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Market
Overview
2018

Residential
Poland

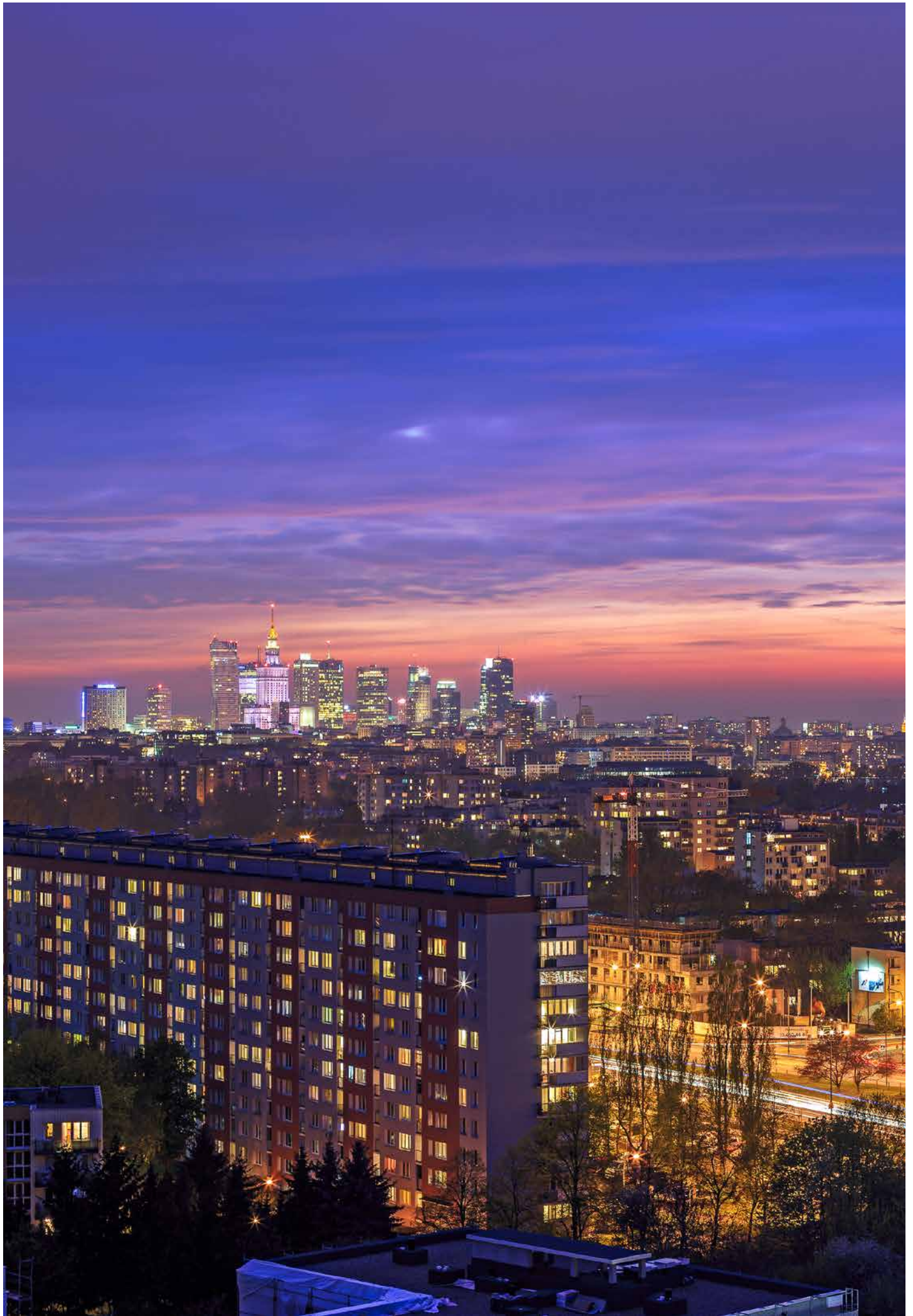


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Residential market in Poland in 2017

For another year in a row, the housing market in Poland outperformed the previous year's records. With sales and supply at an all-time high, the residential property industry proved stronger than ever in 2017. Institutional investment in the private rented sector saw further growth as well.

The residential development for sale market exceeded its 2016 records in sales and new supply. Surplus demand led to a relative shortage in the offer, resulting in a rise in property prices.

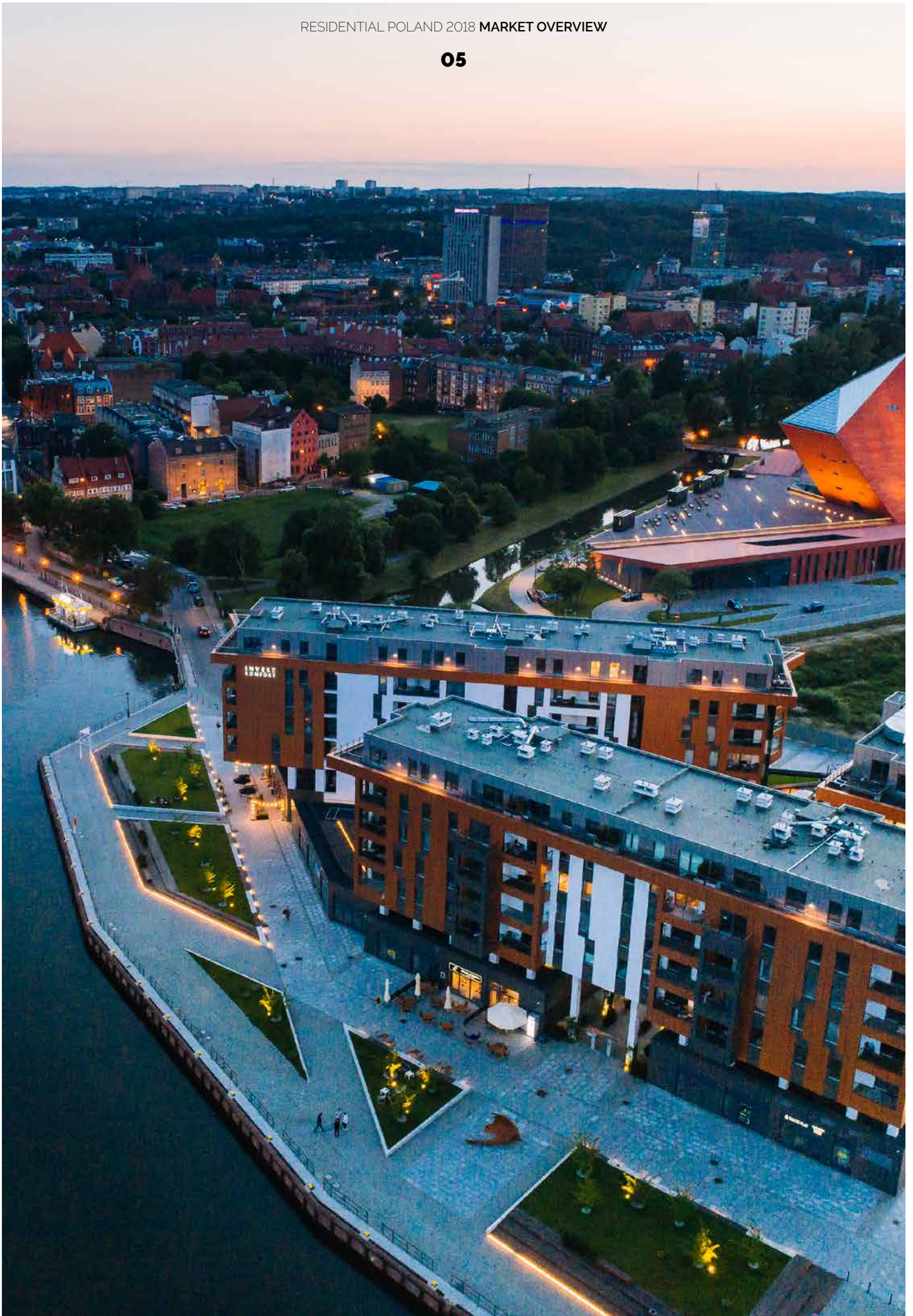
The market is now in its fifth year of rapid expansion, with remarkable annual sales growth rates of 17-20% each year. In 2017 new supply was not able to meet the increasing demand for housing. As a consequence, the market noted a significant decline in the inventory of unsold stock. An accelerated sales pace and an insufficiently large offer resulted in price increases. The tightening land market presents a hurdle for developers, as do growing construction costs. A number of takeovers occurred in the residential development industry in 2017, both by domestic and foreign players.

The institutional transaction volume in the residential rental market grew further, mainly due to increased investment activity in build-to-rent schemes. Foreign investors remained attracted to the Polish PRS sector due to its condition and outlook.

Build-to-rent is emerging as game changer for the Polish housing market. An estimated PLN 670 million (-EUR 157m) worth of residential assets was traded by domestic and foreign institutional investors in 2017. In the largest cities in Poland, more than 2,100 units in whole multifamily buildings were transacted. Thus, the investment volume increased 7% year-on-year, while the number of traded units grew even by 60%. By now the first fifteen rental assets have started operations on the Polish market and can be used as valuable benchmarks for other investors.

The largest investor in student housing in Poland expanded its pipeline in 2017, while new players entered the market. Given the large student population, the lack of accommodation designed for the needs of students provides a huge potential for growth.

Private investors pioneered purpose-built student accommodation in Poland 2-3 years ago. The first schemes are operating in a number of Polish regional cities. There is large pipeline of projects announced by major market players, including both companies which are already investing and newcomers. The student housing sector in Poland has a huge growth potential. Market supply and demand fundamentals are compelling, with 1.35m students enrolled at universities in Poland and a dynamically increasing number of international students.



Economic and political environment

The Polish economy remained buoyant in 2017, as the country experienced the strongest growth in nearly a decade. With unemployment on a downward trend, moderate inflation and growing salaries, demand fundamentals could hardly have been better for the residential market. The mid-term prospects for Poland's economy remain robust and should support the housing market in general.

Economic growth in Poland in 2017 reached 4.6%, according to preliminary data released at the end of January by the Central Statistical Office. This is a much better result than expected by almost all institutions which predicted Poland's economic growth a year ago. The main drivers of growth were a strong expansion in household spending and a rebound in fixed investment based on a recovery of inflows from EU funds. The unemployment rate at the end of 2017 was at the lowest point in 26 years. Inflation was moderate, while the condition of the state budget improved. Salaries increased at a quick pace. In addition, the income of many households was supported by the governmental "Family 500 Plus" program. On the whole, the Polish economy proved to perform extremely well in 2017. Also the medium-term prospects seem favorable, as the global and European economy are experiencing an upturn and a period of intensive implementation of infrastructural investments co-financed from EU funds has just begun in Poland.

Key macroeconomic indicators and other statistical data confirm that the Polish economy is in good shape:

- In its November 2017 forecast, the National Bank of Poland (NBP) projected the country's economic growth to reach 4.2% in 2017, 3.6% in 2018 and 3.3% in 2019. **In the meantime, GDP in 2017 was corrected to 4.6%** in January 2018. In its Winter

2018 Interim Economic Forecast, the European Commission predicts economic growth to remain at 4.2% in 2018 and 3.6% in 2019.

- **The unemployment rate in 2017 was at the level of 4.9%, i.e. the lowest since the beginning of the political transformation period.** In the large Polish cities, unemployment was even lower – at 2.1% in Warsaw, 2.8% in Kraków, 2.2% in Warsaw, 3.0% in Gdańsk, 1.5% in Poznań and 6.4% in Łódź.
- **Inflation remained at the level of 2.1% in 2017.** Combined with the NBP reference rate of 1.5%, this means real interest rates in Poland remained still below zero. The latest NBP forecast predicts inflation to achieve rates of 2.3% in 2018 and 2.7% in 2019.
- **NBP kept its reference interest rate at the record low of 1.5%** which was set in March 2015. Low interest rates have been the key driver mobilizing cash purchases both in case of buy-to-let investments and transactions of homebuyers.
- **Salaries have been growing faster than inflation.** In accordance with data provided by Poland's Central Statistical Office, the average remuneration in the enterprise sector in Poland increased to PLN 4,973.73 gross in December 2017, i.e. a growth of 6.7% year on year.

From a viewpoint of investors' perceptions of Poland, the excellent economic performance stands in stark contrast to the political situation. There was and still is a high level of uncertainty related predominantly to the political situation in Poland. The year 2017 was overshadowed by political tensions between the Polish government and the European Commission, which has threatened sanctions over political and judicial reforms which it considers anti-democratic. From an investor's perspective, the main concerns relate to the regulatory changes that may hinder the activity of companies as well to the functioning of the judicial system. To understand the current Polish situation, it would be best to deviate from the media and tendentious political arguments. There is an evident rupture in Polish society which is mainly caused by ideological differences within the Polish nation, often amplified by the media. Observers hope the new Polish Prime Minister Mateusz Morawiecki, who replaced Beata Szydło as Prime Minister of Poland in December 2017, will be able to soften the conflicts inside and outside the country. In his former role as Deputy Prime Minister and Minister of Finance, he reduced the budget deficit and assisted with the crafting of the popular child benefit program Family 500 Plus.

