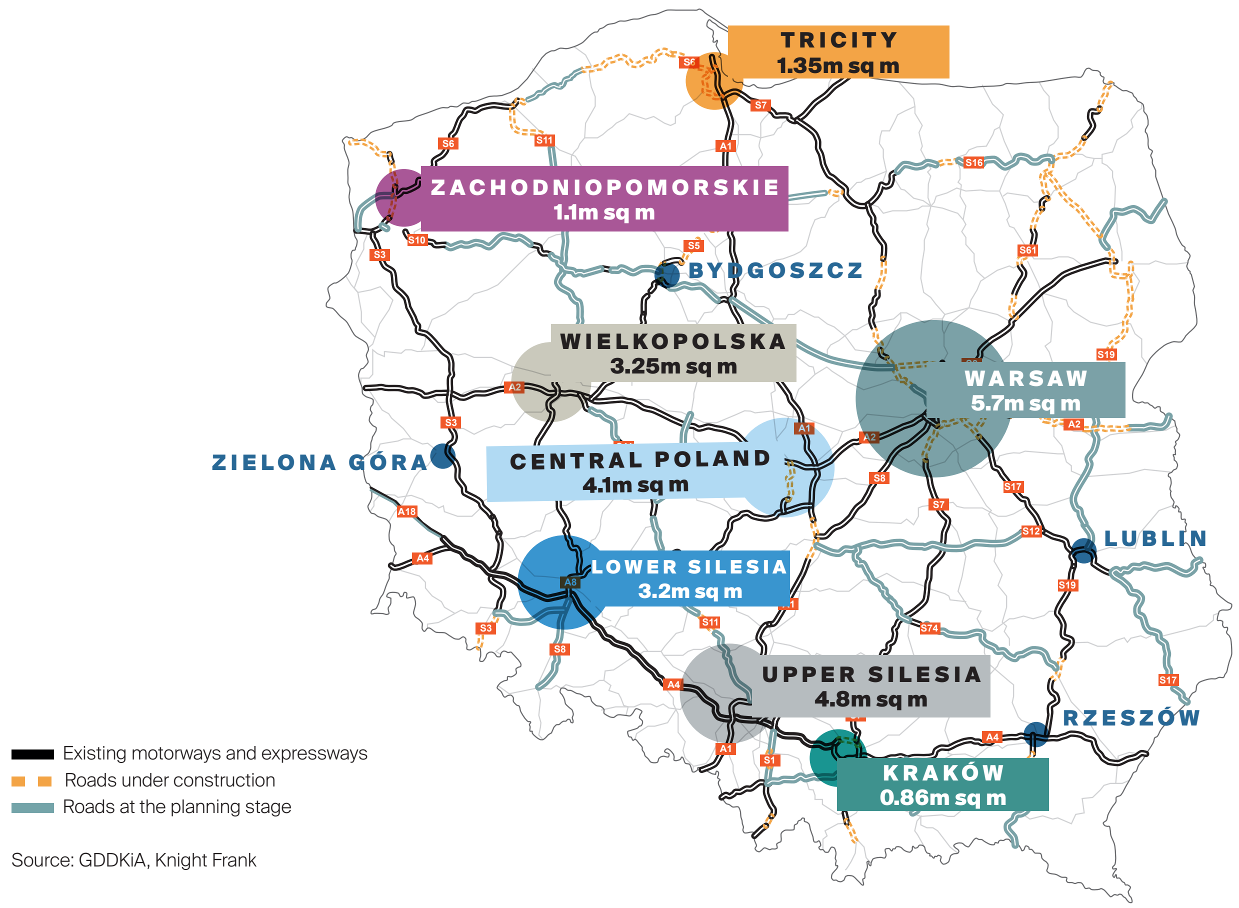
The warehouse market in Poland is currently one of the fastest-growing sectors in the Polish economy and has been consistently at the forefront of the real estate market over the course of several years. Year by year, the stock of existing space is growing dynamically, exceeding 28.3m sq m at the end of 2022. Such intense development of the warehouse market is facilitated by very high tenant interest, resulting in the leasing of 6.8m sq m of logistics and production space in 2022. This was only slightly down on the record volume of take-up in 2021. The Polish warehouse market continues to be a favourable one for new warehouse investments, with the main factors contributing to the region's attractiveness being Poland's strategic location within Europe, its constantly developing motorway network, and low labour costs. The companies leasing warehouse space are mainly from the logistics, manufacturing, e-commerce, distribution and FMCG sectors. Developers are looking for vacant plots for warehouse and industrial development

