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Information on home prices and the situation in housing and commercial real estate market in Poland in 2018 Q2

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The analysis of the situation in the real estate market in Poland in 2018 Q2 ¹ leads to the following conclusions:

- **In 2018 Q2, heightened activity in the housing market continued.** Very high levels of demand and supply in the largest markets were still observed, including investment demand. Growing demand was satisfied by adequate level of supply; thus no excessive price tensions have been noted so far. However, this equilibrium seems less stable than in the past. In this context, the probability of imbalances grows in the case of shocks on the supply or demand side. Shocks on the supply side may appear due to growing risks and costs assumed by real estate developers, including a limited availability of construction workers and growing costs of works, materials and transport. However, until now the high construction activity in Poland and growing production costs have not generated excessive market tensions. Compared to the previous expansion phase (2006-2008), lending growth is much lower and high demand is largely financed from purchasers' own funds.
- **However, the probability of imbalance in the case of shocks on the supply or demand side rises.** Limitation on the supply side may appear due to growing risks assumed by real estate developers, a limited availability of construction workers and growing costs of works, materials and transport. However, until now the high construction activity in Poland and growing production costs have not generated excessive market tensions. Compared to the previous expansion phase (2006-2008), lending growth is much lower and high demand is largely financed from purchasers' own funds.
- **In the analysed period, the average offer and transaction prices per square metre of housing in the analysed cities grew, both in the primary markets (RP) and in the secondary markets (RW) as compared to the previous quarter.** The increase in transaction prices in the secondary markets (RW) was associated with a large number of transactions in better locations. The primary markets in large cities continued to see minor increases in prices of small apartments, especially of better quality and location, including those bought with the intention of renting. The pool of cheaper dwellings decreased in the offer, with simultaneous growth in price of apartments offered in new projects. Prices calculated with the use of the hedonic price index² increased in six cities (by 4.6% q/q and by 9.8% y/y), which means a rise in prices per square metre of similar type of housing. In Warsaw, hedonic prices dropped by 0.6% q/q and increased by 5.6% y/y. In all the analysed groups of cities (Warsaw, 6 cities, 10 cities) prices in the primary market were higher than those in the secondary market. The difference between average transaction prices and average offer prices remains insignificant, which means the buyer's less favourable position than the seller's. Average rents (both offer and transaction) per square metre of housing increased in the analysed

¹ The analysis carried out in this issue of the *Information* is based on data available till 2018 Q2. Due to delays in access to data, some figures include data until 2017 Q4 (inclusive). Data series with average prices per square metre of housing, commercial rents and transaction prices per square metre of office space reflect the available pool of data and may be subject to revision as new data are released. Historic data are also subject to change due to data revisions aimed to eliminate errors. Also the method of calculating the average gross remuneration for the smallest territorial units used by the Central Statistical Office (GUS) was changed. Starting from 2018, the system of data imputation was implemented for data subjects which did not submit the DG-1 report. The data were re-calculated back to 2015 Q1. Since 2018, the definitions of residential construction have also changed.

² The hedonic index of home prices is adjusted for differences in various attributes of dwellings (e.g. location, usable area, standard of finishing) sold in particular periods. The hedonic index is calculated with the imputed method. A hedonic price is an average transaction price from the base period multiplied by the hedonic index. More information in the article by M. Widłak (2010), *Metody wyznaczania hedonicznych indeksów cen jako sposób kontroli zmian jakości dóbr* [Methods of determining hedonic price indices as a method to control quality changes of goods], „Wiadomości Statystyczne” no. 9.

quarter in Warsaw and in 6 cities, declining in 10 cities. The growth in the demand for rental in Warsaw resulted in shortening of the waiting time for concluding a rental agreement.

- **The index of the estimated availability of housing** (based on average wages in the enterprise sector) in large cities **increased in the analysed quarter** to the level of 0.84 square metres, i.e. it was 0.36 square metre higher than the record low observed in 2007 Q3. The index of the estimated maximum availability of a housing loan³ remained at the same level whereas the loan-financed availability of housing for an average household in Warsaw and in analysed 6 cities decreased. The growth in wages and home prices were the main drivers behind the changes in those indices.
- **Housing investment** (excluding transaction costs) **continued to be profitable in the short term** (profitability calculated as interest rate differential). Assuming the average rent likely to be negotiated in the Warsaw market and in 6 cities, the profitability of housing investment was higher than the interest rate on bank deposits and yields on 10-year government bonds, and was close to the return likely to be achieved in the commercial real estate market. The relation of the housing debt servicing costs to rent still enables to finance the cost of credit with income from rent.
- **The value of newly granted loans⁴ in PLN** (excluding renegotiated agreements) **in the analysed quarter stood at approx. PLN 12.8 billion**, i.e. was 7.5% higher as compared with the figures recorded in the previous quarter and 5.5% higher as compared with the 2017 Q2 figures. The results of the NBP survey on the situation in the credit market⁵ indicate that the criteria of granting housing loans and the lending terms and conditions in 2018 Q2 were tightened by a few banks. At the same time, banks increased their requirements concerning borrower's own contribution and collaterals securing the loan and increased the credit margin. Banks declare their intention to slightly ease lending policy in 2018 Q3 and anticipate a decline in the demand.
- **Since 2012 the share of FX denominated loans⁶ has been on a steady decline in the structure of housing loans in banks, which is favourable for financial and macroeconomic stability.** The decreasing share of FX loans⁷ is due to the fact that banks ceased to grant such loans to persons not being in receipt of a regular

³ The maximum housing loan available in a particular market is a measure expressed in PLN thousand, taking into account banks' lending requirements and loan parameters (i.e. interest rate, amortisation period of 25 years, minimum wage understood as the minimum income after the repayment of loan instalments). The assessment does not take into consideration changes in banks' lending policy, including lending terms and criteria.

⁴ Data concerning interest rate and value of new loans based on the NBP data available in the "4 OPN2PLN" tab on the NBP internet site: http://www.nbp.pl/home.aspx?f=/statystyka/pieniezna_i_bankowa/oprocentowanie.html. It should be remembered that a housing loan is frequently a complementary source of home purchase financing.

⁵ "Situation in the credit market - results of the senior loan officer opinion survey, 2018 Q3" NBP, July 2018 http://www.nbp.pl/home.aspx?f=aktualnosci/wiadomosci/2018/kredytowy2018_3.html. In 2018 Q2, a significant growth in demand for housing loans observed by banks resulted from expectations concerning the situation in the housing market and the change in households' economic situation.

⁶ The share of FX denominated loans in the currency structure of housing loans extended by banks until the end of 2018 Q2 slightly decreased and stood at approx. 33% as compared to the level of 34% recorded at the end of 2018 Q1 and the peak 71% share recorded in 2009 Q1.

⁷ According to the BIK data, in the first half of 2018 banks granted the total of 117 thousand housing loans totalling PLN 27.9 billion, i.e. 7.8% (y/y) more as regards the number of loans and 16.7% in terms of value. The value of sales is mainly affected by large-value loans - approx. 60% of the value of housing loans granted in this period are loans in excess of PLN 250 thousand (26.0% are loans ranging from PLN 250 thousand to PLN 350 thousand and 33.4% are loans in excess of PLN 350 thousand). The growth rate of housing loans granted in the first half of 2018/ first half of 2017 in terms of loan values is diversified. In the case of low value loans this growth is negative (-15.7% to PLN 100 thousand and -4.7% for PLN 100 – 150 thousand). A high positive growth (33.2%) was recorded in the case of loans in excess of PLN 350 thousand. According to AMRON report, 2018 Q2 saw a decline in the average amount of granted housing loan, whereas the percentage of new loans with LTV=>80% (approximately 42%) was

income in a particular currency, due to systemic amortisation, earlier repayments, and refinancing those loans with PLN denominated loans as well as the appreciation of the zloty.

- **The estimated profitability of housing investment projects continues to be high, however, its decline has been recorded.** It is associated with growing costs, including mainly the cost of acquisition of construction sites. Developers try to pass these growing costs through to construction firms and purchasers of dwellings, however, only with a partial success. According to Coface experts⁸ the number of bankruptcies and restructuring proceedings in the construction industry in 2018 Q1 increased by 7% as compared to 2017 Q1, particularly among entrepreneurs and limited liability companies. At the same time, the share of the construction sector in the total number of bankruptcy and restructuring proceedings decreased by 2 percentage points, mainly as a result of growth in the number of bankruptcies in manufacturing and trade. According to the survey of the National Debt Register⁹, approximately 89% of entrepreneurs fail to settle on time their liabilities and this phenomenon may intensify.
- **2018 Q2 saw a decline in the number of new home building permits, as compared to the previous quarter¹⁰.** The estimated high margins on developers' profits as well as rates of return on housing projects and high demand boosted the number of issued home building permits¹¹ and the number of dwellings ready for occupancy¹². At the same time, the number of dwellings under construction increased¹³. High home sales and construction of dwellings make it necessary to replenish land banks. High demand for construction land triggered a noticeable rise in the prices of land for developer construction – particularly

maintained and, at the same time, the percentage of new loans with LTV \leq 30% decreased (approximately 14%). The share of housing loans with maturity from 25 to 35 years in the total structure of new loan agreements slightly increased.

⁸ According to Coface experts, significantly growing costs in the construction industry pose a problem. Many contracts become unprofitable while the new ones often have limited price attractiveness for contractors who must buy materials at significantly higher prices than some time ago. Moreover, companies report a shortage of employees to perform individual tasks. The number of bankruptcies in the sector is growing. More and more companies struggle with a growing indebtedness - both in terms of costs and payment gridlocks. The coming quarters are likely to bring a growth in the number of bankruptcies in this sector.

⁹ The survey on "Portfolio of receivables of Polish enterprises" is conducted on a quarterly basis since 2009. It analyses the level of payment gridlocks in Polish companies <https://krd.pl/Centrum-prasowe/Informacje-prasowe/2018/Gwaltownie-przybywa-firm-ktore-spodziewaja-sie-wzrostu-zatorow-platniczych>.

¹⁰ The statistics of the Central Statistical Office (GUS) could have been influenced by the change of the definition of construction introduced in 2018 for dwellings whose construction has started and for the implementation of which a permit was issued or a notification was made. We miss data on individual construction and construction for sales or rental for the period 2016-2017 *Individual construction* - implemented by natural persons (whether pursuing business activity or not), foundations, churches and religious associations, intended for the investor's own use. *Cooperative construction* - implemented by housing cooperatives, intended for persons - members of such cooperatives; if a housing cooperative constructs buildings with dwellings intended only for sale or rental to persons - members of the cooperative, such dwellings should be classified in the construction form "housing for sale or rental." *Company construction* - implemented by companies (of public and private sector) to satisfy housing needs of employees of such companies. *Municipal construction* - mainly of social, intervention nature or satisfying housing needs of low income households - implemented fully from municipal funds. *Public building society construction* - implemented by public building societies (operating on a non-profit basis), using a loan from Bank Gospodarstwa Krajowego (BGK). *Construction for sale or rental* - implemented with the purpose of gaining profit by various investors.

¹¹ According to the data of the Central Statistical Office (GUS), in 2018 Q2 the total of 65.5 thousand home building permits were issued in Poland, i.e. approx. 4.9 thousand less than in 2017 Q2 and approx. 1.2 thousand less than in the previous quarter. In the last four quarters, the total of 251.8 thousand permits were issued, i.e. 7.7 thousand more than in the period from 2016 Q3 - 2017 Q2 (a rise by 3.2% y/y).

¹² According to the data of the Central Statistical Office (GUS), in 2018 Q2 38.3 thousand homes were completed and made ready for occupancy, which is approx. 4.9 thousand more compared to 2017 Q2, however, approx. 6.6 thousand less than in the previous quarter. In the last four quarters, the total of 183.2 thousand homes were completed and made ready for occupancy, i.e. 15.3 thousand more than in the period from 2016 Q3 - 2017 Q2 (a rise by 9.1% y/y).

¹³ According to the data of the Central Statistical Office (GUS), in 2018 Q2 the construction of 65.7 thousand dwellings was started in Poland, i.e. approx. 3.9 thousand more in comparison with 2017 Q2 and approx. 17.7 thousand more compared to the previous quarter. In the last four quarters, the construction of the total of 213.6 thousand dwellings started, i.e. approx. 20.0 thousand more than in the period from 2016 Q3 - 2017 Q2 (a rise by 10.3% y/y).

in city districts with good transport links, with well-developed urban infrastructure and retail and service facilities. Also cheaper land in poorer location and with inferior infrastructure is purchased.