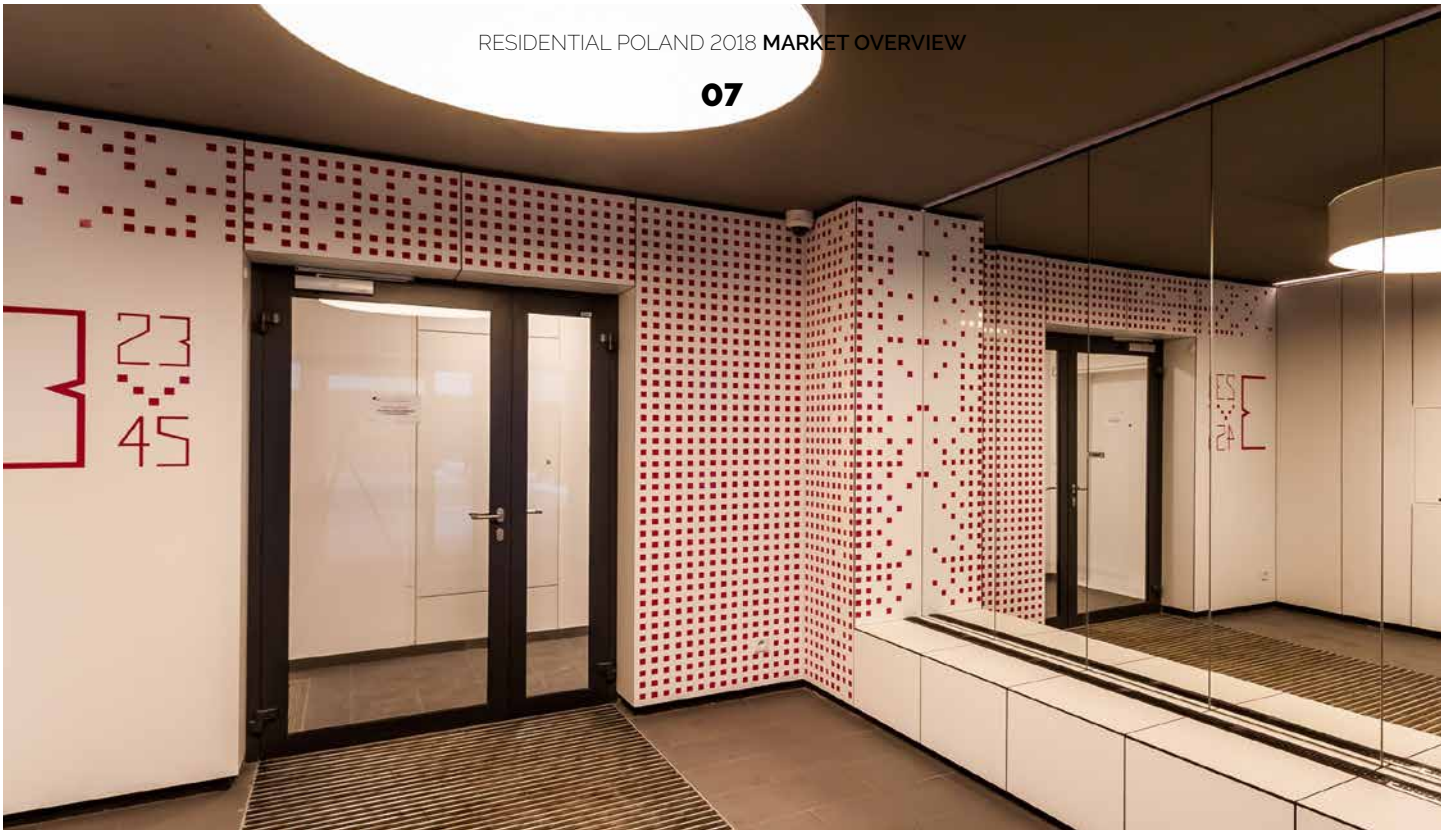
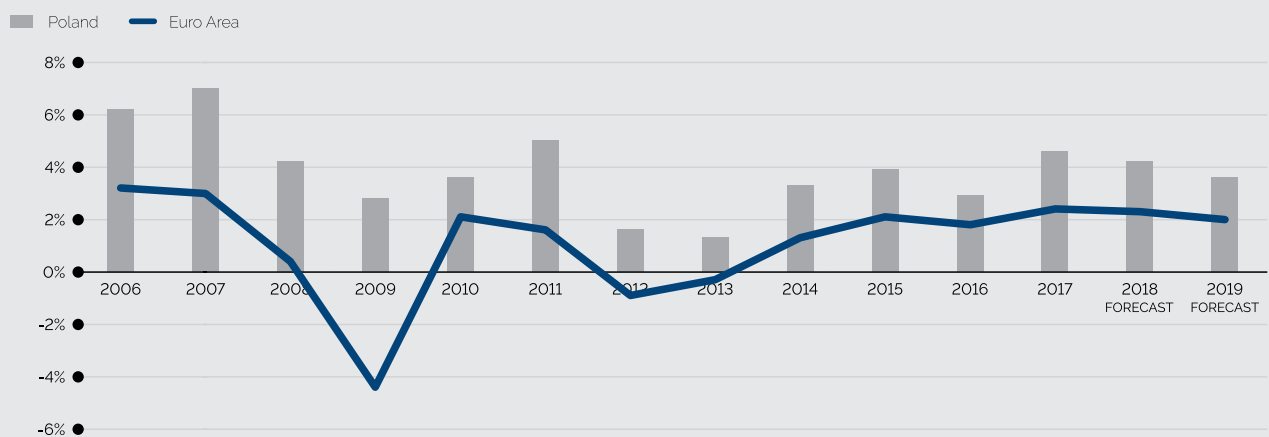
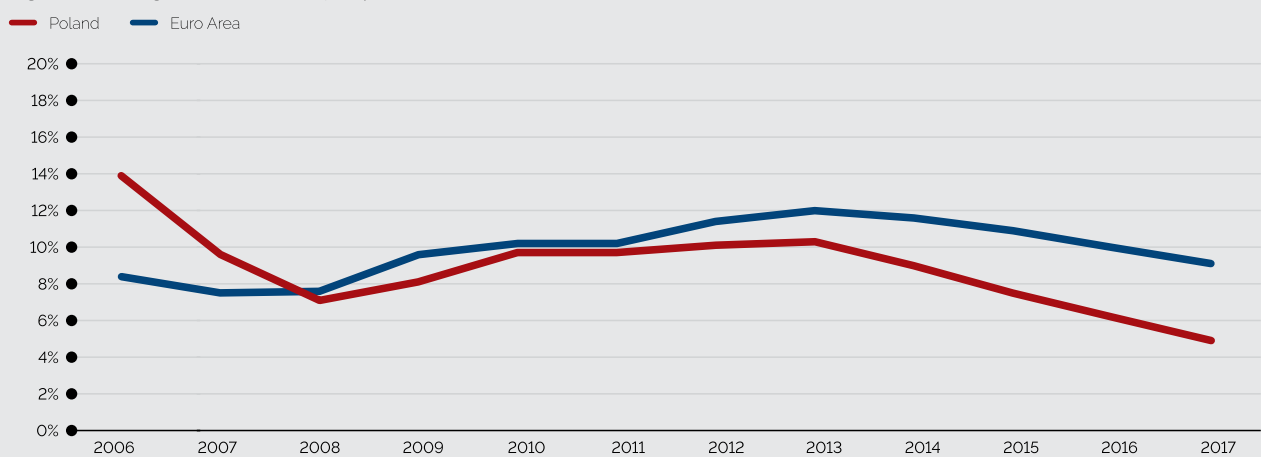


Figure 1. GDP growth year on year



Source: REAS based on Central Statistical Office (preliminary data for 2017), European Commission (Winter 2018 Economic Forecast)

Figure 2. Registered unemployment rate



Source: REAS based on Eurostat

Market environment

Construction costs rose radically due to labor shortage and increased building material prices. Likewise, land prices grew significantly, as landowners reaped benefits from increased demand for building sites. There were the first signs of consolidation in the residential development industry, illustrated by a number of company takeovers. The Polish government declared the increase of affordable housing a priority within its Home Plus program. Meanwhile, the Polish state bank BGK announced that financial subsidies under the Home for the Young (MdM) program have been used up.

Following surges in land prices and construction costs in 2017, there is an ongoing debate among market players and experts on when – rather than if – a greater increase in housing prices will follow. However, there are other consequences of equal importance. The shortage of labor immediately impacted on ongoing developments: it delayed the completion of a few projects and in several cases the general contractor and developer had to sit down to re-discuss conditions. The increase in construction costs and the scarcity of reasonably priced land plots had an impact on building up a new housing supply pipeline as well. With much higher costs of construction, it has become increasingly difficult – especially for small and/or risk-averse – developers to sustain the decision to buy land based on the current level of apartment prices. Meanwhile, the current upswing in apartment prices gives cause for hope that developers will be able to maintain their level of development activity. **An increasing number of developers are looking into housing-like investments, such as condo-hotels or short-term rentals, on land that is not designated for residential use.**

It is still easy for developers to capitalize on ongoing developments. However, under the current market conditions, the first signs of market consolidation can be observed. With more equity to be invested in land and construction, the risk exposure is becoming higher and less acceptable for many players. Land plots are not so easily affordable any more for

smaller development companies, while large capital-rich developers have a competitive edge. Then again, those large players aspire to take the opportunity to grow and grasp a larger market share. Growth was not only achieved through building up land portfolios but also by taking over other companies.

- One of the largest developers in Poland, Dom Development took over all shares of its peer competitor Euro Styl Development in early summer 2017, thereby opening the door to doing business in the primary residential market of the Tri-City.
- Murapol, another leader in the Polish development industry, not only purchased 33% shares of bourse-listed Skarbiec Holding in June 2017, but also became the second largest shareholder of Polnord at the end of the year.
- In September 2017, LC Corp, a developer owned chiefly by Polish billionaire Leszek Czarnecki, was taken over by a consortium of Mercurius Dom Maklerski, mBank and Trigon Dom Maklerski which acquired a stake of over 51% from Mr. Czarnecki.
- Yet, takeovers were not only the domain of players already active in Poland. At the end of 2017, wall street heavyweight Goldman Sachs announced it was entering the Polish residential property market by taking over WSE-listed

developer Robyg. By February 2018 the US investor eventually secured a 98% stake in Robyg in February 2018. The move to enter the real estate development market came along with Goldman Sachs' decision to considerably increase the staffing levels in its Warsaw office in 2017.

At the end of 2016, the government adopted and commenced implementing the so called National Housing Program. The key part of the program was to be the Home Plus scheme, which is intended to develop affordable housing for rent with a purchase option, whose construction is incumbent upon the National Housing Operator. The new program meant a strategic change in state housing policy: the mainstream of public funds will be reoriented towards social groups with significantly lower incomes than the middle-class households who before were supported by other public housing programs. The current Polish government hoped that both the new laws and main amendments in the existing laws proposed to the National Housing Program would be adopted by the Council of Ministers in late 2016 and the rest in H1 2017. In reality, the implementation of the program has taken more time than originally planned. It seems unlikely that the program will actually reach significant scale before 2019 and whether it will continue will largely depend on the results of parliamentary elections in autumn 2019 as well as overall macroeconomic situation and the state of the public budget.

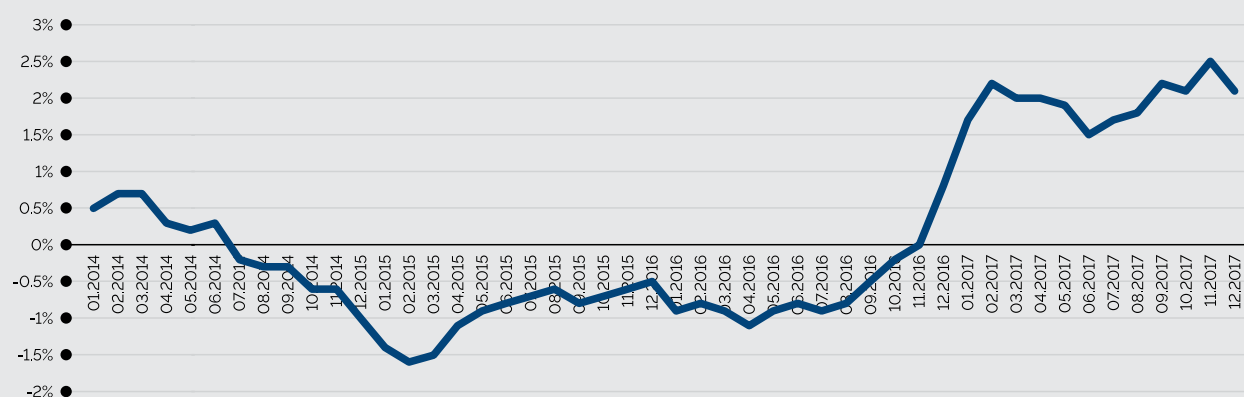
Another part of the National Housing Program is the Housing for Growth program which is implemented on a commercial basis and is described as a pillar of the Home Plus program. The program is carried out in cooperation with both local government authorities and private investors. Currently, over 1,200 flats are under construction. Housing estates are located in smaller Polish cities such as Biała Podlaska, Gdynia, Jarocin, Pruszków and Wałbrzych. In total, there are over 10,000 units in preparation with a total value of over PLN 2 billion. The amount of rent will be determined individually for each project based on capital expenditures – in

particular, costs of land, construction and financing.