Chart 10 New supply and vacancy rate in Poland



Source: Knigh Frank

Map 1 Warehouse stock by areas of concentration (Q4 2022)



Source: GDDKiA, Knight Frank

with direct access to motorways to build BIG-BOX or BTS warehouses, or plots in close proximity to cities for the construction of SBU (Small Business Units) urban format warehouses and last-mile warehouses with high-quality office space. Warsaw remains the site of the largest concentration of warehouse space in Poland. At the end of 2022, the total volume of warehouse space in the capital's market amounted to 5.7m sq m, accounting for 20% of the total stock in Poland. The dynamic development, however, of the other 5 largest concentration areas, and the exceptionally vigorous growth in the emerging markets, mean that Warsaw's share of the market is decreasing year by year. The warehouse market in Poland grew by an average of 2m sq m of new supply annually between 2017 and 2020. 2021, however, saw a record in terms of new supply, with 3.36m sq m of modern warehouse space delivered. 2022 saw another unprecedented result in terms of new supply, with over 4.4m sq m of completed space, increasing the total stock by 17%. It should be noted that, for the first time in history, such a high increase in warehouse space was recorded in emerging markets, with more than 1m sq m completed in 2022. Next in the ranking of most dynamically growing regions in 2022 came Central Poland (650,000 sq m) and Upper Silesia (550,000 sq m). The largest projects to obtain a permit for use in 2022 were: Hillwood Bydgoszcz (104,300 sq m) for Zalando Lounge, EQT Exeter Park Świebodzin (100,000 sq m), a warehouse in P3 Poznań II (82,200 sq m), and Panattoni Park Sosnowiec III (82,000 sq m). The record level of new supply was accompanied by a high volume of space under construction. It was, however, significantly lower than that seen in 2021. At the end of December 2022, 3.4m sq m was under construction, with the largest projects being: Panattoni BTS Zalando in Bydgoszcz (146,000 sq m), Panattoni Park Wrocław Logistics South Hub (125,000 sq m), CTPark Iłowa (111,000 sq m), and Hillwood Łódź II (97,000 sq m). Compared to 2021's historically high result, the stock under construction at the end of 2022 saw a 30% decrease y-o-y. Investors were reluctant to launch new projects due to a combination of the significant increase in construction and financing costs, the weaker economic conditions in Poland, and the general uncertainty in the global economy.

2022 was a period of continued high tenant activity in the warehouse market in Poland, which was reflected in the total volume of lease transactions. In 2022, 6.8m sq m of logistics and industrial space was leased. This is the second highest volume of warehouse take-up, only 300,000 sq m lower than 2021's record result. The largest leases concluded in 2022 were signed with representatives of the logistics and e-commerce sectors, including Panattoni BTS Sulechów for an e-commerce tenant (90,000 sq m), Panattoni Park Poznań A2 (82,000 sq m), also for an e-commerce tenant, and a contract signed in Panattoni Park Wrocław Logistics South Hub with a logistics tenant (75,000 sq m). The most popular locations among tenants were Poland's main warehouse markets, namely Warsaw, Upper Silesia and Central Poland. It is however worth noting that the emerging markets, which continue to attract tenant interest, achieved fourth place. Despite the record new supply coming onto the market, the continued high level of tenant activity has led to a reduction in the amount of available space. At the end of December 2022, the vacancy rate in Poland stood at 4.1%, down 0.3pp. on the same period in the previous year, remaining at the same level as in the previous quarter of 2022.