- **The pool of unsold housing in Poland's six largest primary markets¹⁴ reached approx. 44.4 thousand at the end of June 2018**, i.e. decreased by approx. 0.3 thousand dwellings as compared to the previous quarter. **The number of completed dwellings put on sale also decreased.** The indicator of home selling time in the primary market in the six largest markets remained at a historically low level of 2.5 quarters in the analysed period. It means fast sale of emerging offers and decline in the possibility to select dwellings for purchasers. The home selling time in the secondary market estimated by the NBP decreased in Warsaw whereas it remained unchanged in the six and ten cities.
- **The achieved high level of construction started to trigger problems related to its continued rise in particular, due to growing limitations on the supply side.** Despite the high sales volume, the production of dwellings in progress¹⁵ is growing at a slower pace. The difference between offer prices in the RP (primary market) and RW (existing stock market) increased, which means that purchasers do not accept higher developer prices. Moreover, the structure of dwellings offered deviates from buyers' preferences as regards their size - not enough relatively small dwellings in relation to the demand for them. Price increases and growing availability of production factors, i.e. estimated prices of construction sites for multi-family housing in good location and particularly problems with the availability of construction workers and the shortage of certain building materials, limit the increase of supply. Maintaining flexible supply amid such a high demand is the main challenge in the current market situation and the condition of maintaining stable prices.
- **On 4 January 2018 BGK¹⁶ ceased to accept the last pool of applications for home purchase subsidies under the Housing for the Young (MDM) scheme.** Granting of financial support allocated for a partial repayment of a loan will be continued and the servicing and control of loans with co-financing of own contribution granted in 2014-2018 will be performed.
- As part of the government's measures related to the implementation of the **Housing plus¹⁷** package, in the commercial pillar, BGK Nieruchomości carries out investment projects on land owned by municipalities and privately-owned land. In this part, over 7 thousand dwellings are constructed: over 0.4 thousand were completed and offered for rent, approximately 1 thousand dwellings are under construction and over 5.6 thousand are in the preparatory phase. Under the existing Scheme supporting

¹⁴ According to the REAS data. Such data are not available in other statistics.

¹⁵ The ratio calculated on the basis of GUS data as a difference between dwellings for which a building permit was issued and completed dwellings made ready for occupancy.

¹⁶ Under the "Housing for the Young" scheme, in the period from 2014 Q1 to 2018 Q2 the total of approximately 104.7 thousand subsidies in the amount of PLN 2.75 billion were paid to borrowers, including PLN 0.85 billion for secondary market dwellings. The BGK will continue to carry out tasks including */servicing of financial support agreements concluded with crediting banks, agreements charging crediting bank with redress on account of funds transferred for payments, agreements for provision of services via the communication portal and agreements concerning personal data processing, */maintaining the data base - register of buyers and register of buyers' children, */servicing the limit of budgetary funds designated for the implementation of the scheme */accepting, through crediting banks, home buyers' applications for the disbursement of funds for partial repayment of the loan, */satisfying the crediting banks' needs for funds for to be paid to home buyers, */monitoring of the status of funds to be disbursed and reporting the demand to the Ministry of Investment and Development, */preparing announcements published in the BIP in the scope of management of fund limit, */settlement of reimbursed amounts of financial support with crediting banks and the Ministry of Investment and Development. .

¹⁷ The Housing Plus scheme assumes, among others, the construction of housing for rental at an affordable price, with an option to be granted ownership title. Residential investment is implemented on a market basis on real estate currently owned by local government units and private investors, with the use of financing from the fund managed by BGK Nieruchomości S.A.

the construction of rental housing¹⁸, 163 applications for the total amount of PLN 900 million have been submitted so far, related to the construction of 7427 dwellings and 62 loan agreements were signed for the total amount of PLN 294 million allocated for financing of 2696 dwellings. The total of 843 dwellings in 19 investment projects were completed and made ready for occupancy. Under the Programme supporting the construction of housing units for rental, sheltered dwellings, shelters and shelters for the homeless, warming-up facilities and temporary facilities, over 1.5 thousand projects were accepted for financing (with the value of approximately PLN 3.3 billion), related to the construction of over 26 thousand sheltered dwellings/night shelters. **In the period under analysis, a new element - the Housing for the Start scheme¹⁹** was established, with the purpose of granting subsidies to the rent of new dwellings. It is only addressed to tenants of new housing created or revitalised as part of cooperation of investors with municipalities. In August 2018, the amended Environmental Protection Act entered into force. Pursuant to one of the provisions, a joint-stock company, Polskie Domy Drewniane S.A. was established to act as an investor in the energy efficient wooden homes market (single- and multi-family dwellings). Polskie Domy Drewniane S.A. is also able to purchase land, repair and modernise residential buildings and engage in other activities related to energy efficient wooden construction or accompanying infrastructure. At the end of 2018 Q2, the Rental Housing Fund operating since 2014 offered over 1.7 thousand dwellings in Gdańsk, Katowice, Kraków, Poznań, Warsaw and Wrocław, of which approx. 50% were leased. As a part of the Social Construction Programme, in the 2018 spring edition, BGK accepted 67 applications for financial support totalling PLN 68.8 million, for the construction of 1.2 thousand social housing units, municipal housing units, sheltered dwellings, shelters and homes for the homeless. Under the Borrowers' Support Fund operating since 2016, approximately 0.8 thousand agreements for granting subsidies totalling PLN 18.4 million were concluded, and the amount of PLN 13.0 million was disbursed.

- **In office real estate market, imbalances resulting from oversupply of rental space as compared to demand for such space diminished.** For two quarters, a strong growth of supply has been accompanied by growing demand. It was fostered by the favourable economic situation, including the creation of new jobs, also by international companies. According to the market estimates, in 2018 Q2 the office space supply in the nine largest office markets²⁰ exceeded 10 million square metres and approx. 1.8 million square metres were under construction. The level of vacancies in the nine largest office space markets recorded a slight growth to the level of 10.2% as compared to 10.1% in 2018 Q1.²¹ **The retail and commercial space market continues to see a slight oversupply of space**, whereas the vacancy rate across the country at the end of 2018 Q2 remained at a level of approx. 3.2%.²² The continued high availability of foreign financing has favoured and will continue to favour a rapid growth in office and commercial real estate. This phenomenon may be largely attributed to a low level of interest rates in developed countries, and thus a low alternative cost.

¹⁸ Journal of Laws of 28 July 2017, item 1442.

¹⁹ The subsidies are to be granted to persons meeting the conditions provided for in the Act (Journal of Laws of 10 August 2018, item 1540). The municipality will be responsible for the recruitment of tenants, indicating in agreement with the investor which housing units will benefit from subsidies. It has been assumed that the maximum limit of budgetary expenditure in the years 2019-2028 will amount to PLN 16 billion.

²⁰ Nine cities include: Warsaw, Kraków, Wrocław, Tri City, Katowice, Łódź, Poznań, Szczecin, Lublin.

²¹ See Colliers International Report: Market Insights, 1st half of 2018, Poland and Colliers International Report: Market Insights, 2018 Q1, Poland.

²² See Colliers International Report: Market Insights, 1st half of 2018.

- **The estimated value of investment transactions in the commercial real estate market in 2018 Q2²³ amounted to over 3 billion euro**, where almost 60% of the value of transactions concerned commercial space. The transaction involving 28 commercial facilities had a very high share in the volume²⁴.
- **The level of corporate loans granted by domestic banks to enterprises for real estate investment at the end of 2018 Q2 amounted to approx. PLN 61.7 billion**, which comprised loans granted to real estate developers and loans for office space, retail and commercial, warehouse and industrial space and other real estate²⁵. The level of debt of real estate developers at the end of 2018 Q2 reached PLN 5.4 billion. The value of loans for office real estate increased successively to PLN 16.7 billion, as compared to PLN 15.7 billion in 2018 Q1. The level of loans for retail and commercial real estate amounted to PLN 12.4 billion (a growth of PLN 1.3 billion as compared to 2018 Q1) and for warehouse and industrial real estate - to PLN 6.4 billion (a growth of PLN 1.8 billion as compared to 2018 Q1). The level of loans granted for other real estate²⁶ was stable and amounted to PLN 20.8 billion. The quality of loans to real estate developers continues to improve and the high rate of impaired loans (23.5%) is mainly due to the fact that banks' loan portfolios include loans from previous years²⁷. The share of impaired loans in the total loans for office real estate at the end of 2018 Q2 stood at 6.7% against 7.3% in 2018 Q1, for loans granted for retail and commercial space it stood at 8.9% as compared to 9.1% in Q1. The same indicator for loans for warehouse and industrial space amounted to 6.8% as compared to 9.7% in Q1 and for other real estate - to 10.2% as compared to 10.9% in Q1. The improvement in the level of impaired loans results from a strong growth of new loans,
- **Rents for A class office space in Warsaw, quoted in EUR per square metre per month, were stable**. The highest monthly rents in this class are recorded in Warsaw where they amounted to approx. EUR 20/sq. m/month. In other analysed cities, i.e. in the six large cities and in the nine²⁸ other smaller voivodship cities those prices ranged from EUR 12 to 14/sq. m/month. **Rents in class B office buildings in the largest markets also remain stable**. The average rent index for Warsaw, Poznań and Tri City is very close to the hedonic index²⁹. It results from the fact that rents for individual premises or space in the particular building are relatively similar. The vacancy rate in Warsaw increased by 0.3 percentage points, amounting to 11.1% at the end of 2018 Q2, ³⁰which may be recognised as a high level. The market information suggests that the vacancy rate of office space depends on the age ³¹ and mainly on the location of the office

²³ The above-mentioned investments concern the sale of the entire operating company which rents the building and derives income from it. Such transactions take place between: 1/ the real estate developer who has commercialised the property and sells it to the investor, or 2 / two investors. However, it should be emphasized that these data do not make it possible to draw conclusions as to the participation of foreign investors in possession of commercial real estate in Poland. There is a very large stock of real estate that the owner has built for their own purposes, sometimes even decades ago. Moreover, some domestic investors set up real estate development companies that build rental property for them and then manage it. The above economic events are not included in the statistics on commercial investments.

²⁴ See CBRE press release of 24 July 2018. "The first half of the year most active in the history of investment in the Polish real estate market. A record may be hit in 2018".

²⁵ Starting from 2018, the category of loans granted for other real estate was divided into three last of the aforementioned categories.

²⁶ See FINREP definition "Loans for other real estate – loans for real estate other than housing, office, commercial, industrial and warehouse real estate (subcategory of loans for other real estate)."

²⁷ See The Financial Stability Report, NBP, June 2018.

²⁸ In the case of retail and commercial real estate, the distribution of analysed cities is different than in the case of residential real estate. The six cities include: Katowice, Kraków, Łódź, Poznań, Tri City, Wrocław. Nine cities include: Białystok, Bydgoszcz, Kielce, Lublin, Olsztyn, Opole, Rzeszów, Szczecin, Wrocław.

²⁹ The hedonic index of rents for retail and commercial space contains an adjustment taking into account differences in attributes of buildings and space located therein and leased (e.g. location, usable area, finishing standard) in individual periods. The hedonic index is calculated with the imputed method, as in the case of hedonic index of home prices.

³⁰ See Colliers International Report: Market Insights, 1st half of 2018, Poland and Colliers International Report: Market Insights, 2018 Q1, Poland.

³¹ Cushman & Wakefield, Marketing as one of the key factors supporting the modernisation process of older office buildings, 2018.

building³². The office space market has recently seen an intensive revitalisation of older office facilities in poorer location.

- **Transaction rents for retail space in shopping centres in Warsaw are on a slight increase, whereas they remain stable in other cities³³.** The hedonic analysis performed for Warsaw, Poznań and Tri City showed that the transaction rent per square metre is on a decrease. As regards the sale of small retail and commercial real estate, the median of the offer price all over Poland shows a slight increase.

³² See Knight Frank, Report: Poland, Commercial Market, 1st half of 2018.

³³ The analysis refers to premises with the space from 100 to 500 square metres located in shopping centres in economically significant parts of cities.

Box 1. Analysis of real estate developers' condition in the first half of 2018³⁴.

According to the accounting records, in 2018 Q1 and 2018 Q2, a group of large and smaller development firms (F01) and developers listed on the WSE in 2018 Q1, as compared to the corresponding periods of 2017, reported a decrease in the average values of underlying economic indicators (total revenues and costs and the net financial result). It attests to a diminishing extent of the pursued activity and a decline in the number of dwellings completed and made ready for occupancy. In 2018 Q1 and Q2, in the group of large real estate developers the stock of completed dwellings and the value of projects under construction was lower than in any quarter of 2017, which may mean both problems on the supply side and indicate developers' prudence when launching new housing investment. The land bank of large developers has been maintained at a stable level since 2017 Q3 until 2018 Q2 and it is higher than in 2017 Q1, which suggest that despite a limited access to construction land and growing land price these entities have managed to acquire land for multi-family construction. In the group of smaller development firms in the first half of 2018, as compared to the first and second half of 2017, the stock of land remained at a similar level, with a slight increase in the value of projects under construction and the stock of dwellings made ready for occupancy. Clear signals of supply limitations of activity in the group of large developers and the demand for housing remaining at a lower, however still high level, trigger a growth in home prices in local markets. The analysis of the situation of real estate developers holding bonds introduced to trading on the Catalyst market shows the first signs of slowdown in the residential real estate market. For first time in the last three years, a decline of the total quarter-on-quarter sales of dwellings has been recorded. In the first half of 2018, the analysed developers sold 2.2% less dwellings than in the corresponding period of 2017, whereas declining growth was mainly observed in 2018 Q2 as compared to 2018 Q1. In 2018, developers in this group assume the total sales at a level slightly lower than in 2017. Very high sales of developers from the Catalyst market in 2017 translates into very good results in housing completion in the first half of 2018. According to developers, this allows to expect a growth in aggregate revenues for 2018.

According to the accounting records (F01), in the group of large and smaller real estate developers in 2018 Q2, as compared to the previous quarter, the ratios of sales profitability, equity and company assets improved due to a higher growth in net financial result. In this period, a higher growth in sales revenue in relation to the growth of total costs and costs of operating activity was recorded. Among large developers, the number of profitable developers increased from 64.0% entities in 2018 Q1 to 77.2% entities in 2018 Q2, at a slight decline of the average number of employees and payroll expenditure. In the group of smaller developers, the share of entities with a positive financial result decreased from 78.2% in the second half of 2017 to 69.6% in the first half of 2018, maintaining the average number of employees and a slight decline in payroll expenditure.