The focus of the current government on affordable rental housing comes the Home for the Young program (MdM) comes to an end. Initiated by the former PO and PSL government in 2013, the MdM program was aimed at supporting persons aged up to 35 in buying their first new dwelling by subsidizing mortgages through co-financing of the down payment. Following the change in government, the new PiS government declared it would not enlarge the MdM budget and, thus, the program would terminate once the last resources were

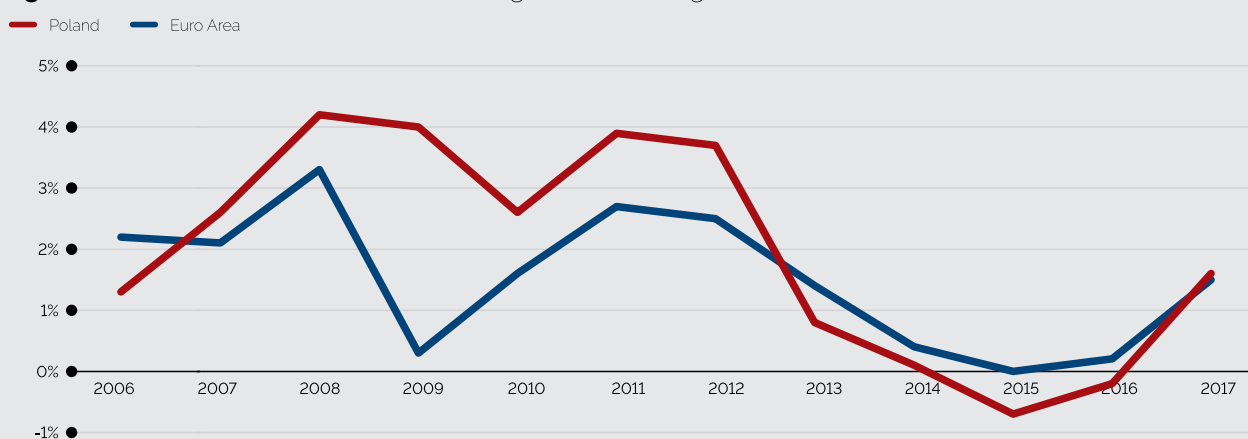
exhausted. This point was reached in early January 2018 when the applications had been approved for the last PLN 381 million in financial subsidies available for 2018 under the MdM program. For the last five years, the MdM program has had a significant impact on sales chiefly in the lower market segments of the primary residential market. **The end of the MdM program together with increased equity requirements for mortgages enforced by the Polish Financial Supervision Authority will make it more difficult for young people to become homeowners. As a consequence, higher demand can be expected on the rental market.**

Figure 3. CPI (inflation) - change to the corresponding month of the previous year



Source: REAS based on Central Statistical Office

Figure 4. HICP inflation rate – annual average rate of change



Source: REAS based on Central Statistical Office and Eurostat

Residential development for sale

The primary market in Poland once again recorded record highs, both in terms of supply and demand. The market witnessed its fifth year of expansion with remarkable sales growth rates of 17-20% per annum. For the first time since 2013, the new supply was not able to meet the growing demand for housing, resulting in a significant drop in the inventory of unsold stock. Fast sales and a listing shortage led to an increase in prices in most of the largest Polish cities.

In 2017 a total of 67,000 units were launched for sale in multifamily development projects in the six largest cities in Poland. This meant a new record output.

Yet, at the same time, this demonstrated an increase of only 3.6% compared to 2016, thus signaling a dampening in the pace of growth. On the other hand, demand experienced an incredible rise year on year, while growth rates maintained a high level. **Almost 73,000 units were sold in Poland's largest six cities in 2017 and, hence, sales climbed to an all-time best.**

Concurrently, the sales growth rate was at 17% year on year, which was remarkable given the already high level of sales in 2016. Nonetheless the sales growth dynamics fell somewhat compared to the three past years when annual growth rates achieved around 20% each year. As new housing supply lagged behind apartment sales, the inventory of unsold stock decreased to 48,000 units available for sale at the end of 2017, i.e. a drop by more than 4,500 units or 8.5% year on year. **This is a very clear sign that the supply was not able to keep up with the growing demand.** A consequence of this surplus in demand was a visible rise in prices in all the six largest Polish urban markets.

In a cross-city comparison, growth in sales was recorded for all analyzed cities. Meanwhile, when it comes to the number of units launched and those available for sale in the offer, different city dynamics become apparent though. Three cities recorded drops in new supply, while the other cities noted growth. The market offer of available

units for sale decreased in all cities, except of two. In Kraków, the number of units sold in 2017 increased by nearly 16% compared with the previous year, while the number of launched units dropped by 9%. A similar situation occurred in Poznań and Warsaw, where sales increased by 20% and 175%, respectively, while supply decreased by 3.3% and 3.7%, respectively. Apartment sales in Warsaw accounted for one fifth of all new units sold in Poland in 2017, with a total of 28,500 recorded sales.

New supply in Wrocław and the Tri-City was able to meet the growing demand. In Wrocław developers sold 17% more than in 2016, while they launched 25.2% more units in the offer. In the Tri-City, these growth rates amounted to 12.8% and 7.4%. However, the most notable results were recorded in Łódź, where the number of transactions increased by more than 37% compared with 2016, and the number of units launched by over 50%. As in the previous boom, Łódź reacted to the improved economic situation much later than other large cities. Yet, as a consequence, the market offer in Łódź increased by 43%. The only other city which saw an increase in the number of units offered for sale was Wrocław, although the growth of 3% was insignificant. With a decline of 26%, Kraków noted the largest drop in the inventory of unsold stock, followed by Poznań with 14%, Warsaw with 12% and the Tri-City with 2%.

Finally, it is noteworthy that Warsaw topped London in the number of new build sales for the second year in a row.

In Warsaw more than 28,500 apartments were sold in 2017 compared to just over 22,000 units in London, thus even increasing the gap of 2016. In this context, the market performance of Warsaw should be assessed bearing in mind a population of around 2 million in Warsaw, while Greater London houses 8.6 million inhabitants.

The excellent performance of the primary residential market was linked to the favorable economic situation in Poland. GDP growth in 2017 was far better than last year's expectations. Moreover, lower unemployment, growing salaries, moderate inflation and continuously low interest rates contributed to the housing boom. The number and value of mortgage loans increased, compared to 2016. The governmental Home for the Young (Młodym) scheme continued to support homebuyers in 2017. Cash purchases were of key importance, notably those for buy-to-let investments in long-term or short-term rentals. **Residential property is increasingly considered a safe haven for investors, whereas both capital gains and yields seem attractive in Poland.** To summarize, the housing market thrived in 2017 and the residential development industry showed a great performance. The year 2018 is likely to continue to see strong demand, despite a few factors which could potentially weaken the sales result, including the end of the Młodym program. The volume of new supply is expected to decrease to some extent. With a lower offer and higher land and construction costs, it is likely that housing prices will go up.

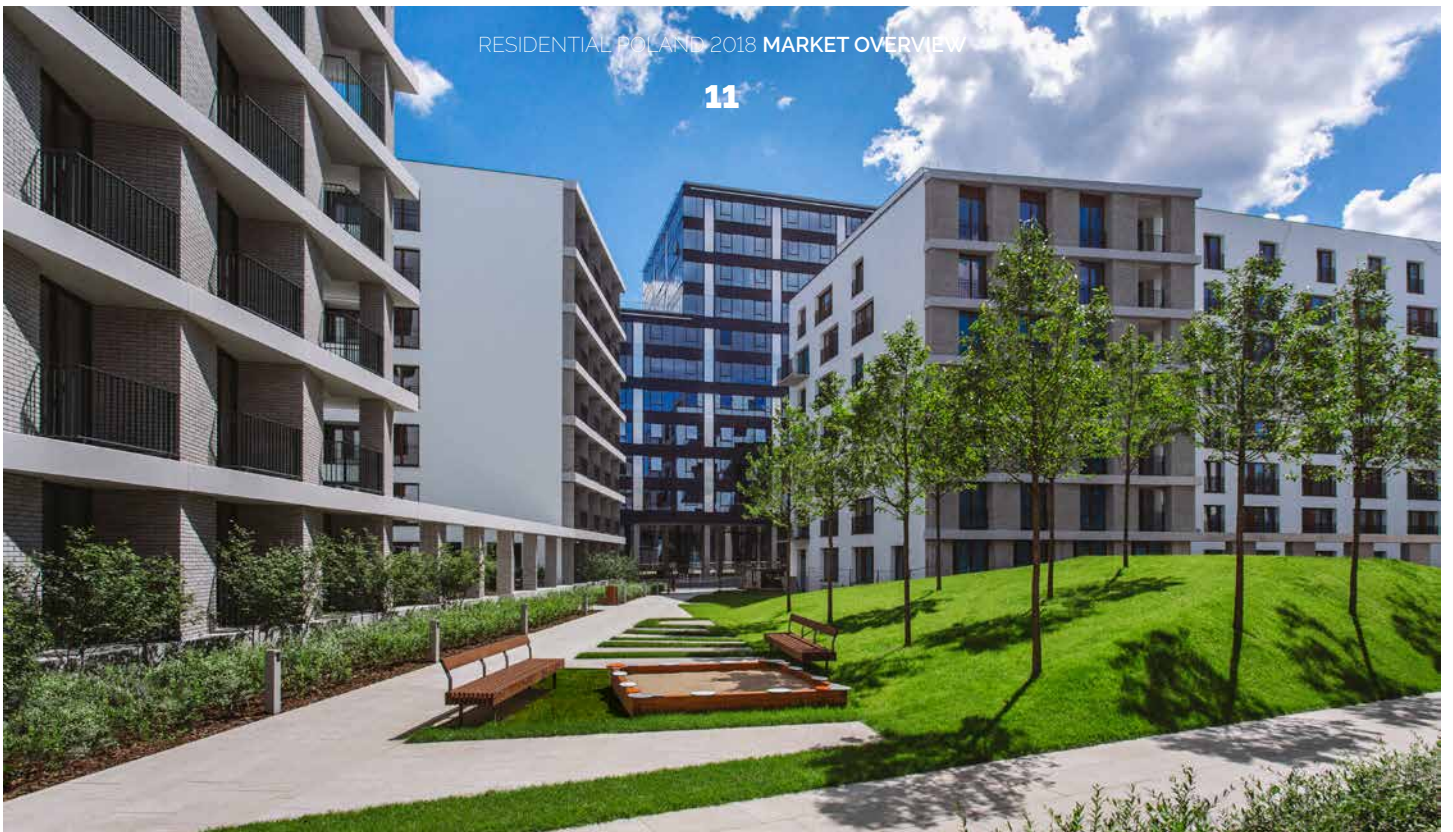
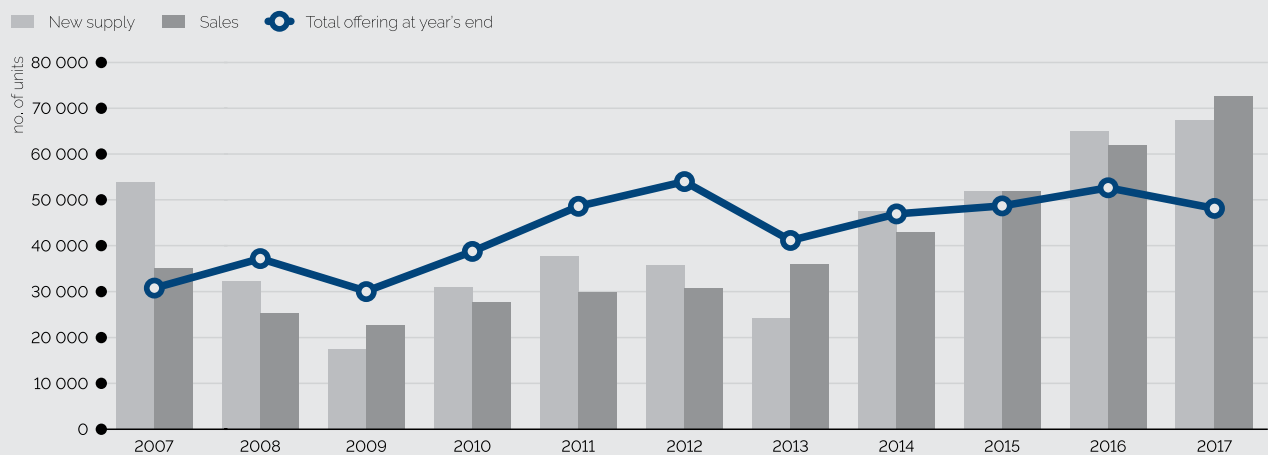
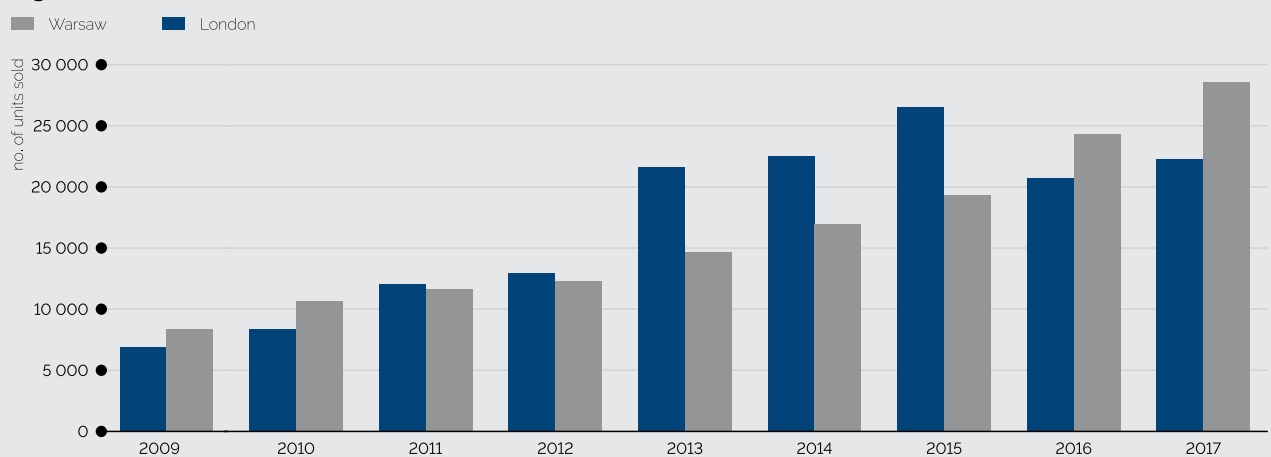