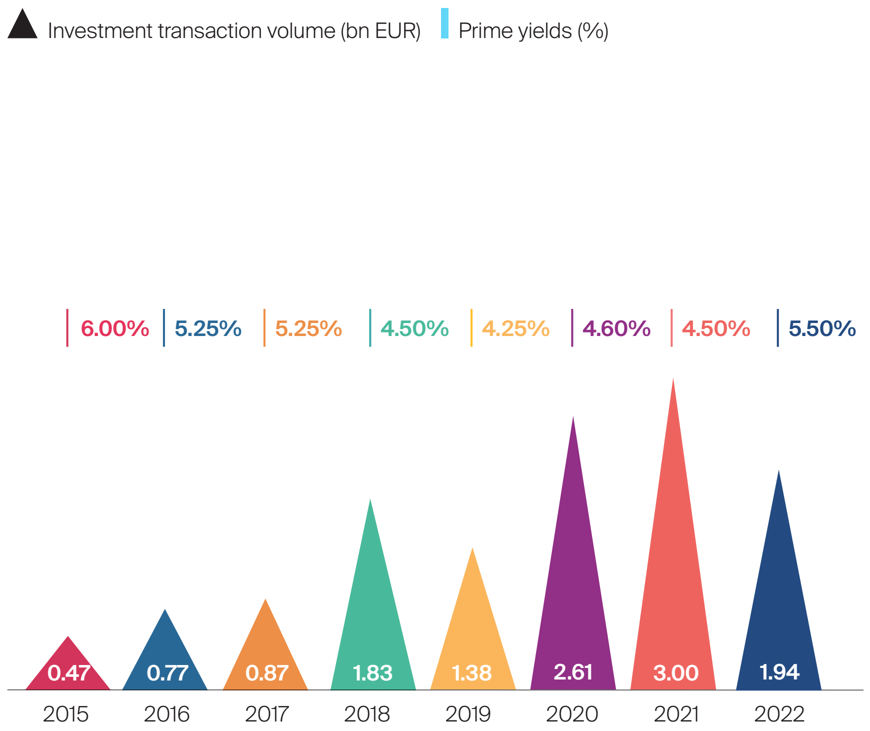
After years of stability, asking rents in the warehouse sector rose sharply in the second half of 2022. Higher financing costs for new projects, high construction costs, and rising prices for services and utilities have all been reflected in warehouse lease terms. Landlords are already setting asking rents at offer level, depending on the length of the lease, the size of the space leased and the tenant's specific expectations regarding the fit-out of the space. The most expensive warehouse market was the Warsaw concentration area, where asking rents ranged from EUR 3.50 to EUR 6.50/sq m/month. In the other regions, asking rents remained in the range of EUR 3.50 to EUR 4.50/sq m/month, with the exception of Kraków, which remained more expensive, with asking rents of EUR 3.50-5.00/sq m/month.

Investment market

From the beginning of the pandemic, the warehouse sector outperformed its competitors in the investment market. 2022, however, saw the warehouse sector in second position in the structure of investment transactions, with 34% of invested capital and a value of over EUR 1.94bn. The warehouse investment volume in 2022 was significantly shaped by single-asset transactions. Portfolio transactions, which dominated the investment volume in previous years, accounted for some 35% of the invested capital. The largest portfolio transaction last year was the acquisition of the Hillwood warehouse portfolio by CBRE IM for a value exceeding EUR 0.5bn. In 2022, other significant transactions were the purchase of the 7R portfolio by CTP, the acquisition of Panattoni's warehouse portfolios by ARES and Accolade, and the sale of the Cromwell portfolio to Partners Group & Peakside.

As in the office sector, yields for warehouse assets increased, and were estimated at the end of 2022 to be around 5.5%-6.0% for prime multi-tenant warehouses located in the main concentration areas in Poland. It should be noted that due to higher financing costs and changing investor expectations, ongoing negotiations are taking place at higher yields.

Chart 11 Investment transaction volume and prime yields in the warehouse sector



Source: Knight Frank

TRENDS

1

Despite the slowdown forecast in the Polish economy and a weaker market, demand for warehouse space in 2022 remained at a comparable level to the previous year.

2

The systematic development of key logistics locations is expected to continue, with most development activity currently concentrated in emerging market areas.

3

After years of stability, asking rents in the warehouse sector rose sharply in H2 2022. The increase in rents was due to high construction costs and high financing costs of new projects. In 2023, rents are expected to stabilise and remain at a high level.