In financing the activity of development firms, equity plays a significant role. Its share in the structure of liabilities in 2018 Q2 in the group of large entities reached 37% whereas it was higher in the case of smaller entities, constituting approximately 48% of liabilities.

Among external sources of financing in the group of large entities, in 2018 Q2, as compared to 2018 Q1, the share of purchasers' prepayments for dwellings decreased (from 20.9% to 17.6%) along liabilities due to debt securities (from 13.4% to 11.4%). The value of liabilities towards service contractors significantly increased - from 18.4% to 26.2% in the share in the structure of liabilities. At the same time the period of settlement of liabilities has been extended, which may indicate financing from unpaid invoices building contractors. Financial liquidity approached an unfavourable level.

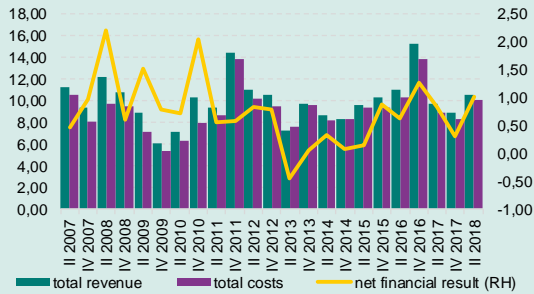
³⁴ The calculations and conclusions in this issue of the *Information* are based on data available until 2018 Q2, resulting from F01 reports submitted to GUS, with the breakdown into two groups of entities: those employing from 9 to 49 persons and those employing above 49 persons, engaged in the implementation of building construction (PKD 41.10). As data was released at a later date, the analysis of accounting records in financial statements of developers listed on the WSE was based on data comprising to the period until 2018 Q1. 2018 r. The analysis of the accounting records was supplemented with information concerning 14 housing real estate developers from the Catalyst market (a report on "Situation of the largest housing real estate developers of the Catalyst market in the first half of 2018", navigator Brokerage House, Warsaw, July 2018).

In the group of smaller developers, in the first half of 2018, as compared to the second half of 2017, the average value of liabilities on account of external sources of financing (bank credits, debt securities and home buyers' own contribution) decreased. Liabilities towards service providers significantly decreased - from 27.6% at the end of December 2017 to 22.8% of the share in the structure of liabilities at the end of June 2018. In this group, a period of receivables collection and the time of settlement of liabilities was shorter whereas financial liquidity and, consequently, the ability to repay liabilities has improved to a limited extent.

In 2018 Q2, as compared to 2018 Q1, along with the decrease in the value of external sources of financing and the increase in equity, smaller developers recorded an improved total debt ratio, debt to equity, ratio, equity to assets ratio and hedging financial liabilities with equity. This results in improvement of conditions while examining loan applications. In the group of large development firms, the aforementioned ratios remain at a safe level although they have slightly deteriorated due to a slight decrease in the value of equity and a growth of liabilities towards contractors of construction services.

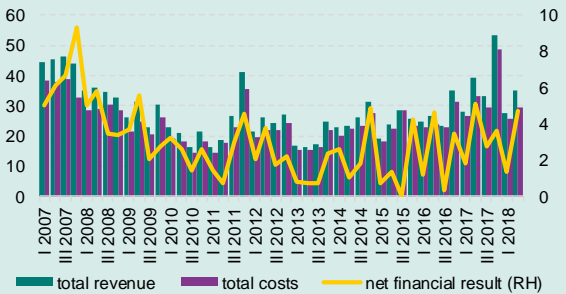
In the first half of 2018, real estate developers listed on the Catalyst market continued increasing the share of bonds in the debt structure.

Figure R1 Economic indicators of real estate developers employing from 9 to 49 people



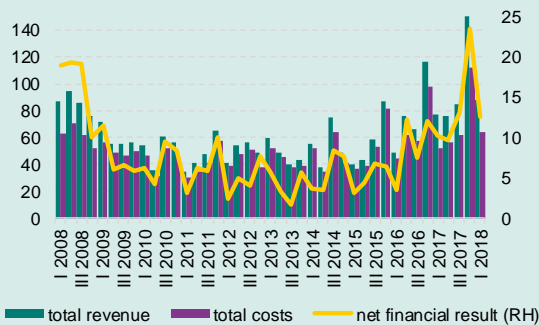
Source: NBP based on GUS (F01)

Figure R2 Economic indicators of real estate developers employing over 49 people



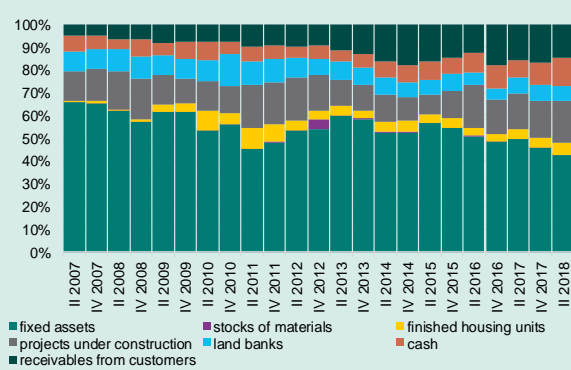
Source: NBP based on GUS (F01)

Figure R3 Economic indicators of real estate developers listed on the WSE



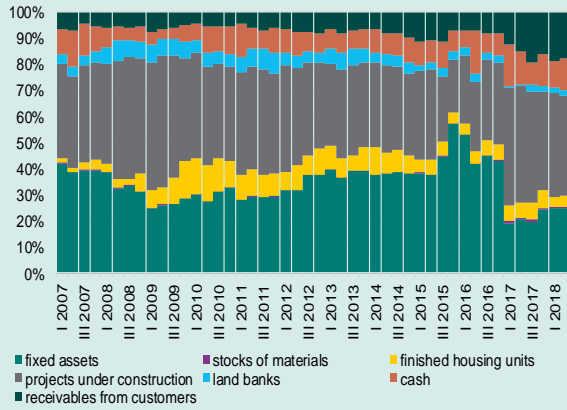
Source: NBP based on financial statements

Figure R4 Structure of assets of real estate developers employing from 9 to 49 people



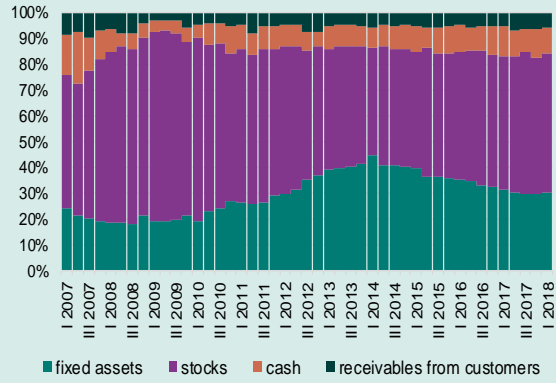
Source: NBP based on GUS (F01)

Figure R5 Structure of assets of real estate developers employing over 49 people



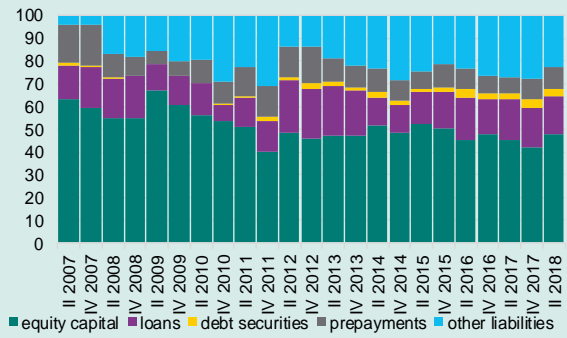
Source: NBP based on GUS (F01)

Figure R6 Structure of assets of real estate developers listed on the WSE



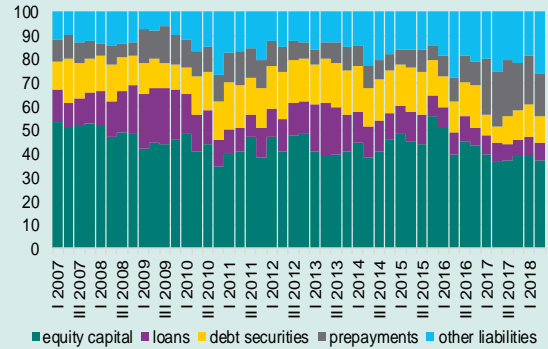
Source: NBP based on financial statements

Figure R7 Structure of liabilities of real estate developers employing from 9 to 49 people



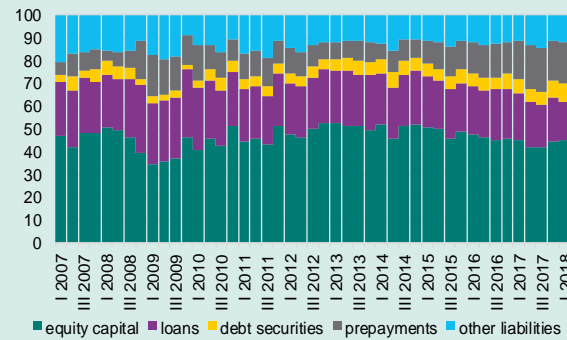
Source: NBP based on GUS (F01)

Figure R8 Structure of liabilities of real estate developers employing over 49 people



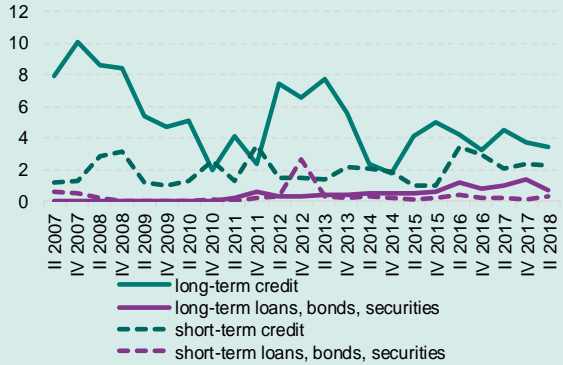
Source: NBP based on GUS (F01)

Figure R9 Structure of liabilities of real estate developers listed on the WSE



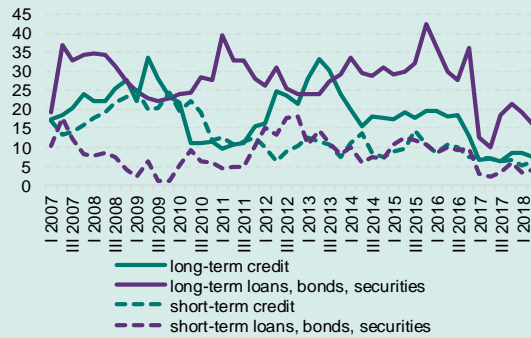
Source: NBP based on financial statements

Figure R10 Sources of financing of real estate developers employing from 9 to 49 people



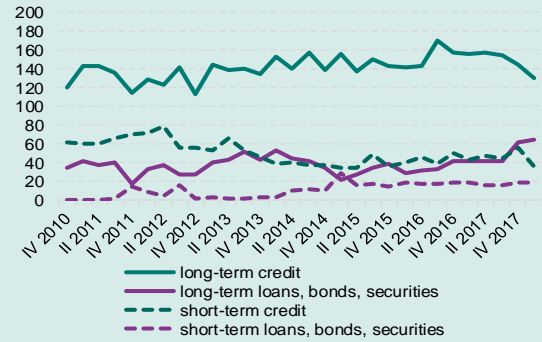
Source: NBP based on GUS (F01)

Figure R11 Sources of financing of real estate developers employing over 49 people



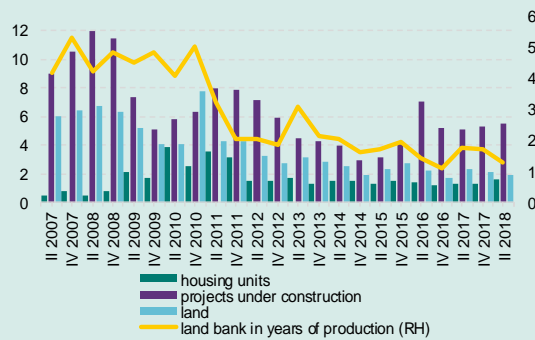
Source: NBP based on GUS (F01)

Figure R12 Sources of financing of real estate developers listed on the WSE



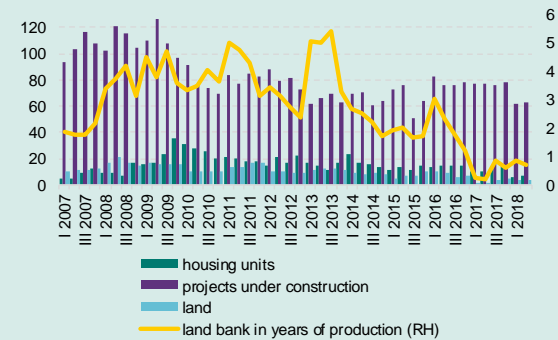
Source: NBP based on financial statements