Figure 5. Market development in the six largest Polish cities



Source: REAS

Figure 6. Warsaw vs. London - new build sales



Source: REAS, Molior

Pricing

For the first time in years, the primary residential market experienced a significant price growth in almost all large cities in Poland. Moreover, against a backdrop of increased land prices and construction costs, it is likely that apartment prices will continue to grow. Then again, if prices go up the pace of sales may be affected, particularly in the case of a decreasing offer.

A general trend of increasing apartment prices can be observed in across almost all large cities, market segments and indicators. **This price growth can to some extent be attributed to a rising demand which allows developers to adjust price levels, whereas a part of this increase was certainly needed to justify higher expenses for land and construction.** Then again, the changed structure of the offer impacted on the average market price. Due to the MdM program coming to an end developers introduced fewer low-priced units in the offer, as there was no longer any more need to adjust price levels to the thresholds in the subsidy program. In contrast, there was an increase in the number of units addressed to investors, usually characterized by higher prices per sqm.

The highest increase in asking prices was observed in the Tri-City, where the average price of units offered for sale grew by 15%, while the average price of units launched for sale increased by 12% year on year. These dynamic growth rates were definitely linked with increased investments in short-term rentals. Price growth in the market offer in Warsaw and Łódź was around 8.5%, whereas Warsaw also noted a high 11% increase in the average price of units launched. Prices in Wrocław and Poznań also increased significantly by 4.4% when it comes to the average price of all units in the inventory of unsold stock, while new supply in these two cities reached price growth rates of 4-5%. Kraków noted the lowest price increase among the analyzed cities at around 2.5%, so technically nearly equal to inflation. This may have

been due to difficulties in acquiring sites for higher-priced projects near the city center.

When it comes to market segments, price growth was observed across all four market segments in the analyzed six cities in 2017.

The high-end or luxury market segment, which almost exclusively concentrates on Warsaw, noted an average growth rate of almost 30% in the market offer year on year. However, it should be borne in mind that the luxury market segment amounts only to 1% of the total offer and, thus, it is prone to larger fluctuations in price levels. A much lower price growth of 5% on average was recorded in the low-end market segment, which currently accounts for more than 80% of the market offer in the analyzed cities. One reason for this relatively low growth in the low-end market segment is that in many cases developers adjusted the price level to the thresholds of the MdM program. Yet, the level of price rises in the low-end market segment differed from city to city, with lowest growth rates around 1-2% in Warsaw and Kraków, mid range growth around 5-8% in Wrocław, Poznań and Łódź and the highest growth rates of 11% in the Tri-City. In the mid-market, REAS distinguishes between the lower-middle and upper-middle market segments, which together comprise currently some 20% of the market offer. On average the upper-middle market segment recorded higher growth than the lower-middle market segment, with rates of 14% and 10%, respectively. Projects which qualify in the two mid-market segments are the main target of investment purchases, particularly those in attractive loca-

tions. Thus, the significant price growth in the mid-market can be explained to some extent by the attractiveness of these products for investors.

Units on the primary market in Poland are typically offered in shell and core standard, i.e. without interior finishing and furniture. Therefore, homebuyers need to pay in addition for fit-out. There are plenty of companies which specialize in providing apartment finishing services. Also, many developers offer a choice of finishing standards for an additional price. This specific market factor should be borne in mind for instance for price comparisons with other countries.

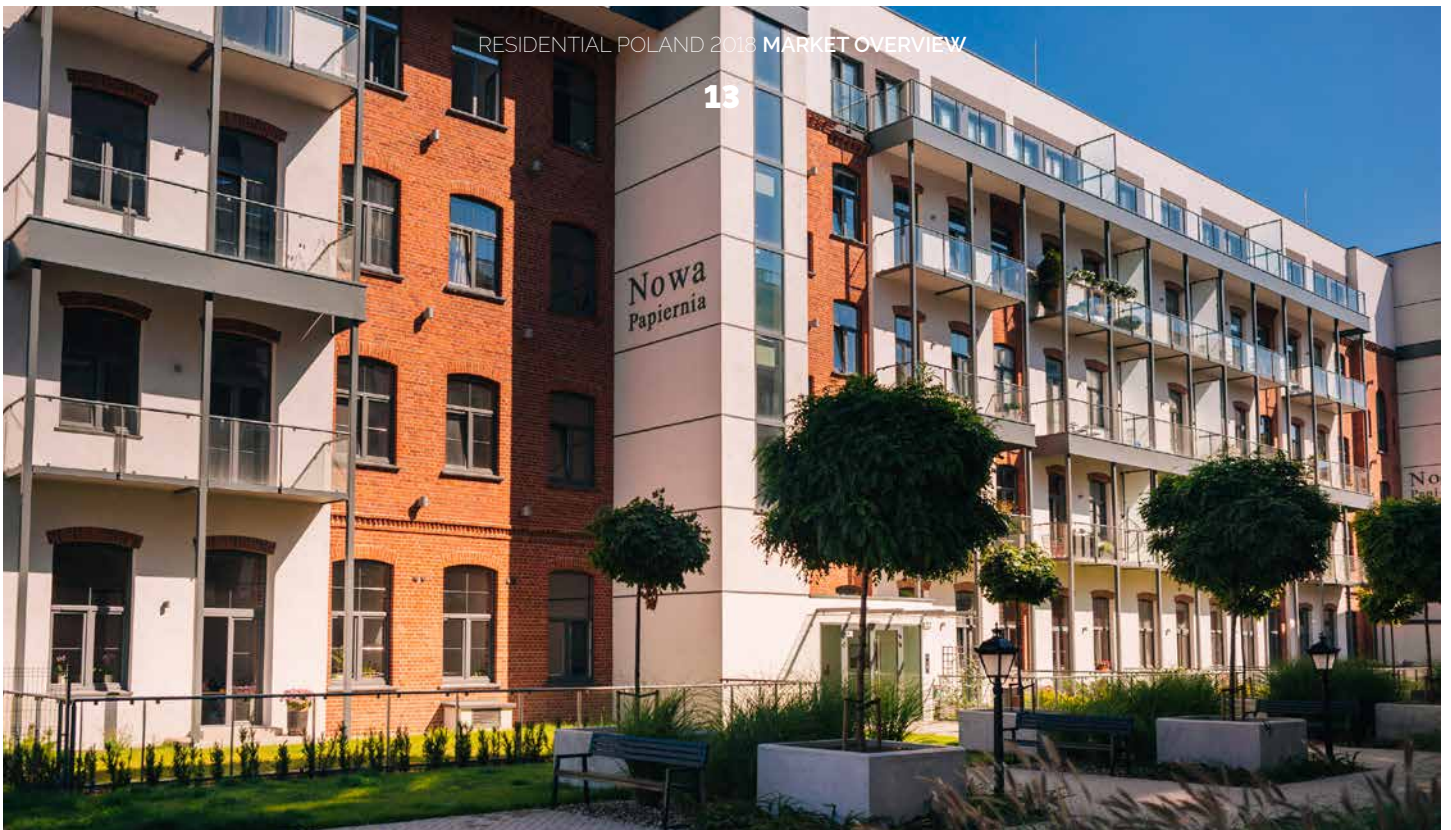
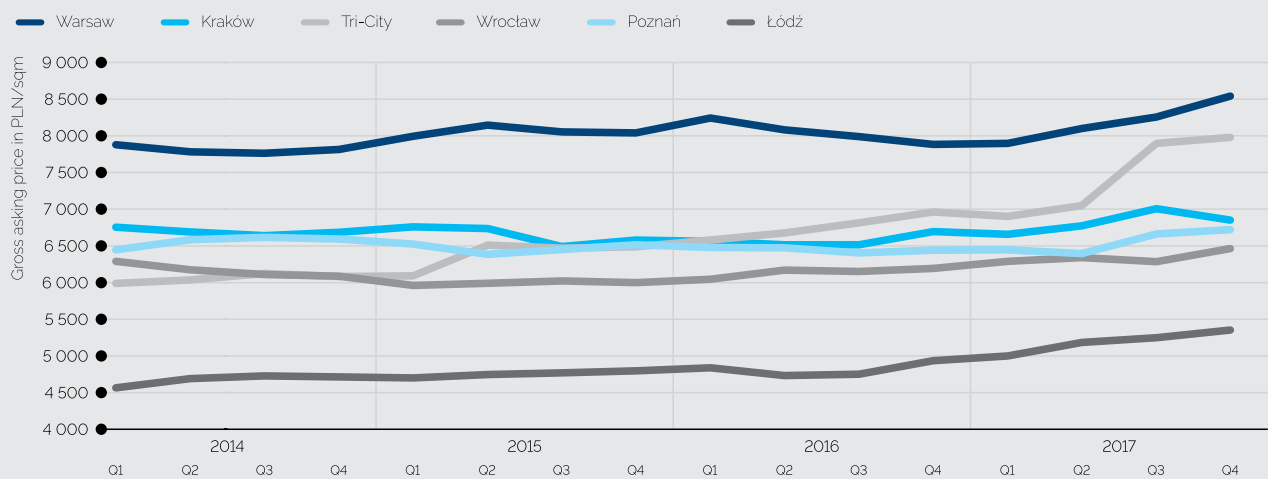
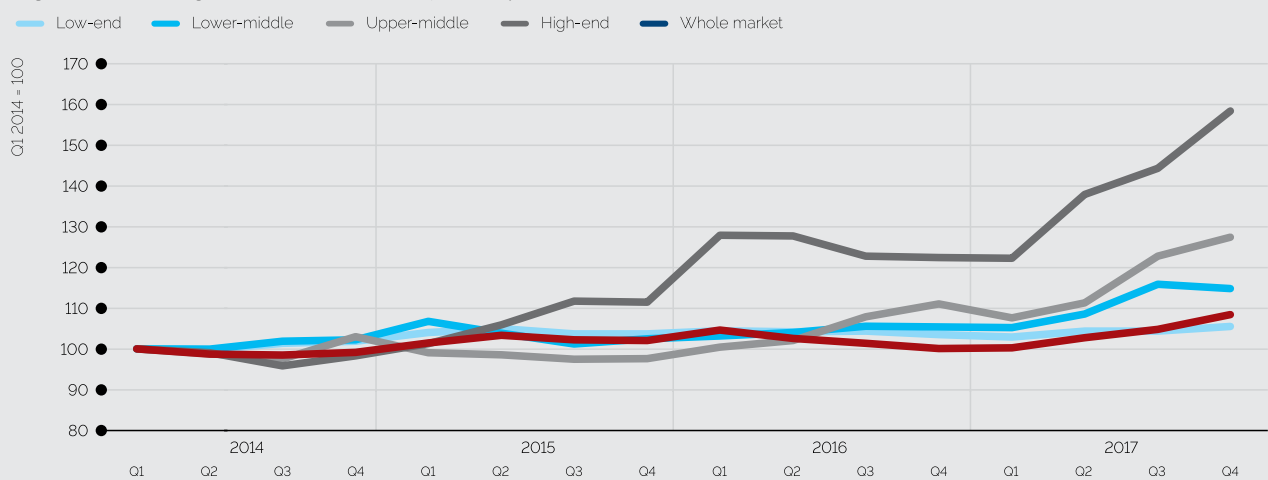


Figure 7. Development of the average price level in the offer



Source: REAS

Figure 8. Price growth index of the primary market offer in Warsaw



Source: REAS

Rental market

Buy-to-let investments soared in Poland's large cities in 2017, as small-scale investors continued to invest their capital in residential property. Average asking rents maintained their upward trend. Increased rent levels somewhat outbalanced rising property prices and sustained worthwhile rental returns. The private rented sector also grew through institutional investments in build-to-rent schemes, i.e. buildings designed and built specifically for renting. Although the Polish institutional rental market is still in its infancy, the first build-to-rent schemes have already started operations and form valuable benchmarks for other prospective investors.