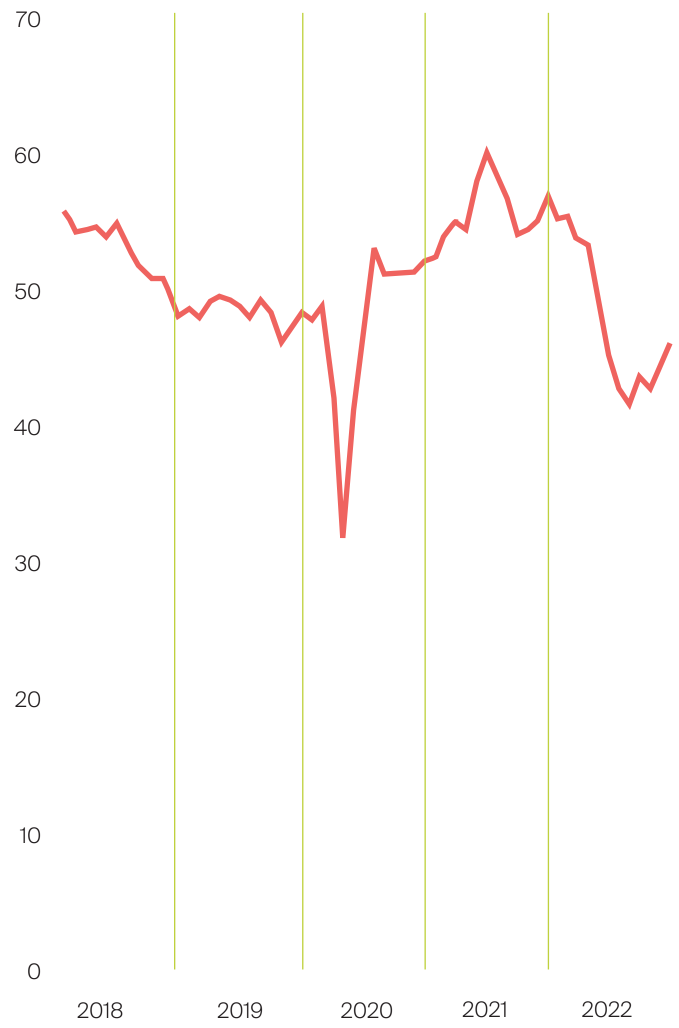
4

The standard of warehouse construction has been changing. The limited availability of land suitable for building warehouses has resulted in developers opting to build taller warehouses, while increasing the load-bearing capacity of floors.

5

In line with ESG strategies, warehouses are being built with environmental considerations in mind. The construction of green-certified warehousing is becoming standard, and ecological solutions applied include: the installation of photovoltaic panels, grey water recovery, LED lighting with intelligent lighting systems. In the long term, these will result in real savings and reduced carbon footprints.

Chart 12 PMI in Poland



Source: Knight Frank

Economic indicators

1 PMI

The Purchasing Managers' Index (PMI) for Polish industry in December 2022 was 45.6 points, compared to 43.4 points in the previous month. The lower level of the index was due to a significant fall in production and new orders. Industrial production and new orders remained on a downward trend, due to unfavourable market conditions caused by inflation and economic instability. Despite the low level of the PMI, which remains below the neutral threshold, there are positive signals for industry and the economy as a whole. The index recorded its highest increase since May 2022.

2 Industrial Production

According to Statistics Poland, industrial production in Poland increased by only 1% in December 2022 compared to December 2021, and was 6.4% lower compared to November 2022. For 2022 as a whole, industrial production sold was 10.2% higher than the previous year. In December 2022, compared to December 2021, increases in output sold were recorded in 17 of the 34 industrial divisions, including the manufacture of motor vehicles and trailers, machinery and equipment, and electrical equipment, while the remaining industrial divisions experienced marked declines, with the highest in the manufacture of metals, electricity generation and supply, and the manufacture of chemicals and chemical products. Industrial activity has clearly slowed, with declines evident in Germany and other countries in Europe. Economists predict that industrial stagnation will occur in the next quarter, but sharp declines will be avoided.

PRS sector

The PRS sector in Poland has flourished compared to previous years, both in terms of stock growth and development pipeline. In addition, the current socio-economic situation brings new opportunities for further expansion of the sector. However, compared to Western European countries, it is still in the early stages of development.

In 2022, the influx of refugees from Ukraine has led to a significant increase in demand for rental apartments in Poland. As a result, the PRS sector benefited from an exceptionally fast commercialisation rate in 2022, while the vacancy rate was estimated at less than 3%.

Due to strong demand and the high cost of financing new developments, rental prices in the PRS market have risen significantly in recent months. Compared to the first half of 2022, rents in PRS facilities have increased by around 30-40% in Warsaw and 10-30% in regional cities.

PRS market in Poland

The institutional Private Rented Sector (PRS) in Poland has seen remarkable growth in recent times, as evidenced by high share of new stock in total supply. As a result, institutional operators had more than 10,300 rental units at the end of 2022, and 40% units were completed in the past year. Nevertheless, it should be noted that PRS facilities accounted for only 1% of the total rental housing stock in Poland's main cities, with the privately owned rental housing stock being estimated at over 1.2 million units.

Warsaw is the largest PRS submarket in Poland, with approximately 4,180 apartments for rent and a 40% share of the PRS stock. Wrocław is the second-largest submarket, with over 2,300 apartments. While Kraków is considered to be most dynamically expanding submarket, where the PRS supply doubled in the previous year, had over 1,200 apartments for rent at the end of 2022. Moreover, about 40% of investors is going to start a new projects in Kraków in 2023.