Figure R13 Situation of real estate developers employing from 9 to 49 people



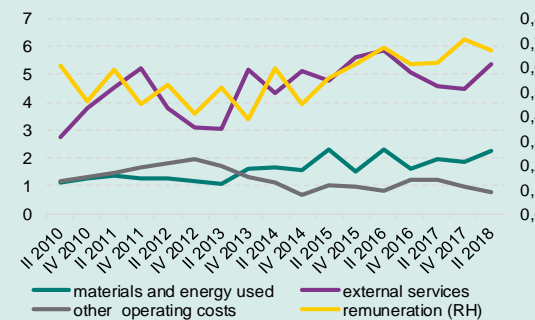
Source: NBP based on GUS (F01)

Figure R14 Situation of real estate developers employing over 49 people



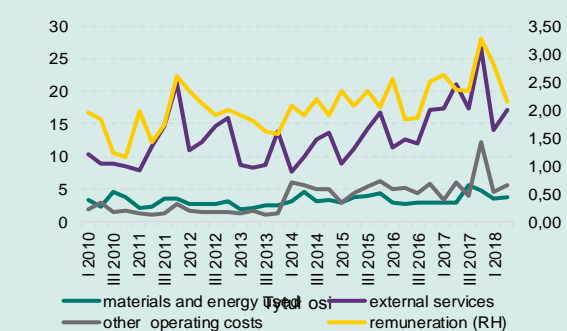
Source: NBP based on GUS (F01)

Figure R15 Costs of operating activity of real estate developers employing from 9 to 49 people



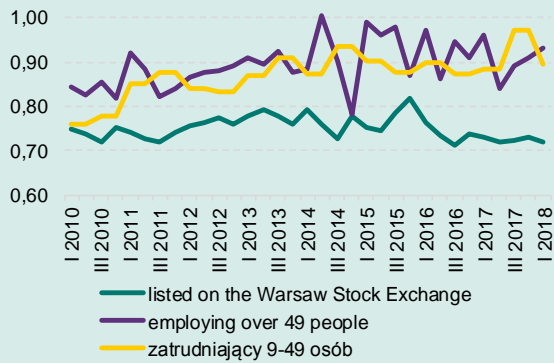
Source: NBP based on GUS (F01) and financial statements

Figure R16 Costs of operating activity of real estate developers employing over 49 people



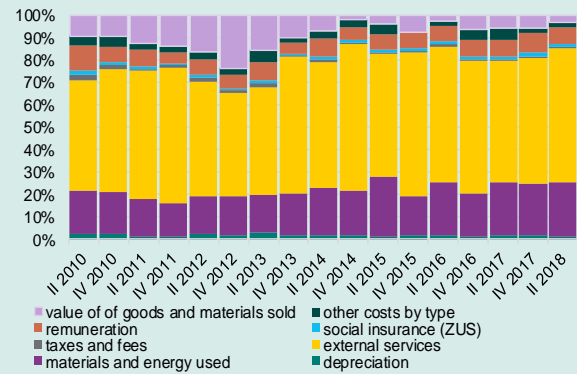
Source: NBP based on GUS (F01)

Figure R17 Indicators of level of operating costs according to groups of developers



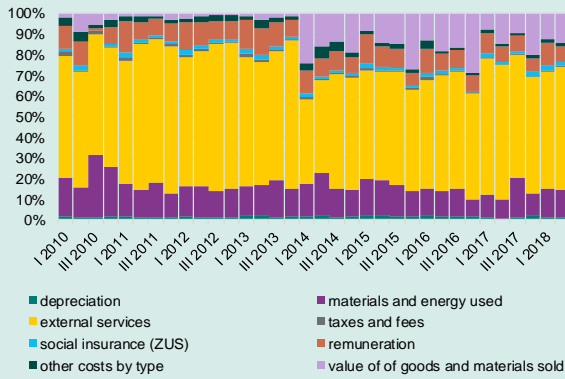
Source: NBP based on GUS (F01)

Figure R18 Structure of operating activity costs of real estate developers employing from 9 to 49 people



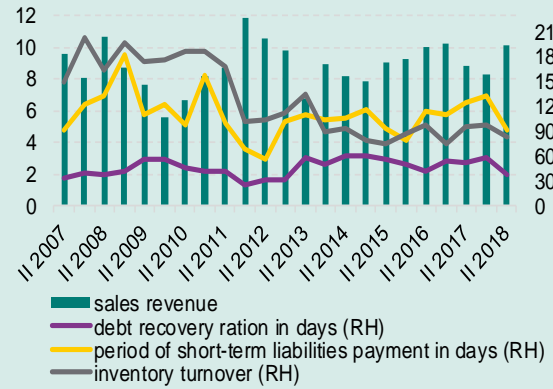
Source: NBP based on GUS (F01)

Figure R19 Structure of operating activity costs of real estate developers employing over 49 people



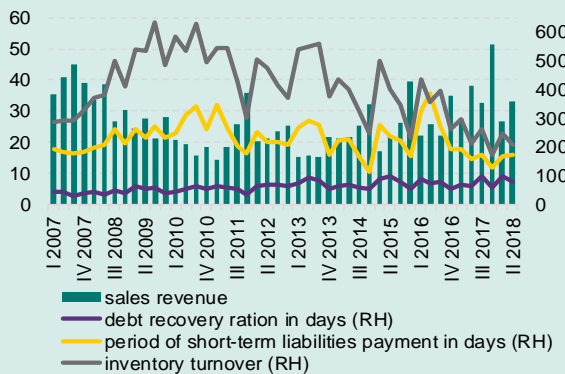
Source: NBP based on GUS (F01)

Figure R20 Turnover of inventory, receivables and liabilities of real estate developers employing from 9 to 49 people



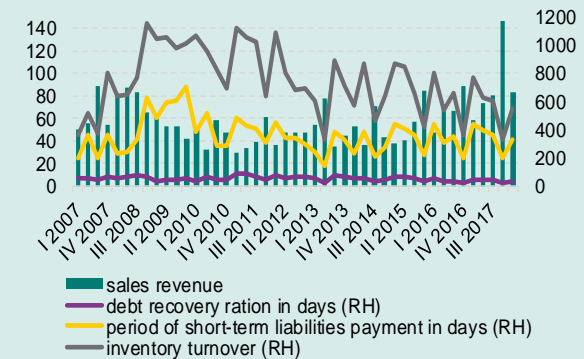
Source: NBP based on GUS (F01)

Figure R21 Turnover of inventory, receivables and liabilities of real estate developers employing over 49 people



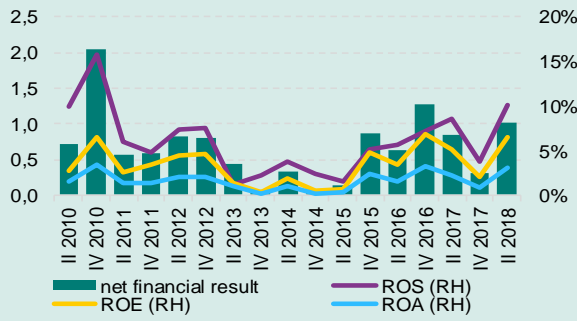
Source: NBP based on GUS (F01).

Figure R22 Turnover of inventory, receivables and liabilities of real estate developers listed on the WSE



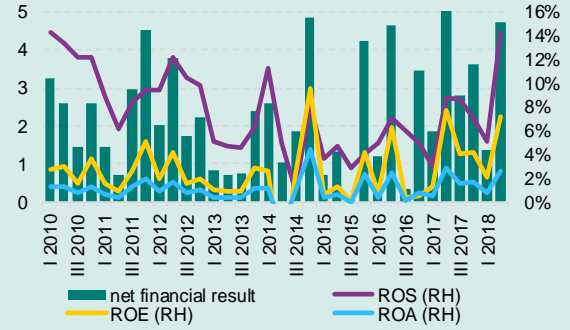
Source: NBP based on financial statements

Figure R23 Profitability of activities of real estate developers employing from 9 to 49 people



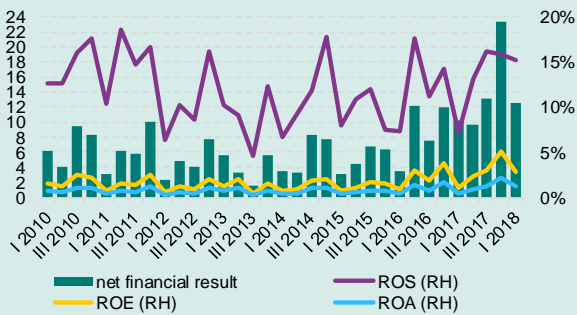
Source: NBP based on GUS (F01)

Figure R24 Profitability of activities of real estate developers employing over 49 people



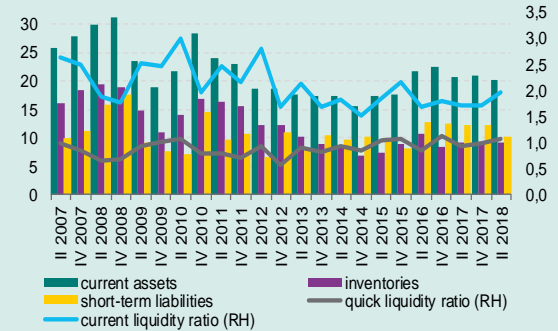
Source: NBP based on GUS (F01)

Figure R25 Profitability of activities of real estate developers listed on the WSE



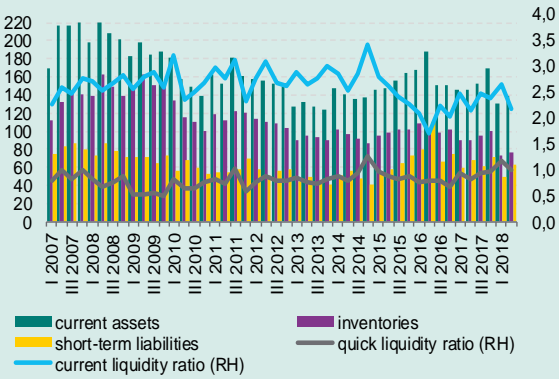
Source: NBP based on financial statements

Figure R26 Liquidity ratios of real estate developers employing from 9 to 49 people



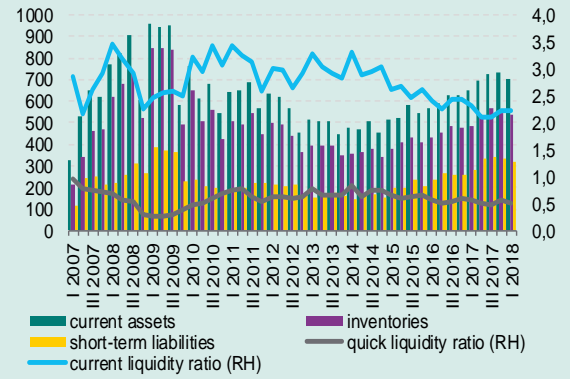
Source: NBP based on GUS (F01)

Figure R27 Liquidity ratios of real estate developers employing over 49 people



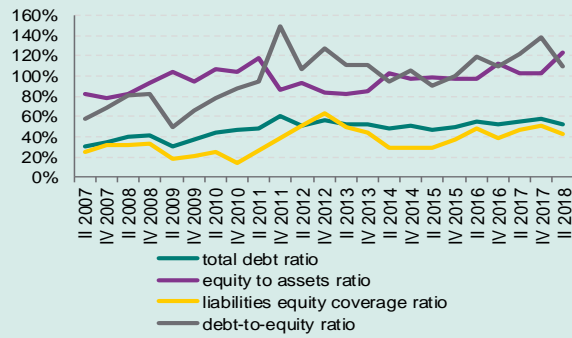
Source: NBP based on GUS (F01)

Figure R28 Liquidity ratios of real estate developers listed on the WSE



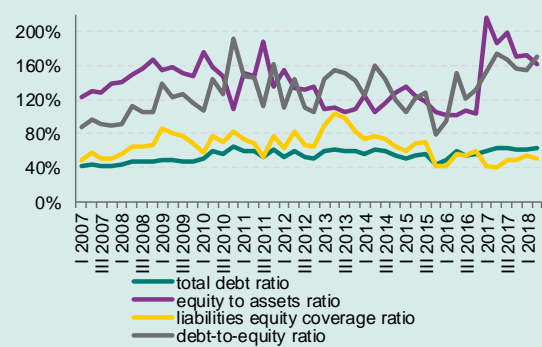
Source: NBP based on financial statements

Figure R29 Debt ratios and indicators of securing liabilities of real estate developers employing from 9 to 49 people



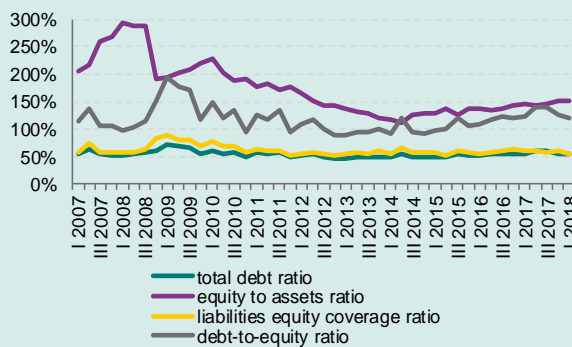
Source: NBP based on GUS (F01)

Figure R30 Debt ratios and indicators of securing liabilities of real estate developers employing over 49 people