The Polish housing market is dominated by home-ownership or, more precisely, owner-occupancy, i.e. a form of housing tenure in which the home is owned by its occupants. The private rented sector is minor and focuses on large cities. According to Eurostat housing statistics from 2015, only 4.5% of the Polish population are tenants who rent for market prices. However, this percentage which Eurostat states for Poland is based on questionnaires, as the Polish statistical office does not gather data on the real number of tenants or rental units. REAS estimates the scale of the rental market in Warsaw and other large cities at least at a share of 10-15% of the dwelling stock, with a strongly rising tendency mainly due to an increased buy-to-let investment activity in the past 3-5 years.

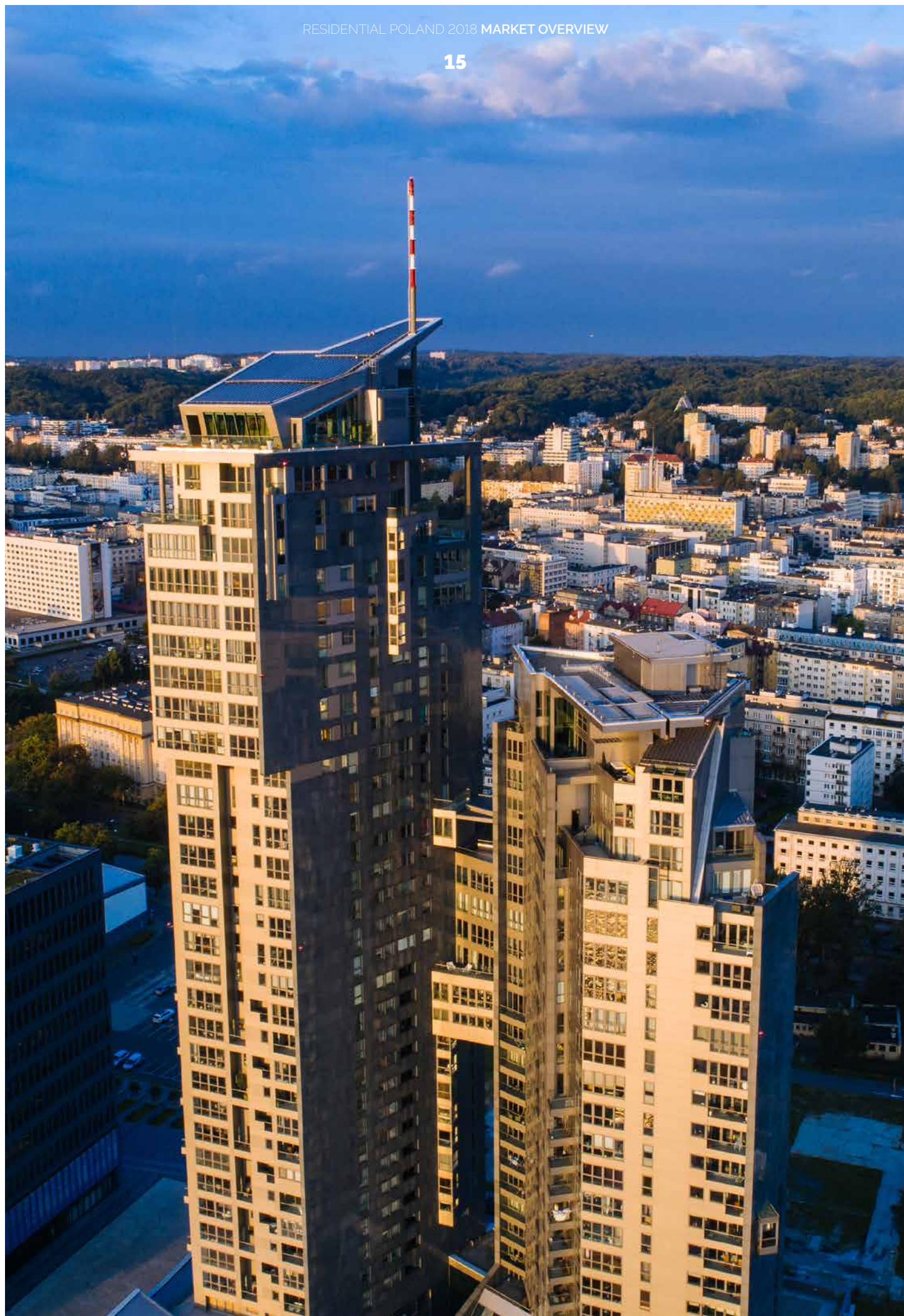
When it comes to the development of average asking rent levels, almost all large cities noted a continued upward trend. On the demand side, major rent drivers included the increase in salaries, and low unemployment and migration, including a rising number of Ukrainians settling in Polish cities in both the short and long-term. Also new rental supply represents a much better quality than old stock, opening the rental market up to new target groups expecting higher standards. The highest nominal growth was observed in Poznań, with an increase of over 9% year on year. Rents in Łódź grew by 7%, thus repeating the growth dynamics of the previous year. Similarly, Kraków maintained its ascendant trend of 5% for the second year

in a row. The level of rental growth in Warsaw and Gdańsk was around 3.5 to 4%. The only market which recorded a decline in the average asking rent level was Wrocław, although the 3% decrease comes after three years of annual growth rates between 10-15% each year.

The average monthly gross asking rent level of all units offered for rent was at PLN 59 per sqm in Warsaw, around PLN 56 per sqm in the Tri-City, at PLN 53 per sqm in Wrocław, PLN 49 per sqm in Kraków, PLN 43 per sqm in Poznań and around PLN 37.5 per sqm in Łódź. In reference to new housing stock built after 2005 the respective asking rents achieved higher levels at PLN 63 per sqm in Warsaw, around PLN 58 per sqm in both the Tri-City and Wrocław, at PLN 53 per sqm in Kraków, PLN 50 per sqm in Poznań and around PLN 47 per sqm in Łódź. In this context it seems particularly interesting to note the difference in the rent level of Kraków to Wrocław and the Tri-City. Until H2 2014 the average rent level of these three cities was at the same level. However, this might be due to higher number of residential projects developed near the city center of Wrocław and the Tri-City compared to a relative shortage of centrally located projects in Kraków.

The rent levels stated above relate to the private rented sector as a whole. These rental units are typically in fragmented ownership constellations, suffer from patchwork management arrangements and often represent low

quality in both building standards and apartment interiors. In contrast, the institutional rental market is focused on entire residential buildings designated for rent with professional management. This institutional approach has many advantages and offers several benefits. Due to a lack of consolidated housing stock in Poland with buildings wholly owned by one landlord, the institutional rental market will essentially have to consist of entirely new stock supposedly of a decent quality and standard. Institutional investors offer longer tenancies, professional management and often onsite amenities. Compared to non-professional landlords, private institutions also provide flexibility, for instance they allow personalization of the apartment. These benefits derive from the fact that the primary motivation of these institutional investors is to keep their rental portfolio fully occupied with satisfied renters. **As long-term players, many investors plan to invest at scale and might in the near future offer rental apartments with consistent standards across different cities in Poland.**



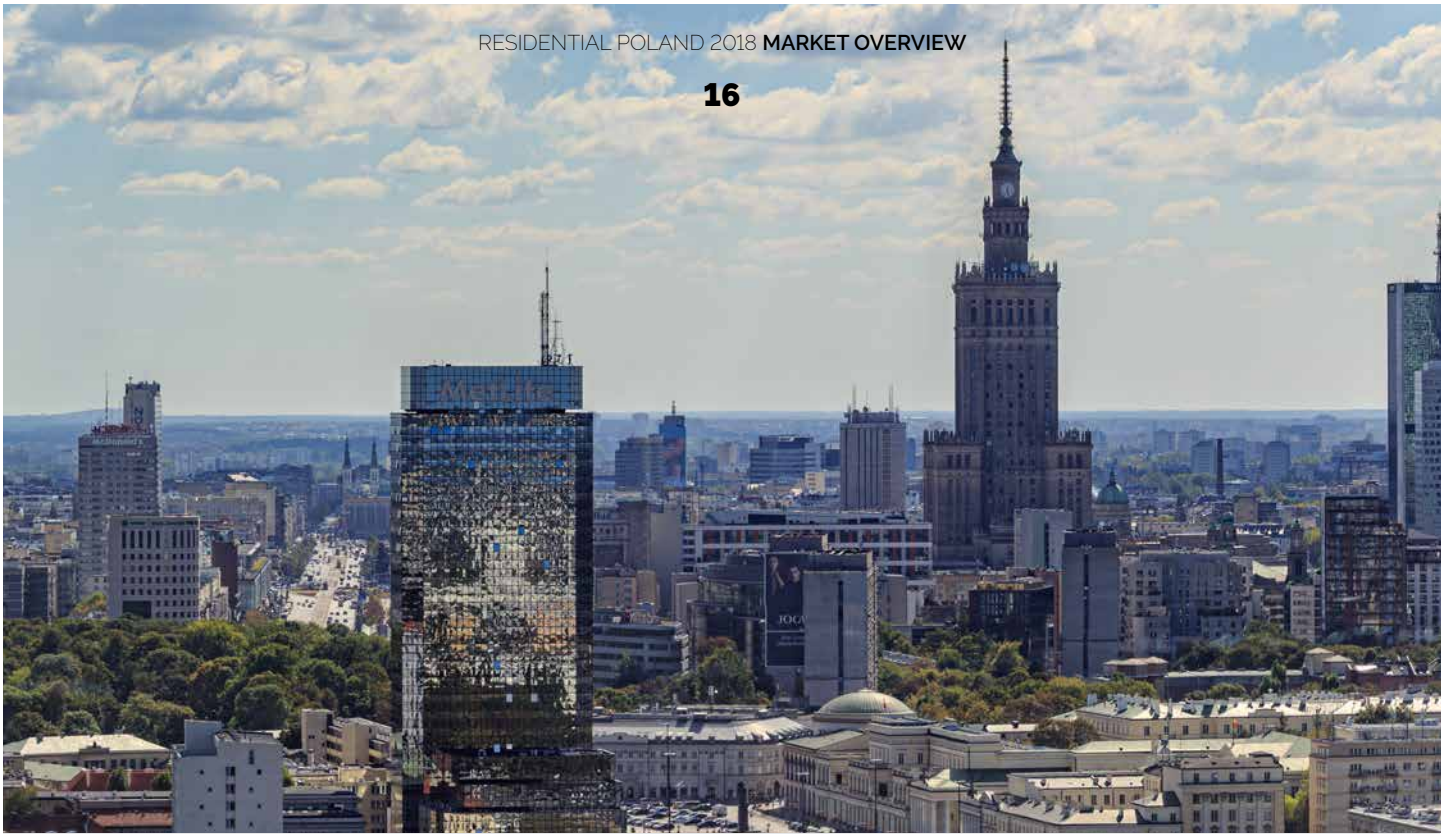
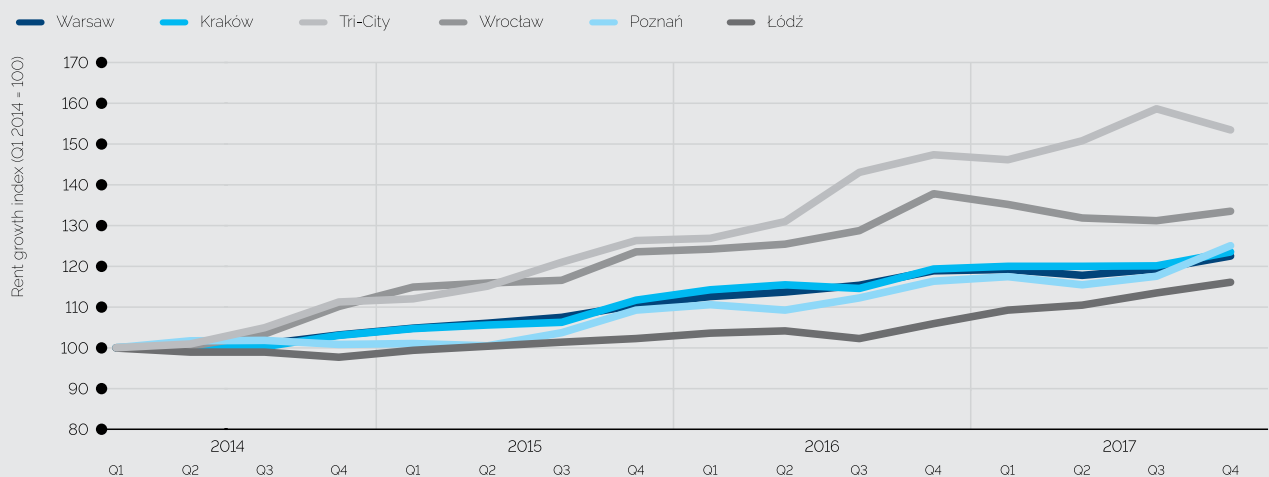