The evolving real estate market and current socio-economic climate are presenting new opportunities for further expansion of the living sector in Poland. Most importantly, high prices in the residential sector and persistent high interest rates are limiting purchasing power in the housing market, resulting in the demand for housing being met primarily through rental apartments. In 2022, the number of mortgages decreased by 50% comparing to the year 2021. Moreover, there is a generational shift taking place in Poland and changes in attitude towards the long-term liabilities could be seen. This may well bring opportunities related to a changing balance between apartment rental and ownership. The demand for rental properties is also driven by the availability of suitable locations for young working people, which may lead to an advantage in renting over buying.

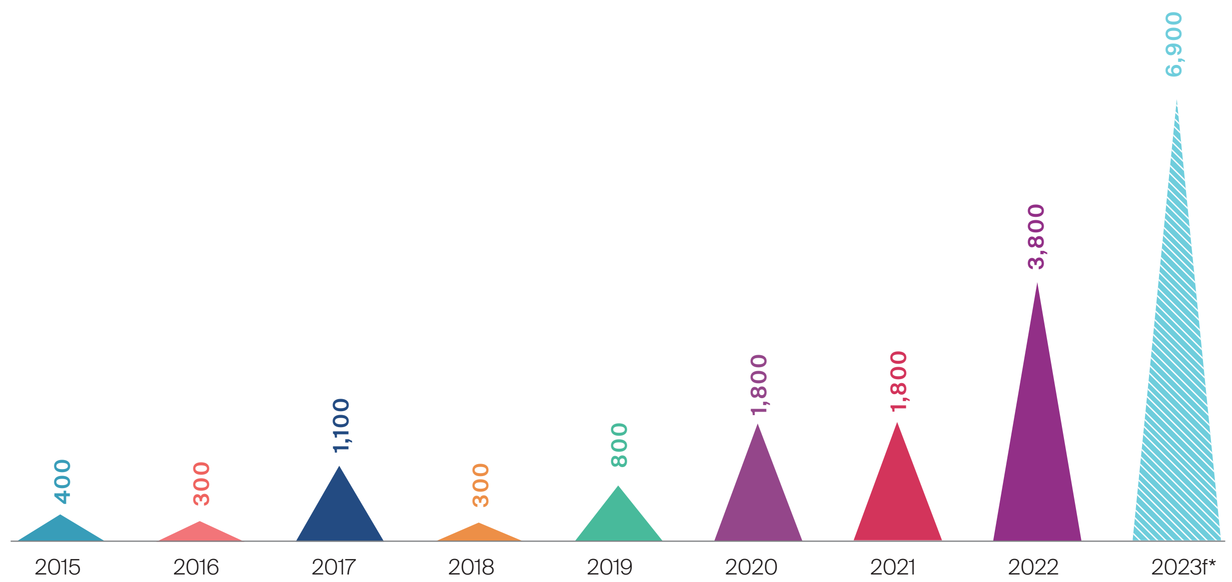
Additionally, demographic circumstances dictated by the war in Ukraine and its consequences have exerted a notable influence on demand in the PRS market. The influx of Ukrainian refugees following the outbreak of hostilities in their country was one of the key factors limiting the availability of rental apartments in Poland. According to the Union of Polish Metropolises, more than 3.85 million refugees came to Poland following the outbreak of the war in Ukraine. Under these circumstances, demand for apartments has risen accordingly. Strong demand for PRS apartments is confirmed by extremely low vacancy rates in the sector, estimated at less than 3% despite 2022's substantial new supply. The sector is also characterised by its fast pace of commercialisation - in many cases the majority of apartments are already rented before the project is ready to open its doors.

Strong demand for apartment rentals has resulted in an unprecedented increase in PRS sector rents in recent months. As a result of the significant decline in the availability of apartments for rent in Poland, coupled with the higher costs of financing new developments and growing construction costs, rents in the PRS sector increased by some 30-40% in Warsaw and some 10-30% in regional cities compared to rents in H1 2022.

At the end of 2022, approximately 8,300 units in almost 40 projects were identified as under construction in Poland. According to developer schedules, nearly 6,900 apartments are planned to be delivered by the end of 2023 with the largest new supply expected in Warsaw, Łódź and Wrocław. It is foreseen that the coming years will bring further flourishing development of the institutional rental market.