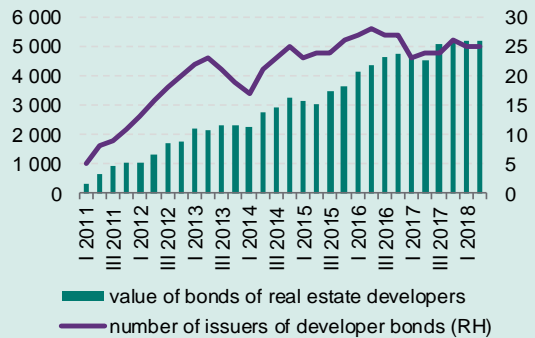
Source: NBP based on GUS (F01)

Figure R31 Debt ratios and indicators of securing liabilities of real estate developers listed on the WSE



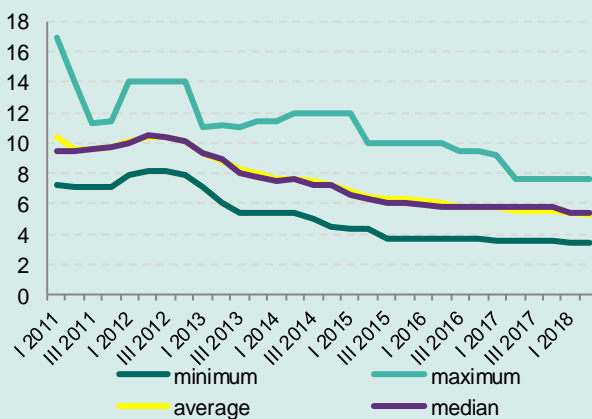
Source: NBP based on financial statements

Figure R32 Value of bonds of real estate developers and the number of issuers of developer bonds in the Catalyst market



Source: NBP based on Catalyst

Figure R33 Interest on bond coupons of real estate developers listed on the Catalyst market



Source: NBP based on Catalyst

The figures below describe the key developments in the housing market in Poland's major cities in 2018 Q2. Charts and figures present:

- 1) home prices (Figures 1-15),
- 2) availability of loan-financed housing, loan availability, profitability of housing investment (Figures 16-23),
- 3) mortgage loan disbursements and interest rates (Figures 24-32),
- 4) operating profitability of housing and real estate development projects, costs of construction and assembly output and economic situation of real estate developers in Poland (Figures 33-46),
- 5) housing construction and the residential market in selected cities in Poland (Figures 47-60),
- 6) housing policy (Figures 61-72).
- 7) rents and transaction prices of commercial real estate (Figures 73-79).

The analysis of housing prices (offer, transaction and hedonic) in the primary and secondary markets as well as housing rents relies on the data acquired from the housing market survey of the Real Estate Market Database (BaRN). On the other hand, as part of the survey of the commercial real estate market, the Commercial Real Estate Market Database (BaNK) data on rent, offer prices and transaction prices of commercial real estate are collected and analysed.

In addition, data from PONT Info Nieruchomości, AMRON and SARFIN Polish Banks' Association and Comparables.pl were used in the analyses. The analyses and reports of REAS, the Polish Financial Supervision Authority and the aggregate credit data from the Credit Information Bureau were also used. For the structural market analysis, data published by the Central Statistical Office and many studies containing sector data were used.

List of abbreviations

5M	5 biggest cities: Gdańsk, Kraków, Łódź, Poznań, Wrocław
6M	6 biggest cities: Gdańsk, Gdynia, Kraków, Łódź, Poznań, Wrocław
7M	7 biggest cities: Gdańsk, Gdynia, Kraków, Łódź, Poznań, Warsaw, Wrocław
10M	10 biggest cities: Białystok, Bydgoszcz, Katowice, Kielce, Lublin, Olsztyn, Opole, Rzeszów, Szczecin, Zielona Góra
BaNK	Commercial Real Estate Market Database
BaRN	Real Estate Market Database
BGK	Bank Gospodarstwa Krajowego
BIK	Credit Information Bureau
CPI	Consumer Price Index
DFD	Large real estate development company
GD	Households
GUS	Central Statistical Office
EURIBOR	Euro Interbank Offer Rate
FSA	Polish Financial Supervision Authority
LIBOR	London Interbank Offered Rate
LTV	Loan-to-Value ratio
MDM	Government-subsidised housing scheme Mieszkanie dla Młodych (Housing for the Young)
NBP	Narodowy Bank Polski
PONT	PONT Info Nieruchomości
PAS	Polish Accounting Standards
REAS	Real Estate Advisory System
RNS	Government-subsidized housing scheme Rodzina na Swoim (Family on their Own)
PM (RP)	Primary housing market
SM (RW)	Secondary housing market (existing housing stock)
ROE	Return on Equity
WIBOR	Warsaw Interbank Offered Rate
WIG20	Index including top 20 companies listed on the Warsaw Stock Exchange with the highest value of publicly traded shares
ZBP	The Polish Bank Association
ZKPK	Accumulated index of changes in banks' credit policy criteria

1. Transaction, hedonic and offer prices of housing in the primary market (PM) and in the secondary market (SM)

Figure 1 Transaction prices per square metre of housing in Warsaw and 6M- PM

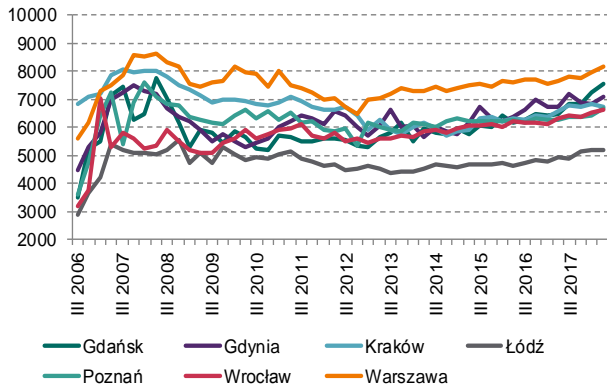
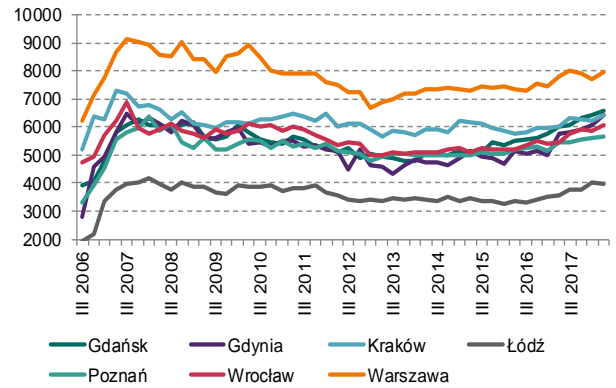


Figure 2 Transaction prices per square metre of housing in Warsaw and 6M- SM



Note: the home price database of NBP (BaRN) has existed since 2006 Q3; description of the database may be found in the “Report on home prices and the situation in housing and commercial real estate market in Poland in 2016” available on the bank’s website.

Source: NBP

Source: NBP

Figure 3 Weighted average price per square meter of housing, offers and transactions - PM

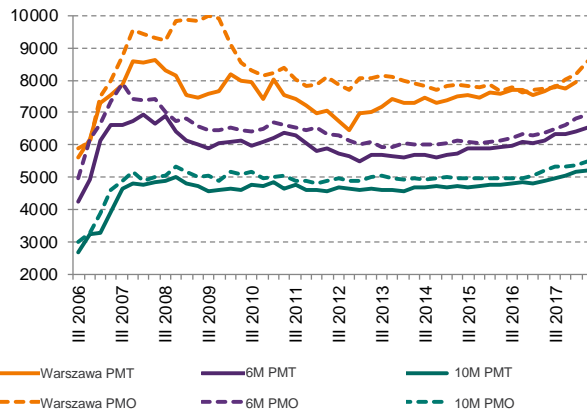
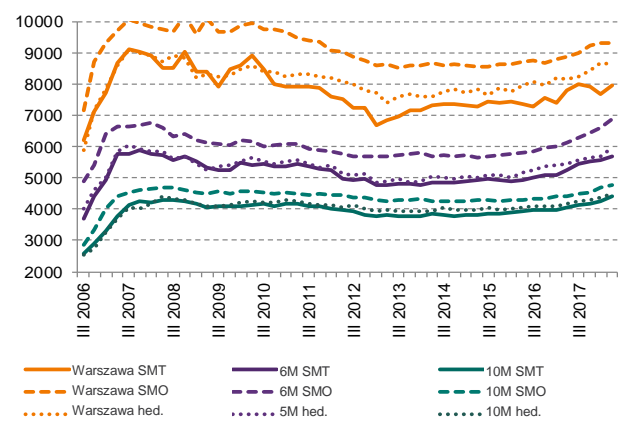


Figure 4 Weighted average price per square meter of housing, offers and transactions – SM



Note to Figures 3-15: the price weighted with the share of housing in the market stock, the average price for Warsaw

Source: NBP

Source: NBP

Figure 5 Ratio of the average weighted transaction price per square meter of housing – PM to SM

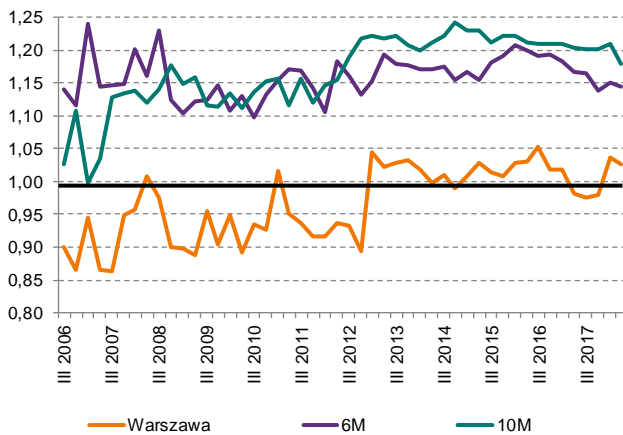
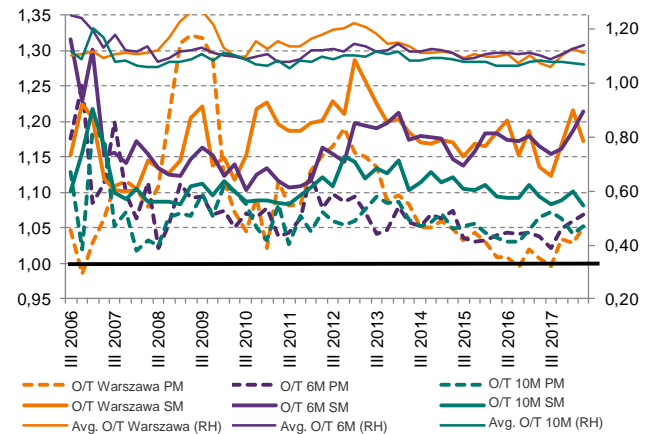


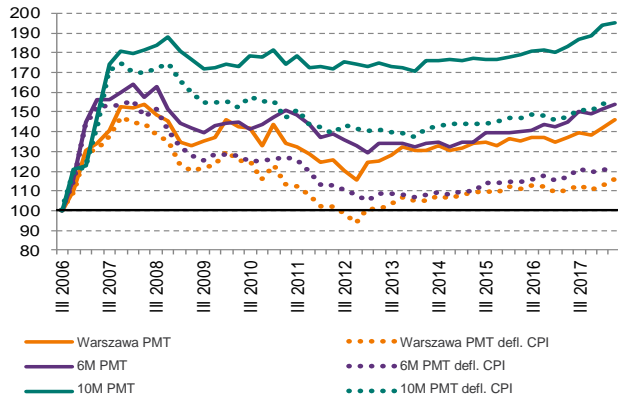
Figure 6 Ratio of the average weighted offer price to transaction price per square meter of housing – PM and SM



Source: NBP

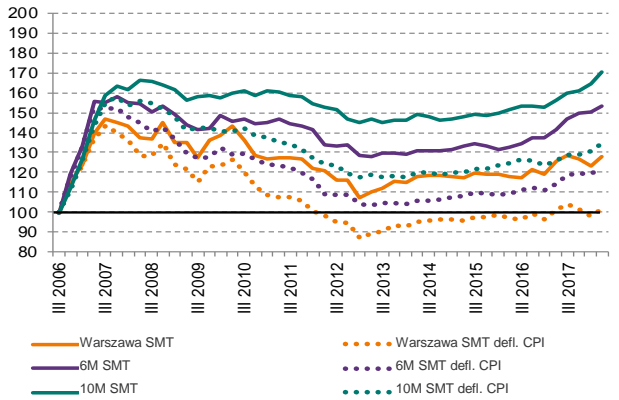
Source: NBP

Figure 7 Index of the average weighted transaction price per square metre of housing in the PM to CPI deflated price (2006 Q3 = 100)



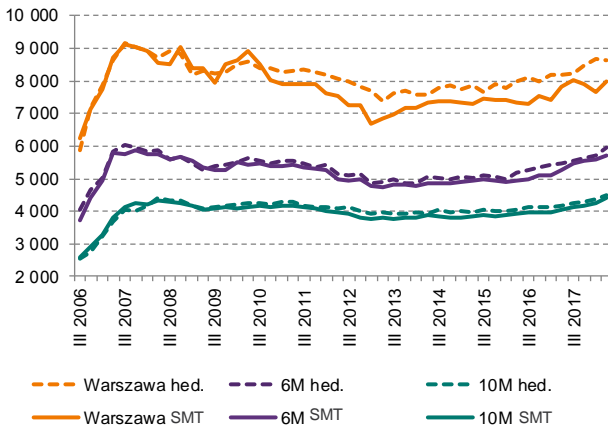
Source: NBP, ZBP (AMRON), GUS

Figure 8 Index of the average weighted transaction price per square metre of housing in the SM to CPI deflated price (2006 Q3 = 100)