Figure 9. Rent growth index



Source: REAS based on Domiporta

Figure 10. Gross asking rent vs. annual rent growth

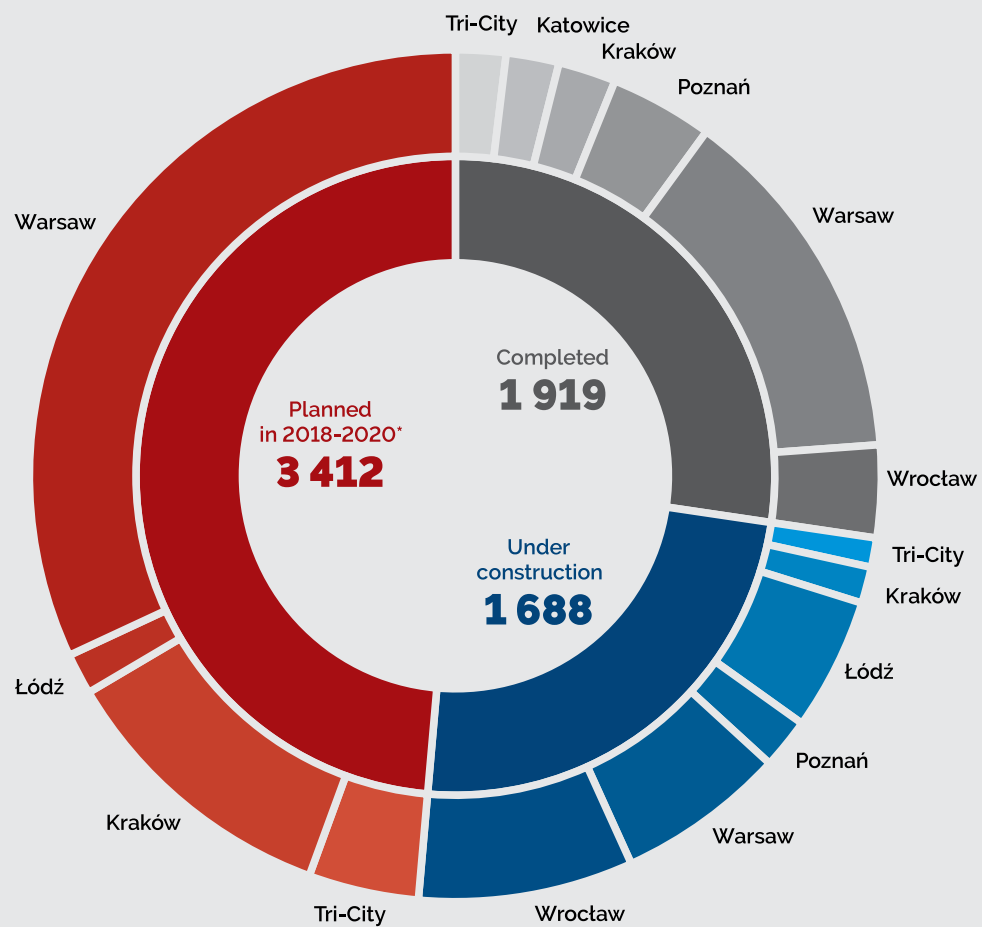


Source: REAS based on Domiporta



Figure 11. Build-to-rent pipeline in Poland

Number of dwellings by construction status and city



*Category "Planned in 2018-2020" includes only projects publicly announced until February 2018

Source: REAS

Residential investment market

The Polish institutional market has grown rapidly as a significant number of build-to-rent properties were delivered in the past two years. Likewise the institutional transaction volume increased further in 2017, with an estimated PLN 670 million (~EUR 157m) worth of residential assets traded by domestic and foreign institutional investors. The interest of foreign investors in the Polish private rented sector remains high.

Before 2015, there were no standing residential rental assets of scale owned by institutional investors in Poland. At the end of 2017, the portfolio of the Rental Housing Fund of BGK included thirteen operating properties in six agglomerations. In addition, Catella Real Estate's 72 rental apartments in the Złota 44 project of BBI Development and Amstar were put on the market for rent in Q3 2017. The Pereca 11 project by Bouwfonds IM commenced rentals at the turn of Q1/Q2 2018. At present, there are almost 2,000 units in residential assets in institutional ownership, of which six assets with 850 units are located in Warsaw. Thus, there is at least a sizable portfolio of benchmark projects to measure project performance, including rents and occupancy levels.

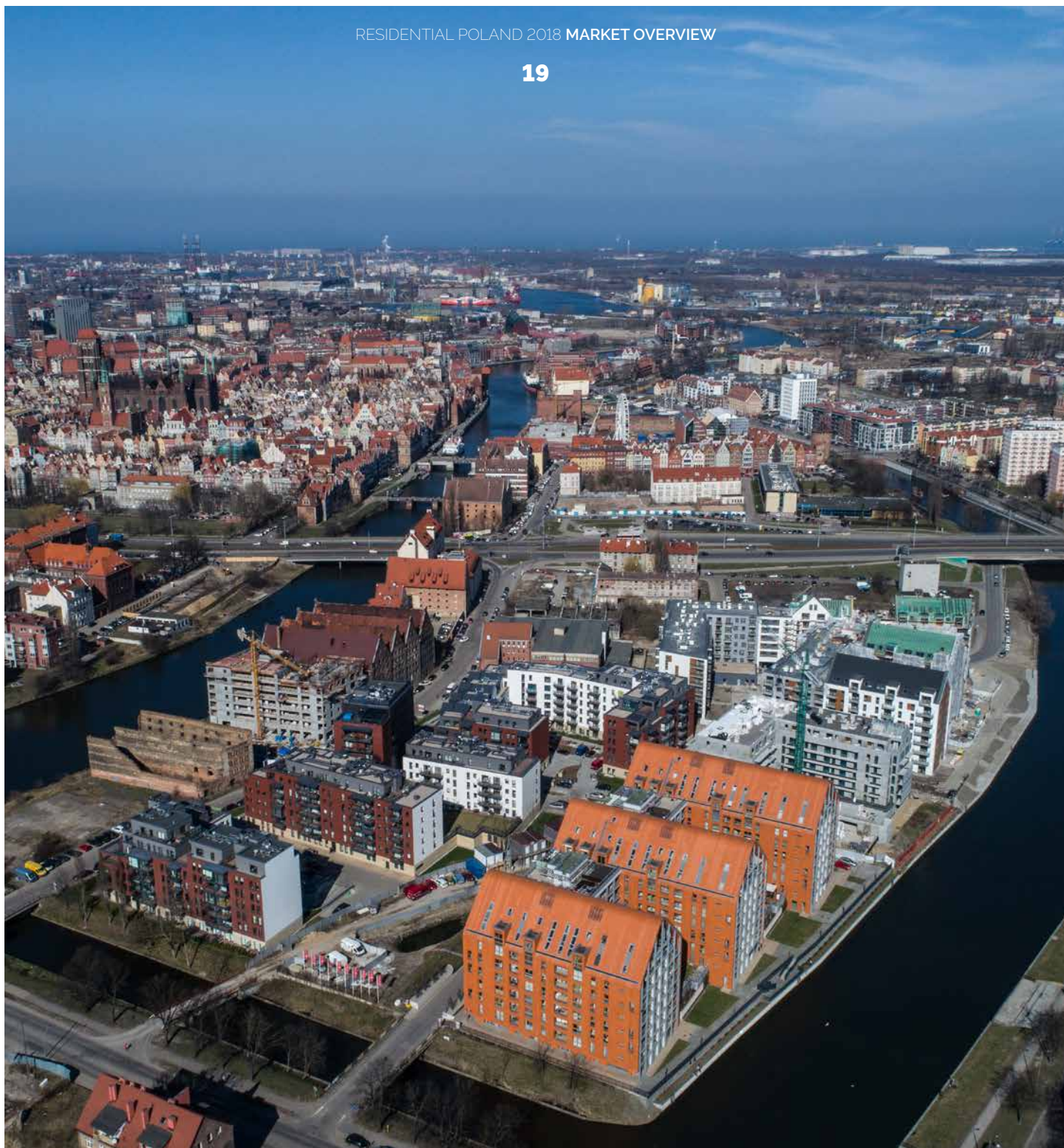
When it comes to the investment scale, there were nine deals in residential rental assets in Poland in 2017 with a total transaction volume of approximately PLN 670m (~EUR 157m). The main investor in 2017 was Resi4Rent, a platform in Echo Investment's division which was initiated by Griffin Real Estate. In 2017 Resi4Rent secured around 1,235 units in four projects of Echo Investment, located in Warsaw, Wrocław and Łódź. BGK's Rental Housing Fund took over two buildings with 215 units in total in the residential development project of Asbud in Warsaw's Żoliborz district. A Danish fund purchased an existing building with 39 apartments in the Praga Północ district of Warsaw. Bouwfonds IM acquired three buildings comprising

146 apartments and 113 student housing units from Hines and Heitman in Krakow. One investment occurred outside of the largest six cities, with the purchase of 170 apartments in a residential building in the city of Mysłowice by a German family office. In addition to those transactions, we have observed several acquisitions of land plots and existing buildings which are or could potentially be designated for rental purposes. Moreover, we observed the first attempt to invest in apartments for rent by an insurance company, though these purchases have so far been fragmented rather than in whole blocks.

The total institutional transaction volume in 2017 grew 7% year-on-year to PLN 670m, of which the majority was made of forward funding deals. Compared to 2015, the growth in investment volume was higher and amounted to 35%. The number of traded units increased to around 2,000 in 2017, which is 60% higher than in 2016 and 43% higher than in 2015. Likewise traded lettable floor area increased by 25% year-on-year to approximately 80,000 square meters. The growth in residential transactions in 2017 derives mainly from increased investment activity of Resi4Rent. For other players the booming primary residential market proved to be a challenge, as rising apartment prices led many developers to favor individual sales over block deals. In addition, many foreign investors faced and are still facing the difficulty of the obstacle of currency hedging. Despite relatively

attractive yields at levels around 5-6% NOI for prime investments, many institutional investors complained that hedging costs of around 200 basis points or higher made meaningful investments extremely difficult. However, currency hedging is not an issue for all players. **Overall institutional investment is expected to rise in Poland in the near future.** Many deals have already been declared by major investors. Moreover, a proposed amendment in the Act on the Protection of the Rights of Residential Premises or of Detached Houses, the so called Developer Act, is likely to change developers' attitude towards forward deals with institutional investors.

Three locally active investors alone declared that they were building a few thousand units for rent, with other international players joining in. The largest portfolio of residential rental assets was announced by Resi4Rent. By 2020 Resi4Rent plans to have 5,000 units rented, of which approx. 3,000 are currently under construction awaiting for final construction permits. Another major player with huge plans in the rental housing field is Golub GetHouse, a real estate investment and development company with experience in Poland and the United States. Golub GetHouse announced a fund designated for residential and student accommodation. In the first investment phase some 1,500 units are planned to be developed, while in the long-term Golub GetHouse has said that its ambition is to build up packages of



2,000-3,000 residential units every three years. Likewise Murapol, a Polish developer, intends to raise a fund with a few thousand rental units. In addition, there are those players who have already invested in residential rental assets in Poland, including Catella Real Estate which has stated that it will build up stock gradually.