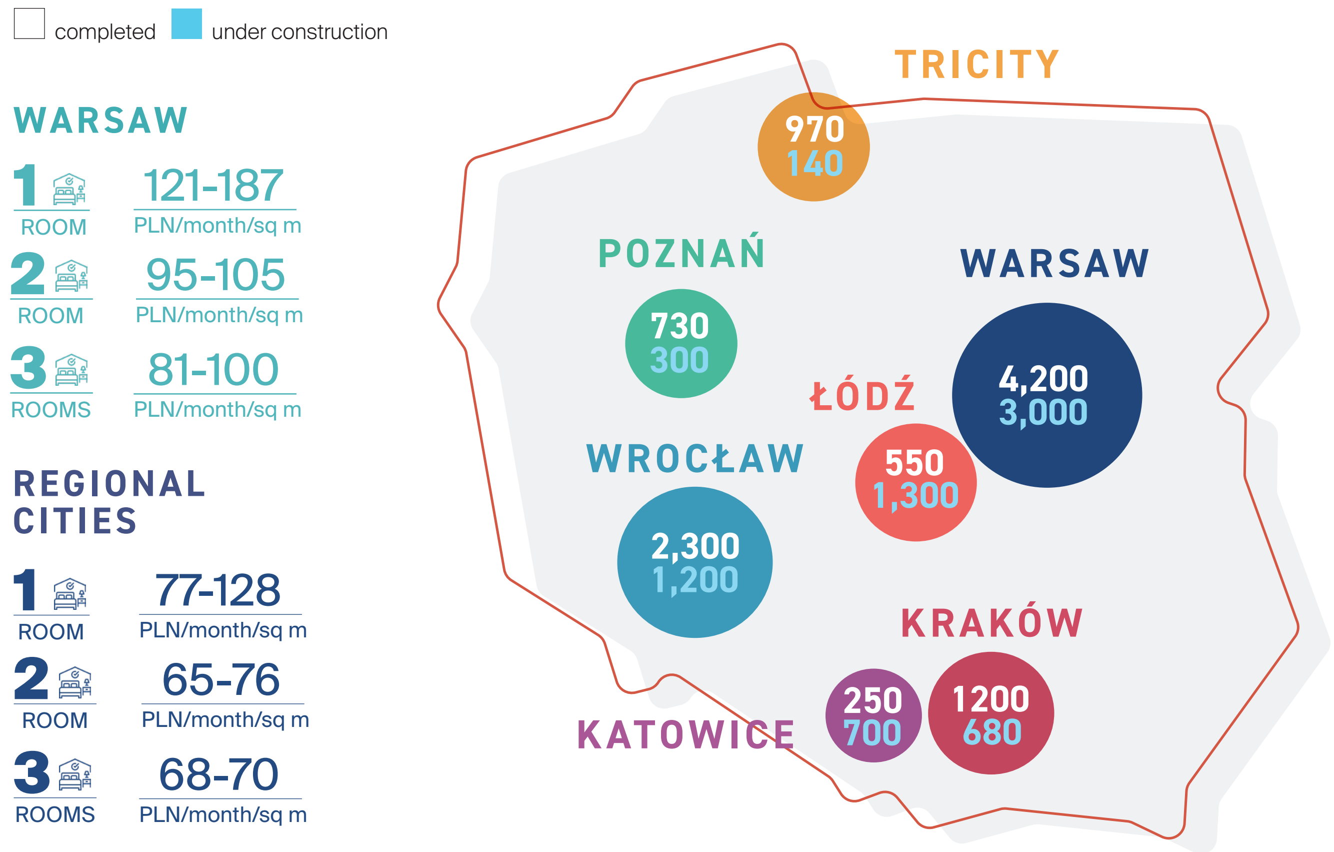
The Polish PRS market currently plays host to both Polish and foreign operators

Chart 13 Annual supply of PRS apartments



Source: Knight Frank, f*-forecast

Map 2 PRS stock and supply under construction by location (Q4 2022)



Source: Knight Frank

with extensive international experience in the sector. At the end of 2022, Echo Investment had the highest share of the existing stock (29%), with almost 3,000 apartments in 11 projects available on its Resi4Rent platform. Other important investors were Fundusz Mieszkań na Wynajem (with more than 2,000 existing units in 19 projects) and TAG Immobilien (with 1,500 apartments in 9 projects on its Vantage Rent platform). Moreover, TAG Immobilien acquired 100% of the shares in the Robyg Group, securing land for approximately 16,500 apartments across 14 residential projects. It should be noted that such a positive outlook for the PRS market has attracted new players such as Syrena, Van der Vorm and AFI, all debuting in the sector in 2022.

Investment market

Despite many challenges, investors remain committed to the Living sectors. In 2022 the institutional investment into Polish Living sector totalled an estimated EUR 436m. Moreover, a number of investors currently active on the commercial real estate market are seeking opportunities to diversify their portfolio in the PRS sector direction.