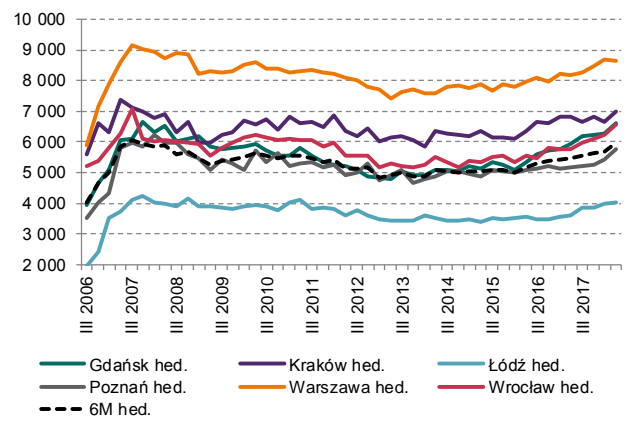
Source: NBP, ZBP (AMRON), GUS

Figure 9 Weighted average price per square metre of housing in SM and price adjusted by the hedonic index



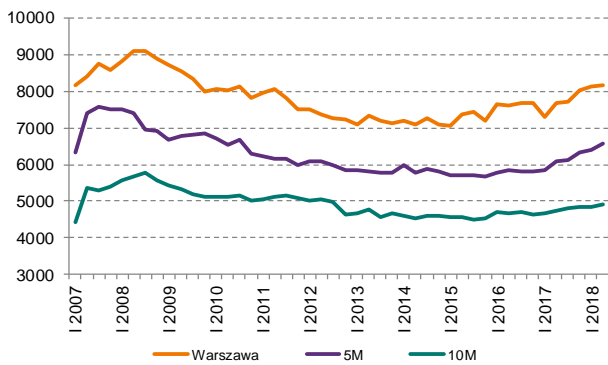
Source: NBP

Figure 10 Weighted average transaction price per square meter of housing in the SM, adjusted by the hedonic price index, in 6M



Source: NBP

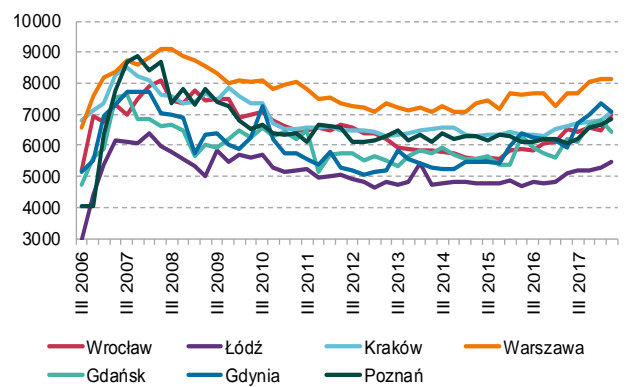
Figure 11 Average offer prices per square meter of housing in PM, selected markets



Note to Figures 11-12: prices are collected from all available sources.

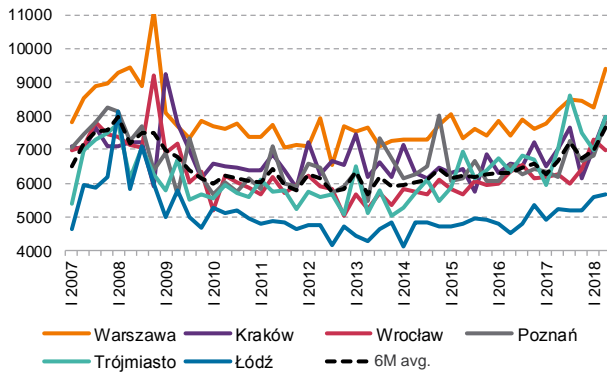
Source: PONT Info Nieruchomości

Figure 12 Average offer prices per square meter of housing in PM (Warsaw and 6M)



Source: PONT Info Nieruchomości

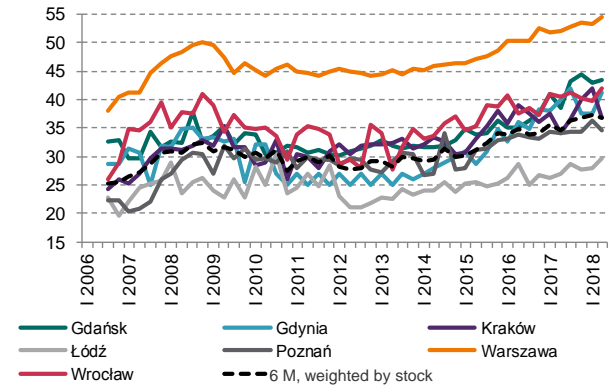
Figure 13 Average offer prices per square meter of housing, new housing contracts – PM, selected markets



Note: prices refer only to new contracts put on the market for the first time.

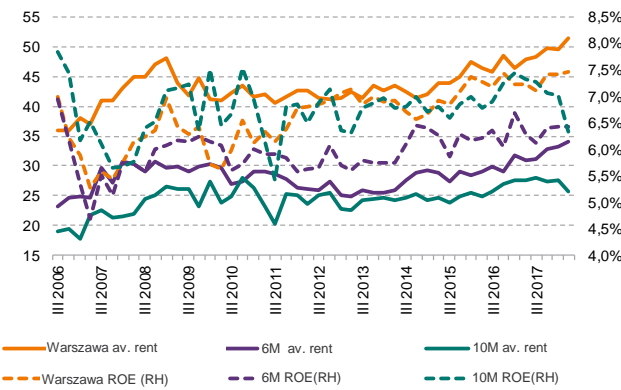
Source: REAS

Figure 14 Average rent rates (offers and transactions) per square meter of housing - SM, selected cities



Source: NBP

Figure 15 Average rent rates (transaction) per square metre of housing in SM (left-hand scale) and the estimated profitability in rental housing (right-hand scale) in selected cities

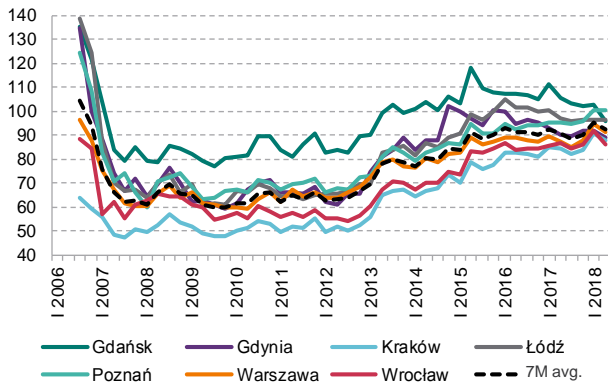


Source: NBP

Note to Figure 15: price per square meter of housing 40% SM and 60% SM; the price per square meter of housing in the PM was increased to include the average costs of home finishing; the analysis does not take into account the high transaction costs in the housing market and the potentially long time needed to exit from such an investment.

2. Availability of loan-financed housing, loan availability, profitability of investment in housing

Figure 16 Estimated availability of loan-financed housing (7M)



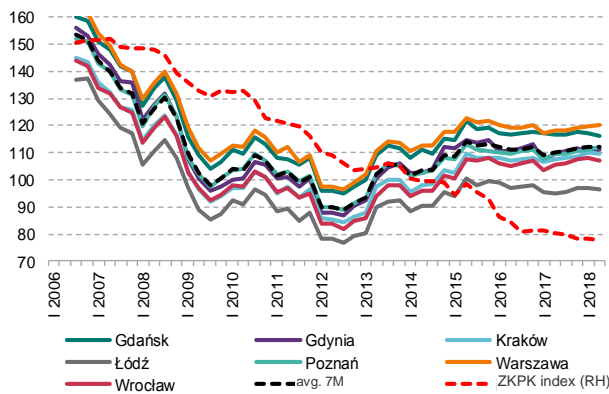
Source: NBP, GUS

Available housing loan – a measure specifying the potential maximum housing loan, expressed in PLN thousand taking into account banks’ lending requirements and loan parameters (interest rate, amortization period, minimum wage, as the minimum income after payment of loan instalments).

Availability of loan-financed housing – a measure specifying how many square meters of housing may be purchased with a mortgage loan obtained basing on the average monthly wage in the enterprises sector in a particular market (CSO), in view of bank’s lending requirements and loan parameters (interest rate, depreciation period, social minimum wage understood as the minimum income after payment of loan instalments) at an average transaction price of housing (40% in the primary market and 60% in the secondary market) in a particular market (BaRN). The pace of changes of the index and differences between particular markets provide important information.

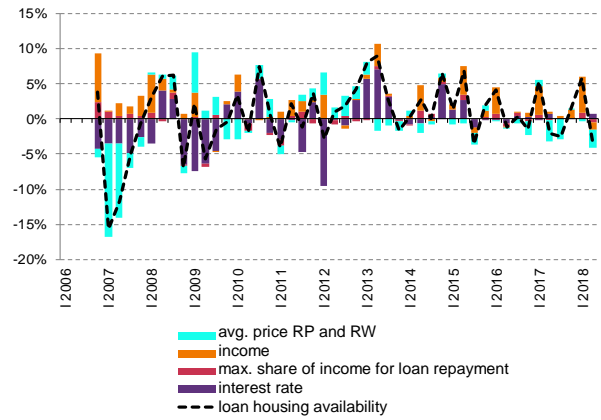
ZPKK Index – accumulated index of changes in banks’ lending policy criteria; positive values mean easing, and negative values tightening of lending policy as compared to the initial period i.e. 2003 Q4. Computing methods of the index are described in the *Financial Stability Report, December 2012, NBP*.

Figure 18 Estimated availability of loan-financed housing and accumulated index of banks’ housing credit policy (ZPKK, right-hand scale)



Source: NBP, GUS

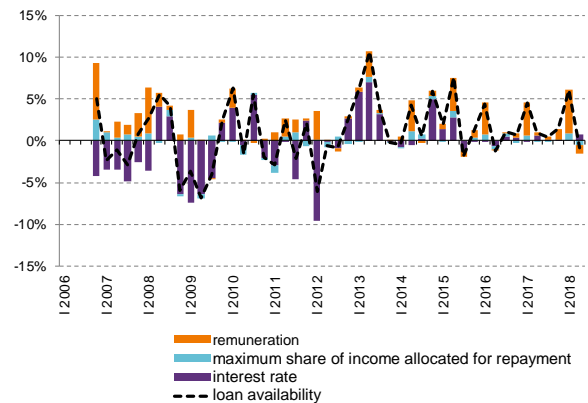
Figure 17 Quarterly changes in the estimated availability of loan-financed housing in 7M and the force and direction of the impact of particular components



Source: NBP, GUS

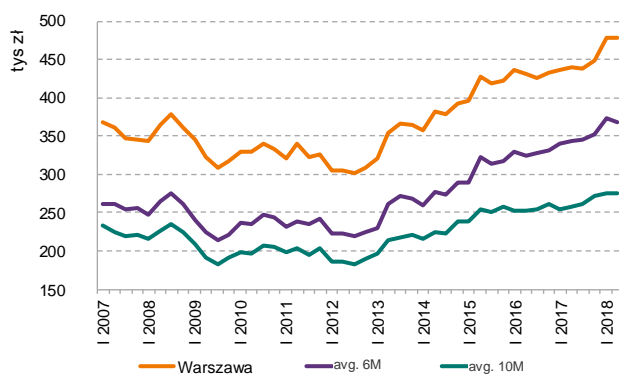
Quarterly changes in the estimated availability of loan-financed housing in 7M and the force and direction of the impact of individual components

Figure 19 Quarterly changes in the estimated availability of loan-financed housing in 7M and the force and directions of the impact of individual components



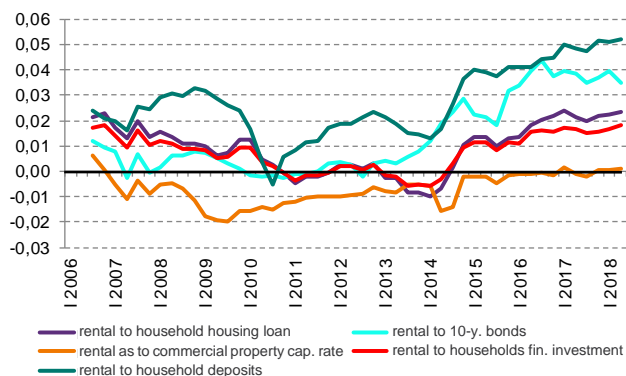
Source: NBP, GUS

Figure 20 Estimated available housing loan in selected cities



Source: NBP, GUS, BGK

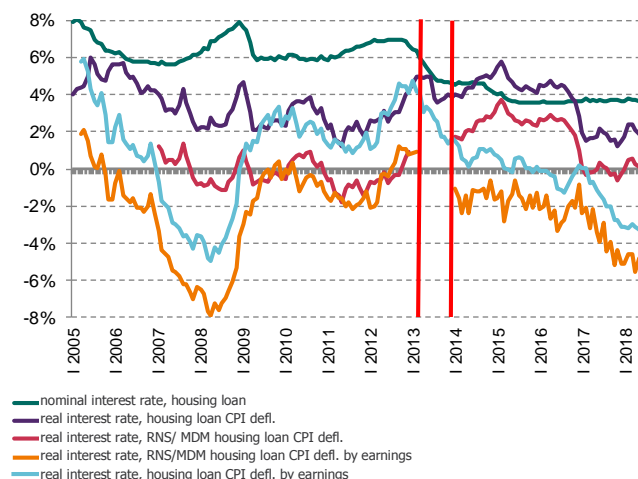
Figure 22 Profitability of home rental (average in Warsaw and 6M) as compared with alternative household investments (differences in interest rates)



Source: NBP, GUS

Note to Figure 22: values exceeding 0 denote higher profitability of purchasing property for rental to third persons than other GD investment. This analysis does not take into account high transaction costs in the housing market and potentially long payback periods. Note to Figure 23: the estimated total demand is composed of consumer demand and investment demand; no speculative demand. Consumer demand means the average number of dwellings sold in a quarter (2010 average) multiplied by the growth of weighted availability of loan-financed housing. Investment demand means the number of dwellings sold in a quarter (2010 average) multiplied by 10% (in the period from 2007 Q1 to 2013 Q2), 20% (2013 Q3 to 2016 Q4) and 30% (beyond 2017 Q1), multiplied by the growth (2010 Q1=100) of rental profitability against cash investment (90% - interest rate on deposits, 10% - interest rate on Treasury bonds).