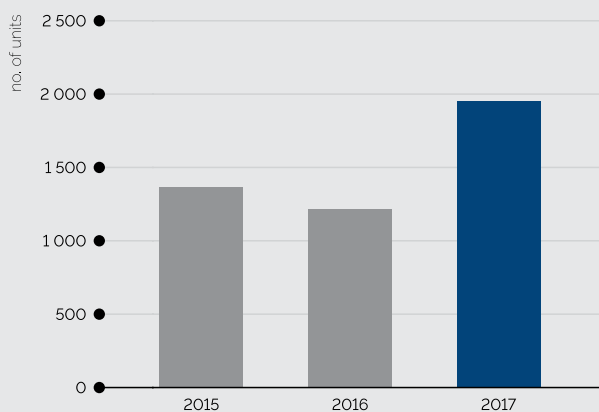
Residential investment volumes are likely to see a boost if the Polish

Office of Competition and Consumer Protection (UOKiK) goes ahead with its announced plan to abolish open escrow accounts. The amendment to the Developer Act is intended to introduce obligatory closed escrow accounts for sales of dwellings from developers to individual buyers. If this change in law comes into force, developers will not be able to utilize installment payments made by homebuyers during the construction

process. This will certainly increase the costs of development. Moreover, it might jeopardize the capacities – especially of small and mid-sized – developers to finance development projects. In such a situation, cooperation with institutional investors in the form of forward funding, forward purchase or JV partnerships may come in handy. In contrast to individuals, apartment sales to legal entities are not regulated in the act.



Figure 12. Residential investment market in Poland – traded units



Source: REAS

Figure 13. Residential investment market in Poland – transaction volume

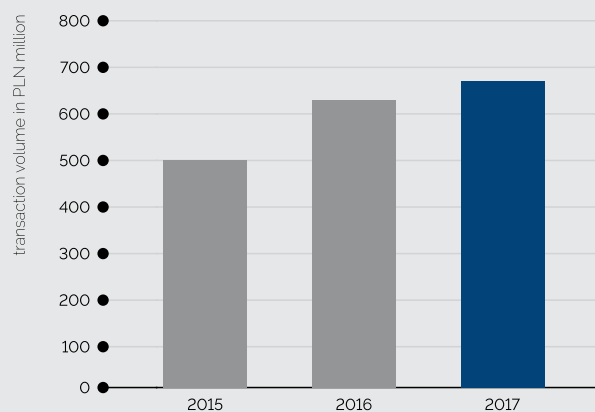
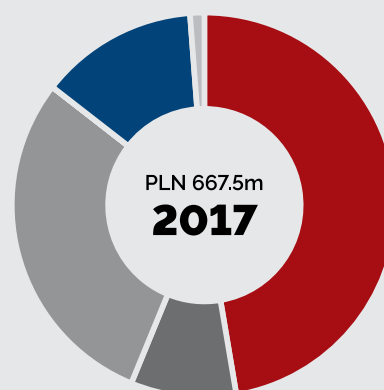
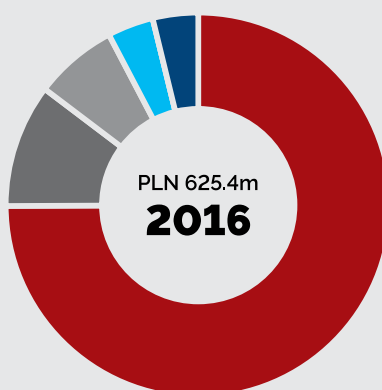
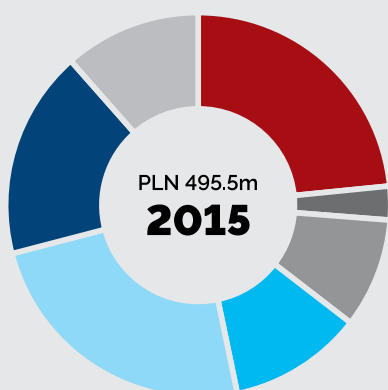


Figure 14. Residential investment market – volume traded by city

— Warsaw — Kraków — Tri-city — Wrocław — Poznań — Łódź — Other



Source: REAS



Figure 15. EMEA residential property clock – capital value and rental income growth



Student accommodation

Student housing is a relatively new asset class in Poland, with a high growth potential. Demand for private student accommodation is on the rise, mainly based on a large student population and a rising number of international students. There were 1.35 million students in Poland in the academic year 2016/2017, while the number of international students increased by 15% year on year to 65,700. The first student housing schemes are operating on the market. Although only a few new investments in purpose-built student accommodation were observed in 2017, the pipeline of planned projects by major players is ample.

Demand for student housing is fundamentally based on demographics within the student population. To begin with, **Poland has one of the largest student populations in Europe, embracing 1.35 million students.** Poland is also benefiting from a global growth trend in the number of international students. Today, there are over 4.5 million students in the world studying abroad. By 2020 this number is expected to double. In the academic year of 2016/2017, there were 65,700 international students enrolled at Polish universities. The growth dynamics in international students are enormous. **Within the last five years, the number of foreign students has more than doubled, while noting average annual growth rates of around 20% each year.** It is expected that the number of international students will increase further. Foreign students are already the main tenant group in the first operating purpose-built student accommodation (PBSA) schemes today. The predicted growth dynamics will foster demand for student housing. On the other hand, new student accommodation will help to make Polish universities more attractive to international students and domestic students alike.

When it comes to supply, there is only a limited offer targeted directly at students. Generally speaking, there are three main options for students. The first option is student halls owned by public universities, which cater for less than 10% of all students enrolled in Polish universities. These halls are

in most cases old and uninvested and represent low quality and standards, but for a low price to be fair. A major portion of the rooms in these public student halls are used for multiple occupation, while bathrooms and kitchens are typically shared. The second and widest option is represented by the residential market. A few students are lucky to possess an apartment of their own, to buy an apartment or to be able to use a private apartment owned by their family. Yet, the vast majority of students rent dwellings in the private rented sector, whereas they target mainly studio units or larger shared apartments. However, the private rental market in Poland seems not to favor students as a tenant group. Many landlords do not want students as renters. In addition, the residential rental market is relatively expensive, non-institutionalized, and is not transparent, particularly for foreign students. The third option is to stay in the family home, which an estimated 20-30% of students do. Thus, they do not necessarily need to move elsewhere, though some might want to start a life on their own but either cannot afford it or cannot find a worthwhile offer.

The market of PBSA schemes is still at a very early stage in Poland. **Yet, given student demographics and an almost complete lack of tailor-made supply, this market segment is predicted to have a great potential for growth.** The first PBSA schemes have started operations in major regional cities.

- The main player is the Student Depot chain, managed by Griffin Real Estate, which has three running schemes in Poznań, Łódź and Lublin with some 1,060 units. Another investment in Wrocław is under construction and already started pre-lets in Q1 2018. In addition, Student Depot has secured plots for the construction of student housing schemes in Warsaw, Kraków and Gdańsk. The three projects will comprise about 1,200 beds in total. Work on the design of a student hall in Warsaw, which is planned to offer 488 beds, is also in progress. The construction of the facility is to start at the beginning of 2018. In total, Student Depot aims to achieve a scale of up to 6,500 units within the next few years.
- Another serious player is Base-Camp with its newly opened student hall in Łódź with 487 student apartments, which was created after rebuilding the former "Printing House of Lodz". The scheme is part of a private network that has student houses in Copenhagen, Leipzig and Potsdam, while more are being planned. About 3,700 square meters of the building will be dedicated to commercial space and a wide array of amenities.
- Besides these existing institutional schemes, there are other initiatives with a more local and non-institutional character in Poland, which can serve as useful benchmarks when it comes to proving suffi-

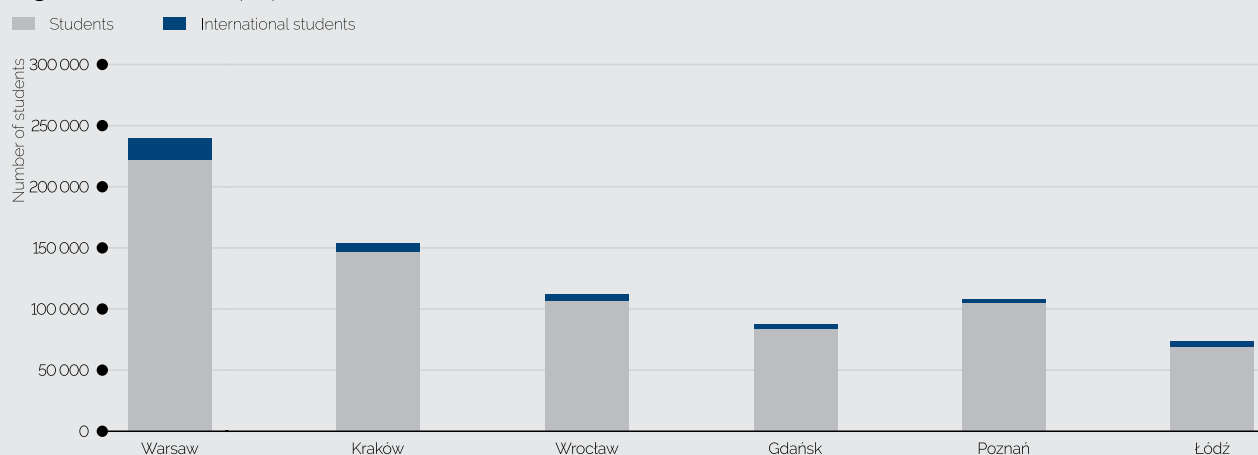
cient demand and achievable rent levels. However, these schemes have chiefly fragmented ownership arrangements, do not always come with a professional management for the whole building, and some of these non-institutional projects are also not necessarily targeting only students.

Several PBSA projects have recently been announced by new players. In a

forward deal which focused on residential assets, Bouwfonds IM acquired one student house with around 140 units in Kraków which is currently under construction. Golub GetHouse announced the purchase of a plot in Krakow designated for a student housing scheme of around 600 units. Another project with approximately 400 beds is planned by Golub GetHouse in Warsaw. These will be the first student housing investments of

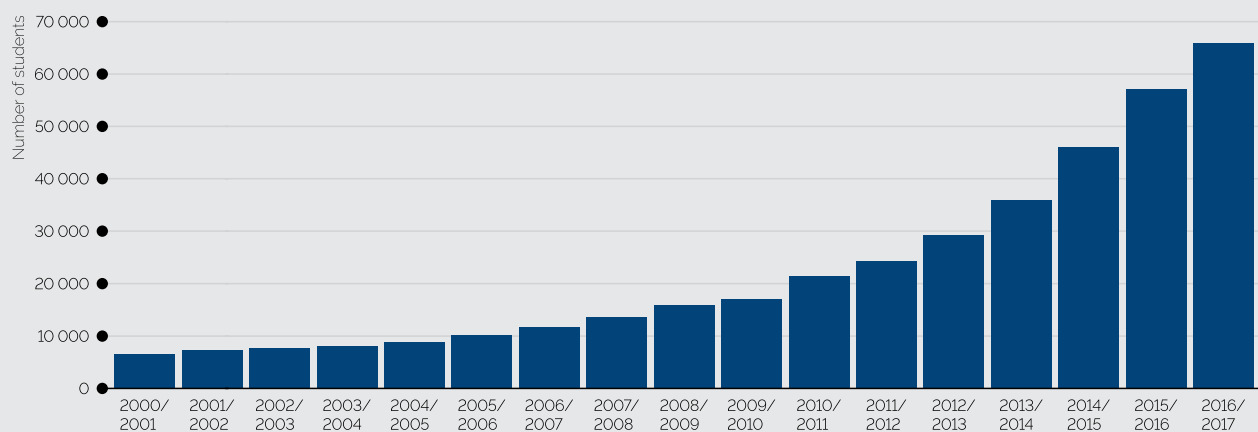
the new fund Golub GetHouse Property Fund II FIZ, which plans to realize a portfolio of private student halls and apartments for rent. Besides these officially announced investment plans, there are plenty of other investors not only screening but also investing in the market. Due to the lack of existing stock and fine performance of the already operating schemes, we expect the Polish PBSA sector to grow significantly in the next few years.

Figure 16. Student population in major Polish cities



Source: REAS based on Central Statistical Office. Data refer to academic year 2016/2017.