On the other hand, living sectors captured the second largest share of total European investment volumes 2022, only behind offices. It is worth notice that, in total, provisional data suggests that Living accounted for 20% of total European CRE investment in 2022. The Living sectors have increased their share of total investment for seven consecutive years.

As investors and developers strive to create solutions to construction cost inflation, open book construction contracts, hedging costs and increasing swap rates, the student, BTR and seniorshousing sectors will remain attractive to global investors.

The yields for PRS investments in the most popular cities of Western Europe amounted to an average of 3.25% -3.75% in Q4 2022. In Warsaw, it is estimated that prime yields were around 5.0% -5.25%.

Knight Frank's global survey of more than 600 investors - part of Knight Frank's October 2022 Active Capital research - found that 46% of investors plan to target the living sector over the next 18 months. Their preferences paint a rosy picture for the future of the PRS market in Poland.

Table 1 European Residential Investment Yield Matrix (Q4 2022)

	Germany	France	Spain	Netherlands	Austria	Ireland	Poland	UK
Total population	84.1m	67.8m	46.7m	17.2m	9.1m	5.1m	37.7m	68.7m
Urban population	64.5m	54.1m	37.9m	16.2m	5.2m	3.1m	22.8m	56.6m
Rent Restrictions	Rent Control or Rental Brake	Rent Controls in Paris and other cities in the provinces (Lille, Lyon, Bordeaux, etc)	Rent controls being discussed	More rent controls in preparation	Regulated and un-regulated	Rent controls in RPZs	-	Some affordability requirement
Prime Net Initial Yield	2.55%	3.00%	3.75%	3.75%	3.10%	4.10% -4.20%	5.00% -5.25%	3.25+%
Trending	▲	▲	▲	▲	▲	▲	▲	▲
Prime Gross Yield	3.00%	3.00%	4.20%	4.00%	3.40%	5.00%	5.50% -5.75%	4.00% -4.25+%
Prome Cap Val p sq.m	€7,000	€6,840	€6,000	€11,000	€7,000	€8,000	€3,700	€11,000
Typical Rent p sq.m per Month	€22.00	€25.00	€16.00	€24.00	€14.50	€32.00	€21.00	€42.00

Source: Knight Frank

TRENDS

1

Many investors are now diversifying their asset portfolios by investing in the PRS sector, and land banks have been secured to construct some 35,000 new apartments. Additionally, decreasing residential market sales are leading to a further increase in the PRS supply, as residential developers are becoming more open to negotiating the purchase of entire projects.

2

High prices in the residential sector and persistent high interest rates are limiting purchasing power in the housing market, resulting in the demand for housing being met primarily through rental apartments.