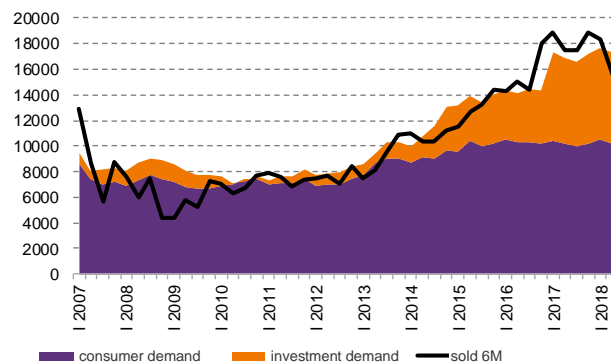
Figure 21 Profitability of housing loans for the consumer deflated with CPI or wage growth in the enterprise sector



Note: values below 0 denote negative real interest rate for the borrower; red lines separate the period of the absence of the government subsidised housing scheme, i.e. RNS (operating in 2007-2012) and MDM (operating in 2014-2018).

Source: NBP, GUS, BGK

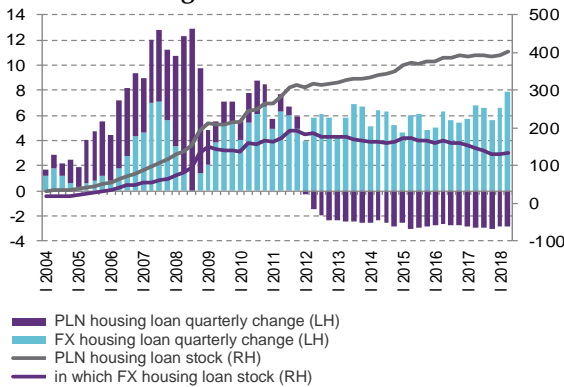
Figure 23 Estimated housing demand in PM (average in Warsaw and 6M) and its components



Source: NBP, REAS, GUS

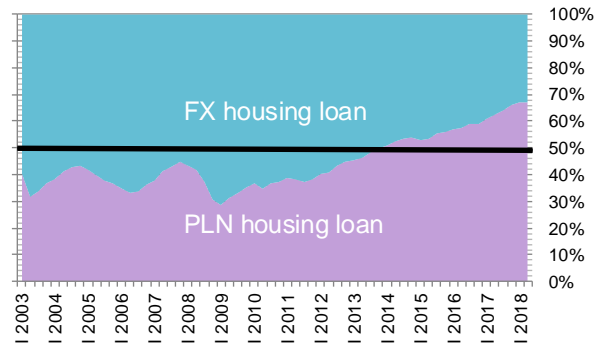
3. Disbursement of housing loans, interest rates

Figure 24 Balance and quarter-on-quarter changes in housing loan receivables from GD after adjustments and the currency structure of quarter-on-quarter increases in housing loan receivables (PLN billion)



Source: NBP

Figure 25 Currency structure of housing loan receivables from households resulting from residential mortgage loans (%)



Source: NBP

Figure 26 New housing loans: value and number

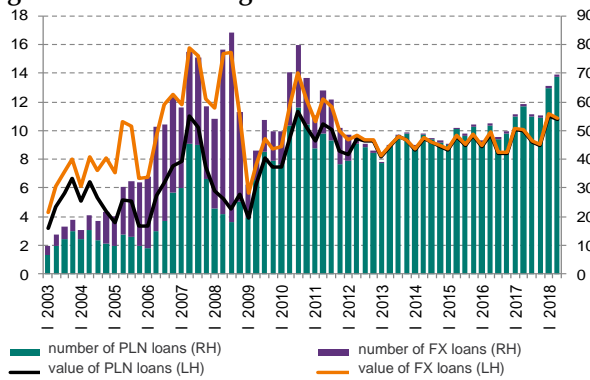
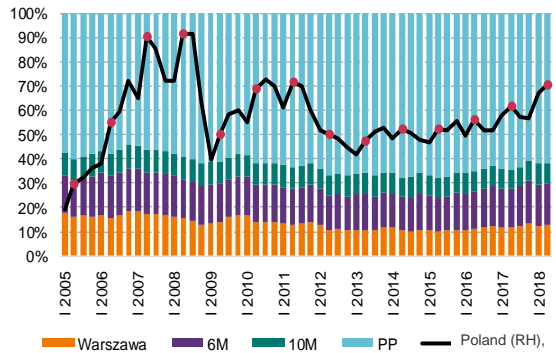


Figure 27 Geographical structure of the value of new housing loan contracts in Poland

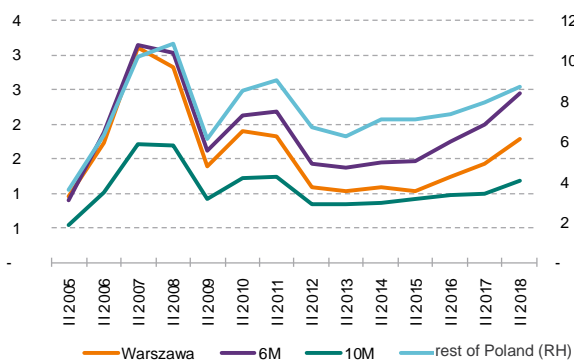


Note to Figures 26 and 27: the data inform about signed residential mortgage loan contracts and not the actual disbursement of residential mortgage loans. The second quarters are marked by red points.

Source: ZBP, from 2017 NBP estimate of FX loans

Source: BIK

Figure 28 Annual value of contracts for new housing loans in selected towns in Poland in second quarters (in PLN billion)



Source: BIK

Figure 29 Interest rates on housing loans for households in Poland

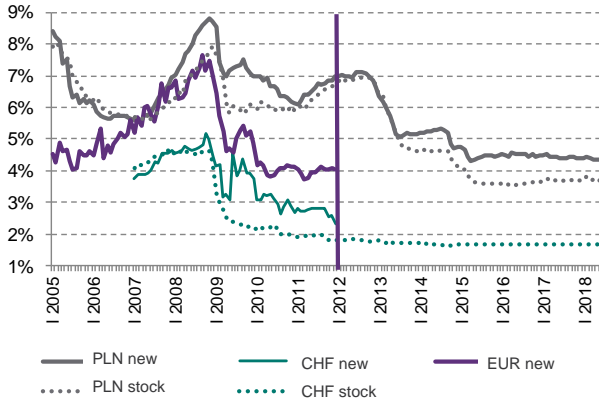
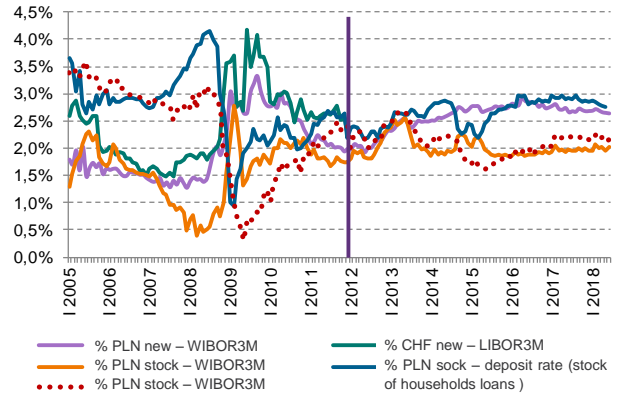


Figure 30 Bank margins (for WIBOR, LIBOR, EURIBOR 3M) in the case of housing loans



Note to Figure 29 and 30: the violet vertical line separates a period with no FX loans which have not been practically granted since 2012. Note to Figure 30: the bank margin is the difference between housing loan rate (NBP data) and the WIBOR3M rate or the LIBORCHF3M rate.

Source: NBP

Source: NBP

Table 1 Estimated gross mortgage loan disbursements to households in Poland and the estimated value of cash and loan-financed*/ purchases of developer housing in 7 M (in PLN million)

Date	Disbursement of housing loans in Poland	Estimated value of housing transactions in the PM and 7M	Estimated loan demand including client's downpayment in the PM in 7M	Estimated downpayment to loans in the PM in 7M	Estimated cash home demand (no downpayment) for the PM in 7M	Estimated value of cash home purchases with client's downpayment in the PM in 7M
I 2014	7,571	3,870	1,726	432	2,144	67%
II 2014	8,899	3,673	2,029	507	1,644	59%
III 2014	8,894	3,709	2,028	507	1,681	59%
IV 2014	8,416	3,953	1,919	480	2,034	64%
I 2015	8,996	3,980	2,051	513	1,929	61%
II 2015	10,640	4,437	2,426	606	2,011	59%
III 2015	10,341	4,711	2,358	589	2,354	62%
IV 2015	11,237	5,115	2,562	641	2,553	62%
I 2016	9,742	5,142	2,221	555	2,921	68%
II 2016	11,661	5,409	2,659	665	2,750	63%
III 2016	9,632	5,218	2,196	549	3,022	68%
IV 2016	9,933	6,616	2,265	566	4,352	74%
I 2017	10,945	6,959	2,495	624	4,464	73%
II 2017	12,139	6,578	2,768	692	3,811	68%
III 2017	11,794	6,753	2,689	672	4,064	70%
IV 2017	10,652	7,231	2,429	607	4,803	75%
I 2018	11,914	7,197	2,716	679	4,480	72%
II 2018	12,807	6,224	2,920	730	3,304	65%

Note: the estimates are based on the following assumptions:

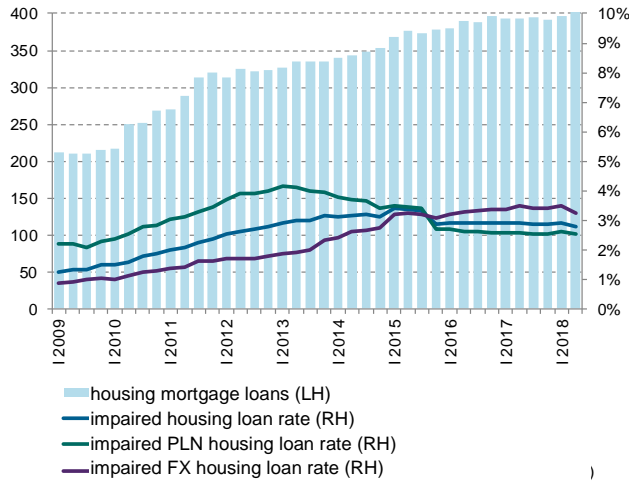
In the period 2014 I-IV, the estimated value of newly granted loans in Poland in particular quarters was based on increases in the volume of loans to households adjusted for loan amortization and flows between the foreign currency loan portfolio and the zloty loan portfolio, available in the NBP reporting. The entire banking system was taken into account, including SKOK credit unions. As of 2015 Q1, the value of disbursements is based on data collected from banks.

*/ Loan-financed home purchases comprise purchases made based on a loan and the minimum share of cash (a downpayment of 25% was assumed; in big cities, downpayment of 20% more prudently than the requirement of the amended S Recommendation), whereas home cash purchases make a difference between the value of transactions and credit funds.

In order to calculate the estimated value of PM transactions in 7M (Gdańsk, Gdynia, Kraków, Łódź, Poznań, Warszawa, Wrocław), the average home price (NBP) was multiplied by the average home size in square metres (GUS data) and the number of housing units sold (based on REAS data). On the basis of ZBP data it was assumed that the value of newly granted loans for the purchase of housing in the primary markets of 7M has amounted to approx. 57% since 2014. The estimated value of cash transactions was calculated as the difference between transactions in 7M and disbursements of loans, including buyer's downpayment. Data concerning prices for all the periods have been updated.