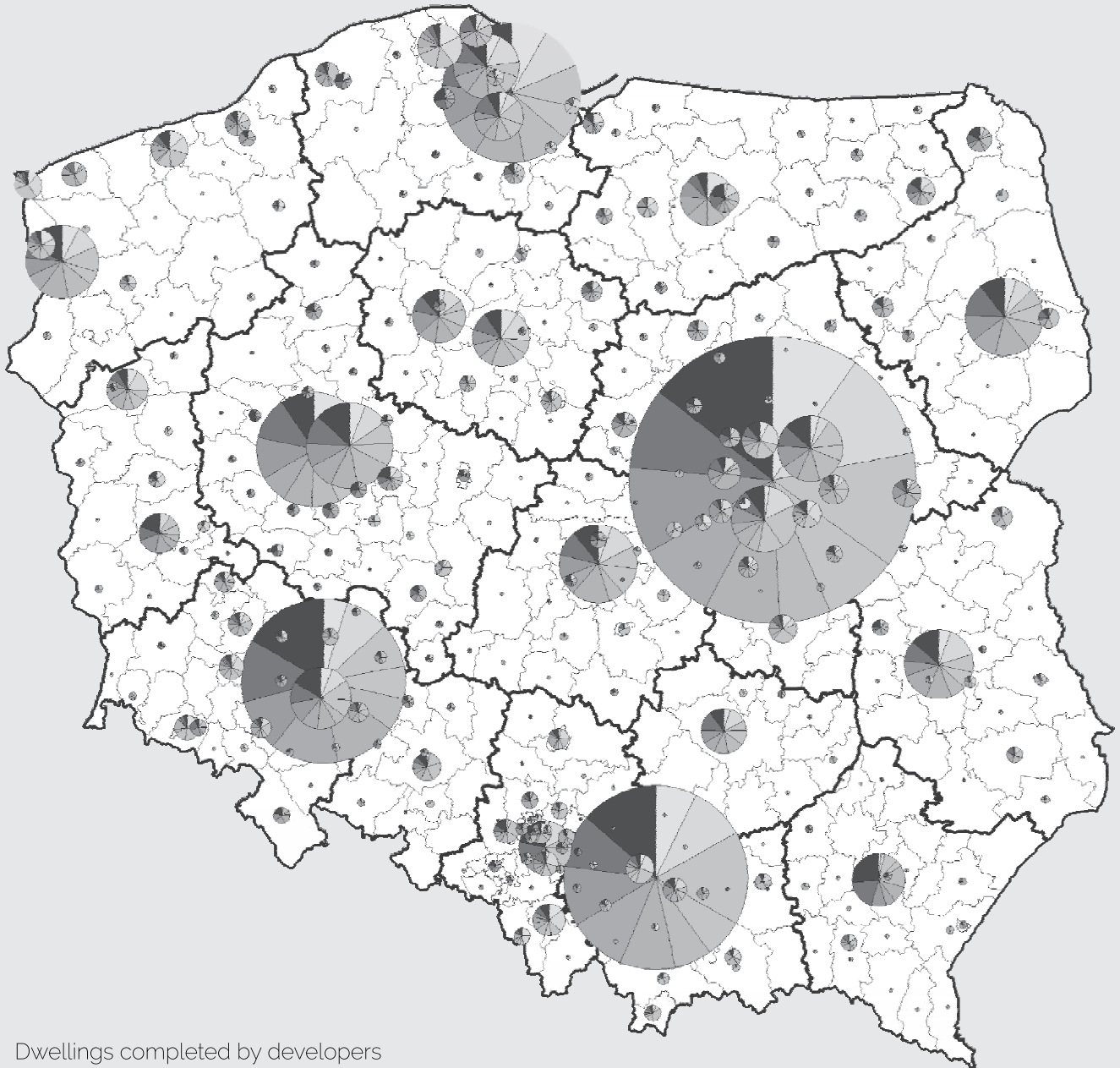
Figure 17. Development of the international student population in Poland



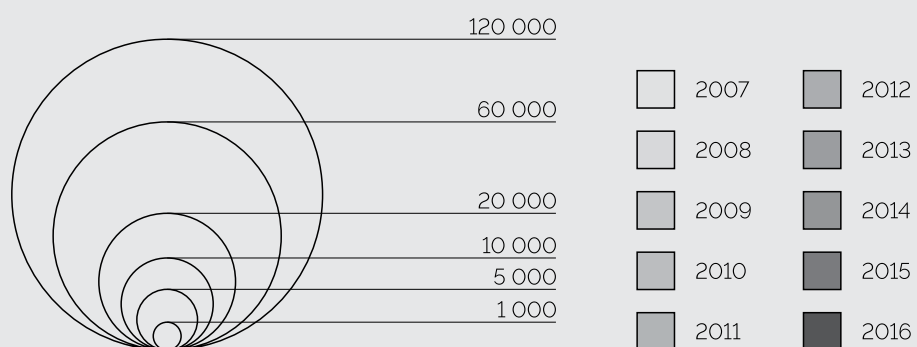
Source: REAS based on Central Statistical Office. Data refer to academic year 2016/2017.

Key facts about Poland's Big Six

	Warsaw	Kraków	Wrocław	Tri-city	Poznań	Łódź
Population	1,758,100	766,700	637,700	747,600	540,400	696,400
City size	517 sq. km	327 sq. km	293 sq. km	414 sq. km	262 sq. km	293 sq. km
Unemployment rate	2.1%	2.8%	2.2%	3.6%	1.5%	7.9%
Average monthly salary	PLN 5,769	PLN 4,964	PLN 4,942	PLN 5,028	PLN 5,107	PLN 4,230
Dwelling stock (units)	932,574	369,203	311,010	347,305	254,074	353,968
Residential investments in primary market (no. of phases, Q4 2017)	582	322	277	273	141	147
Market offer on primary market (units, Q4 2017)	18,335	7,731	8,296	5,795	4,115	3,939
Annual volume of sales on primary market (units, 2017)	28,506	13,790	12,086	10,174	4,863	3,267
Average gross asking price – primary market (PLN/sqm, Q4 2017)	8,544	6,852	6,461	7,656	6,723	5,353
Average gross rents – total stock (PLN/sqm, Q4 2017)	58.68	49.73	53.24	55.91	42.82	37.49
Average gross rents – new housing after 2005 (PLN/sqm, Q4 2017)	62.52	53.31	57.20	59.35	50.35	46.61
Yield proxy (avg. gross price vs. avg. gross rent of new housing, Q4 2017)	8.8%	9.3%	10.6%	9.3%	9.0%	10.4%



Dwellings completed by developers



ABOUT REAS

REAS is an advisory company specializing in issues relating to the residential market. Since 1997, we have been providing advisory services to developers, banks and investors and other entities operating in the residential market, effectively supporting them in planning and execution of their projects.

Over the last 5 years we were engaged in more than 2.6 thousand of advisory projects for 253 different clients. Since the year 2000, REAS has been conducting continuous monitoring of the primary residential market, accumulating data on projects in a database based on the GIS system. This knowledge allows REAS to offer a broad range of market analysis services and to devise long-term market forecasts supporting the process of strategic planning.

REAS provides advisory services at all stages of the investment process, supporting the developers in the process of designing and preparing a product with the best market potential and competitiveness. The implemented advisory projects feature the following services: location analysis, recommendations regarding the project-mix and functionality of residential units, opinion and recommendations regarding architectural designs, pricing strategies and units' price lists, and recommendations regarding marketing and sales strategies. We also offer consultancy regarding the Developer Act, including preparation of information prospectuses.

REAS specializes also in valuations of investment land and existing residential buildings. The valuations are conducted by

certified property valuers with many years of experience allowing them to use both domestic and foreign valuation standards, i.e. British (RICS), European (TEGOVA), American (USPAP) and international (IVSC).

Thanks to our long-term cooperation with institutions financing the residential market in Poland and the recognized reliability of our business plans, valuations and feasibility studies devised by the company, REAS is able to effectively support investors in the process of obtaining financing for new residential investments. We also provide transactional advisory and services regarding investment sites disposal and acquisition.

Our key services include:

- Market research, analysis and forecasting;
- Competition monitoring and analysis;
- Highest and Best Use studies;
- Development consultancy;
- Property valuations (RICS, TEGOVA, USPAP, IVSC);
- Business plans and financial feasibility studies;
- Rental sector, senior housing, condo hotels and second homes market consultancy;
- Capital raising and search for equity partners;
- Investment sites disposal & acquisition;
- Market due diligence;
- Acquisition/disposal of assets, portfolios and companies
- Procurement of residential rental assets
- Joint venture partnerships and share deals
- Valuation of transaction objects



Kazimierz Kirejczyk, FRICS

Managing Partner,
President of the Board

kazimierz.kirejczyk@reas.pl



Katarzyna Kuniewicz

Partner,
Market Analysis & Research

katarzyna.kuniewicz@reas.pl



Paweł Szejter, MRICS

Managing Partner,
Development & Transaction Advisory

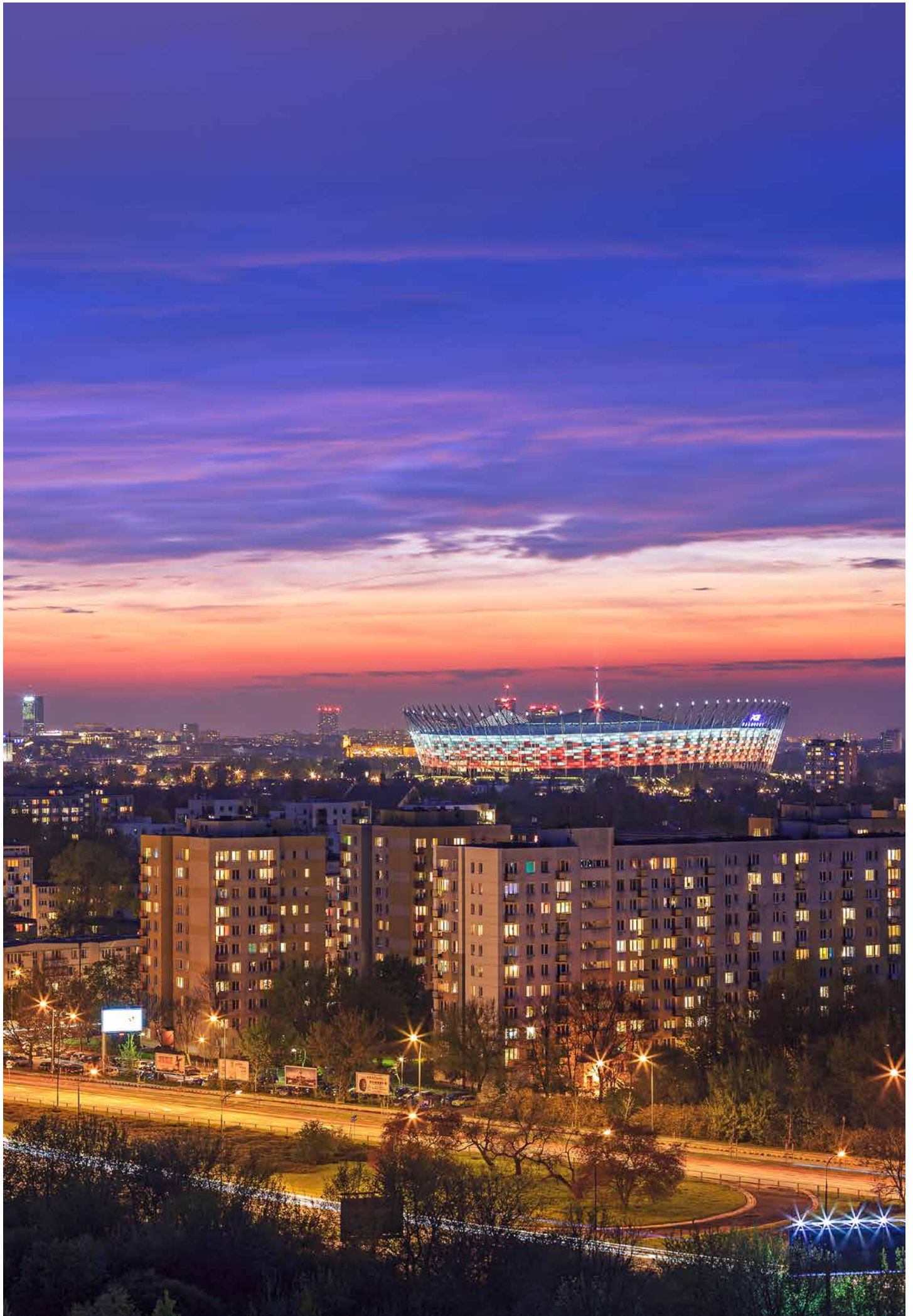
pawel.szejter@reas.pl



Maximilian Mendel, PhD, MRICS

Partner,
Transaction Advisory

maximilian.mendel@reas.pl



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