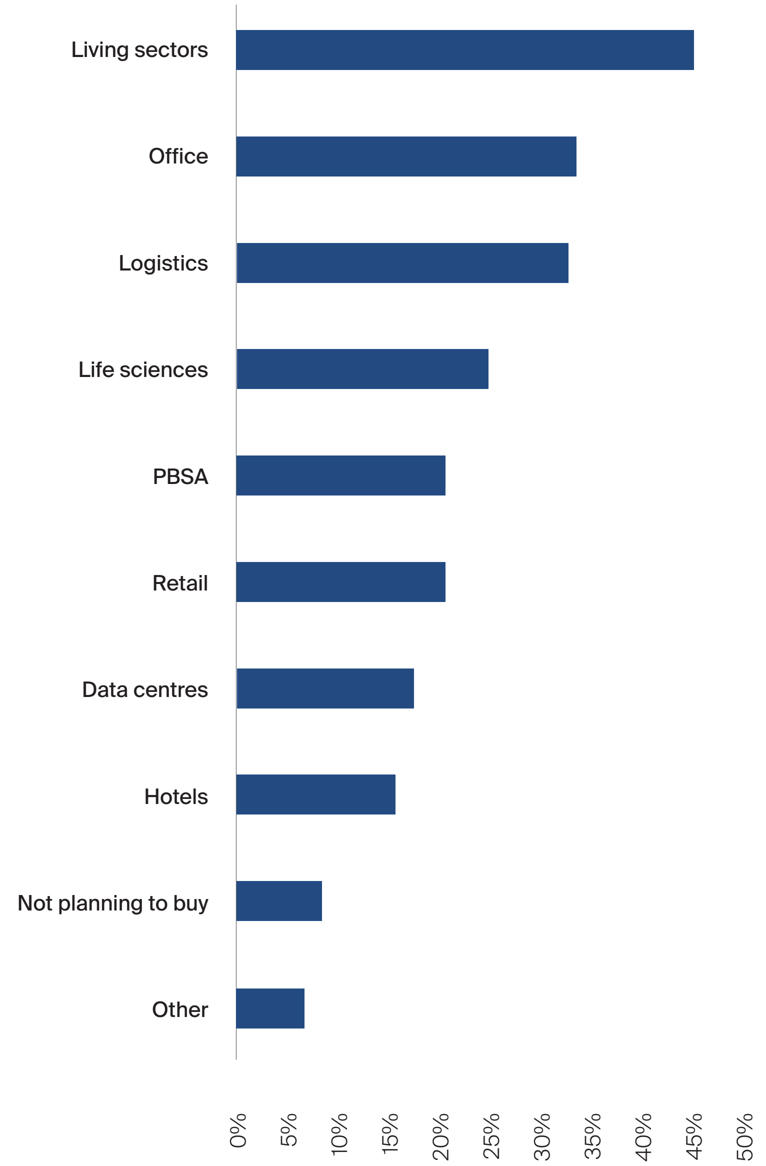
3

The demand for rental properties is also driven by the availability of suitable locations for young working people, which may lead to an advantage in renting over buying.

4

The PRS sector in Poland has seen significant growth in recent years, that is evidenced by high share of new units in the total stock, equalled in 2022 to 40%. This trend is expected to continue in the future, as the evolving real estate market and current socio-economic climate present new opportunities for expansion.

Chart 14 Sectors that investors are considering to target over the next 18 months on the global investment market



Source: Knight Frank's global survey of more than 600 investors - part of Knight Frank's October 2022 Active Capital research.

Economic indicators

1 Interest Rates

Over the last year, the reference interest rates was raised 11 times, rising from 0.1% to 6.75%. Due to rising interest rates, the WIBOR index used to calculate mortgages in PLN has been growing, resulting in increases in monthly liabilities of several hundred PLN in recent months for mortgage holders. Rising interest rates and higher costs of mortgages create opportunities for the rental market. Nevertheless, they also lead to higher financing costs for new developments on the developer side, and an increase in previously incurred liabilities.

2 Mortgages

As a factor limiting customer purchasing capacity, the introduction of the new Recommendation S by the Financial Supervision Authority, which implies higher household costs, was identified. The introduction of Recommendation S thus resulted in a decrease in creditworthiness by several dozen percent. According to the latest data published by the Credit Information Office (BIK), the value of mortgages approved in Poland in 2022 fell by 49.1% year-on-year. Similarly, in terms of volume, there was a decrease by over 50%.

CONTACT IN POLAND:
+48 22 596 50 50
www.KnightFrank.com.pl

COMMERCIAL AGENCY KRAKÓW, KATOWICE, WROCŁAW, TRICITY
Monika Sułdecka-Karaś
monika.suldecka-karas@pl.knightfrank.com

COMMERCIAL AGENCY - T-REP WARSAW, ŁÓDŹ, POZNAŃ
Piotr Borowski
piotr.borowski@pl.knightfrank.com

VALUATIONS & ADVISORY
Małgorzata Krzystek
malgorzata.krzystek@pl.knightfrank.com

STRATEGIC CONSULTING EMEA
Marta Sobieszczak
marta.sobieszczak@pl.knightfrank.com

INDUSTIAL AGENCY
Michał Kozdrój
michal.kozdroj@pl.knightfrank.com

RESEARCH
Elżbieta Czerpak
elzbieta.czerpak@pl.knightfrank.com

CAPITAL MARKETS
Krzysztof Cipiur
krzysztof.cipiur@pl.knightfrank.com

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- strategic consulting, independent forecasts and analysis adapted to clients' specific requirements,
- market reports and analysis available to the public,
- tailored presentations and market reports for clients.

Reports are produced on a quarterly basis and cover all sectors of commercial market (office, retail, industrial, hotel) in major Polish cities and regions (Warsaw, Kraków, Łódź, Poznań, Silesia, Tricity, Wrocław). Long-term presence in local markets has allowed our research team to build in-depth expertise of socio-economic factors affecting commercial and residential real estate in Poland.

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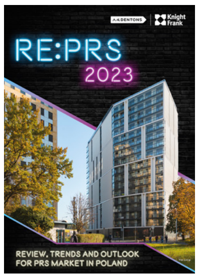

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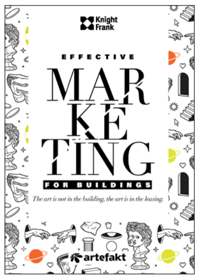

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