Source: NBP, REAS, ZBP, GUS

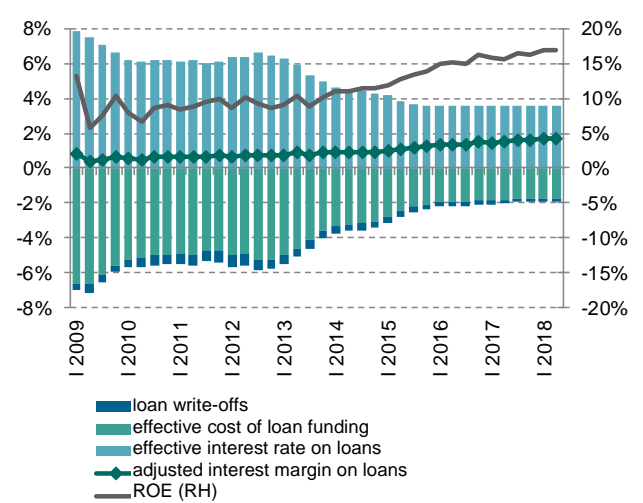
Figure 31 Household loans for housing real estate and indicator of loans recognised as non-performing loans



Note: receivables (loans) with determined loss of value – receivables from portfolio B, in relation to which objective premises of loss in value were observed and a decrease in the expected value of future cash flows (in banks using the IFRS) or which were recognized as non-performing receivables in accordance with the Ordinance of the Minister of Finance on establishing provisions against the risk associated with banking activities (in banks using the PAS).

Source: NBP

Figure 32 Estimated ROE on residential mortgage loans denominated in PLN for banks in Poland

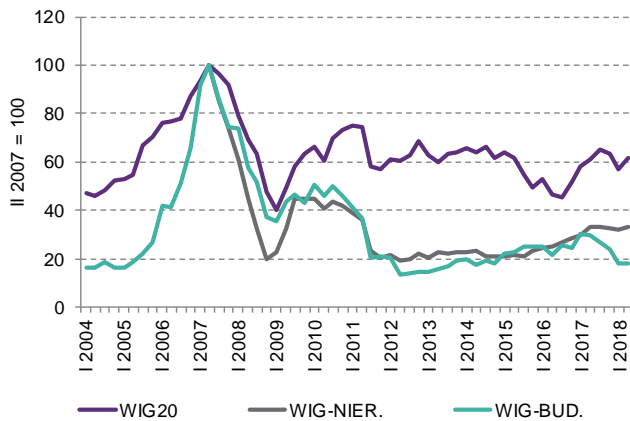


Note: Income and costs related to the mortgage loan portfolio are provided excluding costs of conducting bank’s activity and taxes. Estimated ROE is calculated as the adjusted interest margin on mortgage loans with respect to the minimum required down-payment (buyer’s own contribution). Calculation based on KNF publication, *Solvency ratio* - until 2014, *Total capital ratio* - as of 2014. The adjusted interest margin is the result of all income being added and all costs being deducted. The effective cost of financing was computed based on the WIBOR rates by adding estimative costs related to bank’s own financing.

Source: NBP, KNF

4. Operating profitability of housing and real estate development projects, costs of construction and assembly output and economic situation of real estate developers in Poland

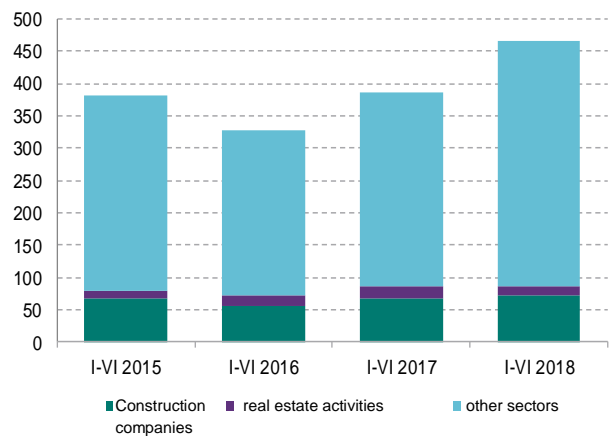
Figure 33 Rescaled exchange indices: WIG20 and for real estate developers and construction companies



Note: harmonized data, 2007 Q2 = 100. The WIG index for real estate developers has been recorded since 2007 Q2; 2018 Q2 as at 27 August 2018.

Source: Warsaw Stock Exchange

Figure 34 Number of bankruptcies in particular sectors (as at the end of the first halves of the year)



Note: breakdown according to the first entry into the KRS.

Source: Coface Poland.

Figure 35 Estimated share of direct construction costs per square meter of the residential building's usable area (type 1122-302³⁵) in the transaction price in the PM

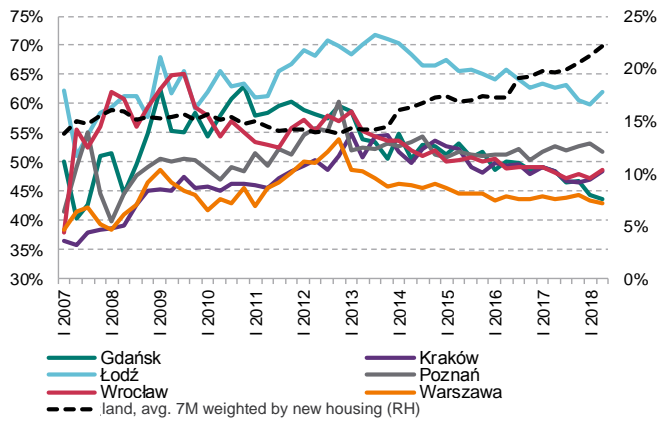
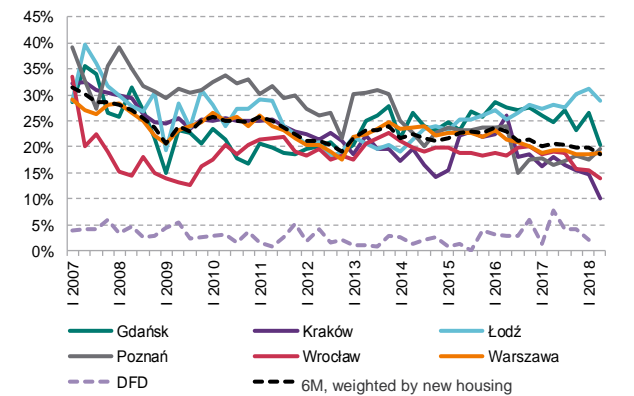


Figure 36 Estimated rate of return from investment projects (type 1122-302³⁵) in the largest cities and the reported rate of return of real estate developers (DFD*)

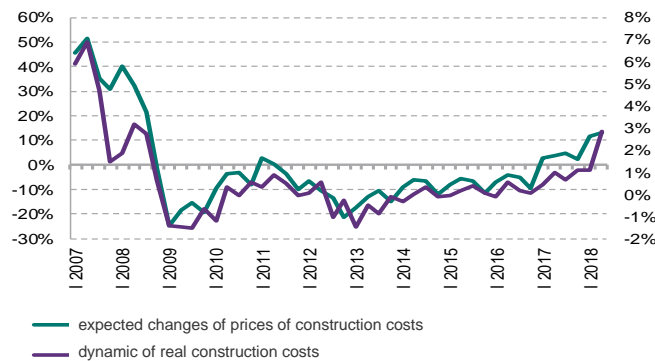


Note to Figure 36: the estimated rate of return on equity from typical new investment projects assuming the currently applicable interest rates, banks' requirements and production costs; calculated on the basis of the diagram included in Annex 3 of the *Report on the situation of the Polish market of residential and commercial real estate in 2011*. Since 2014, NBP's own appraisal of land for housing construction has been used, which has changed the previous estimates. */DFD – ROE of an average large real development company according to GUS data (employment size =>50 persons).

Source: NBP based on Sekocenbud

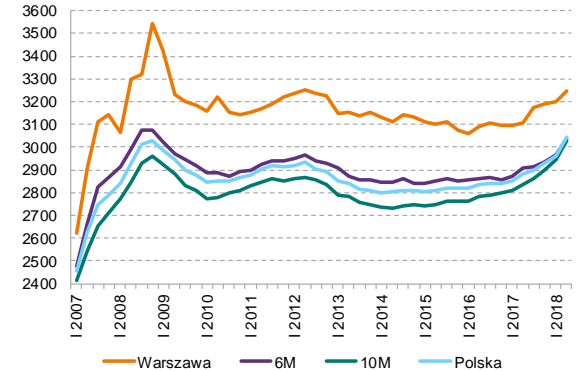
Source: NBP based on Sekocenbud, GUS (F01)

Figure 37 Predicted changes in prices of construction and assembly works (+3M) and growth in construction costs of usable area of a residential building (type 1122-302³⁵)



Source: NBP based on CSO data (business conditions survey), Sekocenbud

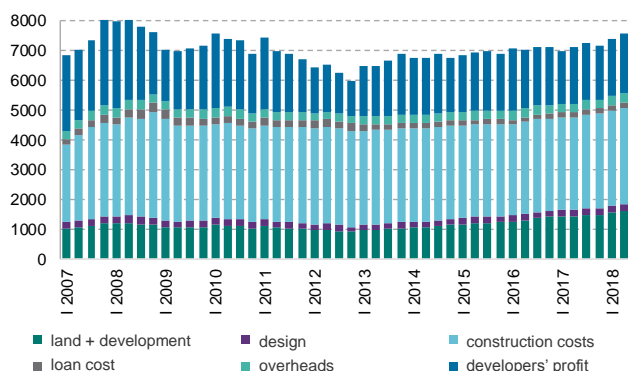
Figure 38 Average cost of construction of square meter of the residential building's usable area (type 1122-302³⁵) in selected markets (PLN/sq.m)



Source: NBP based on Sekocenbud

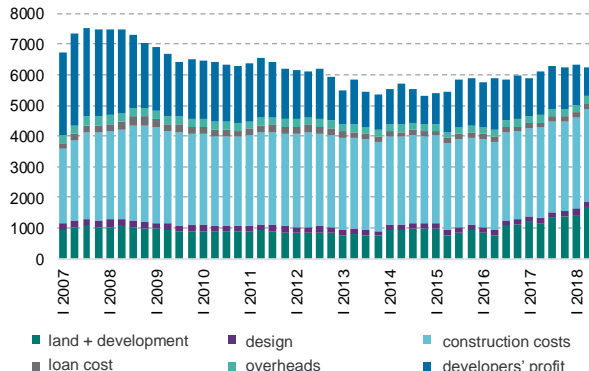
³⁵ Half of the building (type 1122-302) monitored by NBP since 2016 Q2 based on Sekocenbud data: An average residential multi-family building, with an underground garage constructed in the technology: foundation footings, construction walls and ceilings - monolithic reinforced concrete, curtain walling - bricked walls of hollow MAX blocks. Change of the type of the analysed building is related to closing of the cost estimation of facility 1121. Analytical assumptions related to building 1121 have been maintained.

Figure 39 Warsaw – estimated structure of price per square meter of housing usable area in the PM (building type 1122-302^{35/}) for consumer.



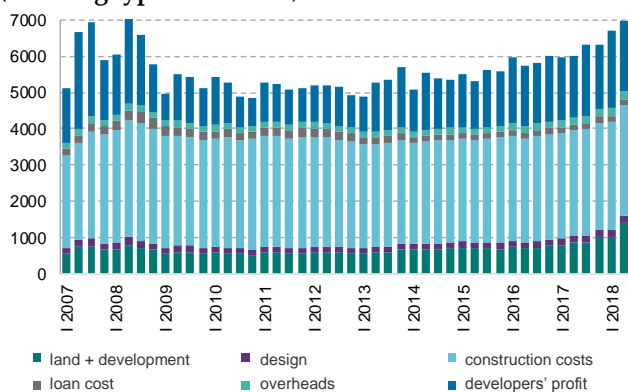
Source: NBP based on Sekocenbud, REAS

Figure 40 Kraków – estimated structure of price per square meter of housing usable area in the PM (building type 1122-302^{35/}) for consumers



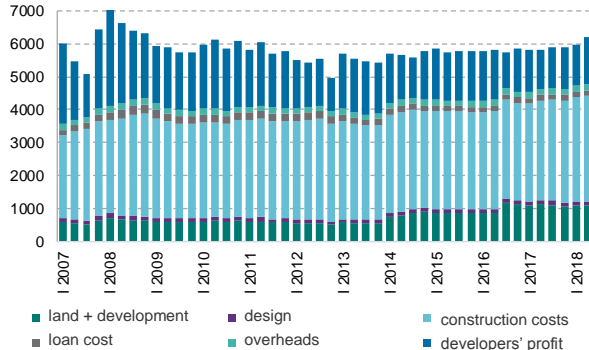
Source: NBP based on Sekocenbud, REAS

Figure 41 Gdańsk – estimated structure of price per square meter of housing usable area in the PM (building type 1122-302^{35/}) for consumers



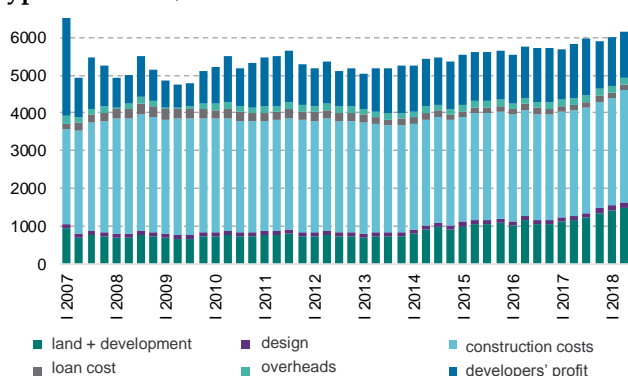
Source: NBP based on Sekocenbud, REAS

Figure 42 Poznań – estimated structure of price per square meter of housing usable area in the PM (building type 1122-302^{35/}) for consumers



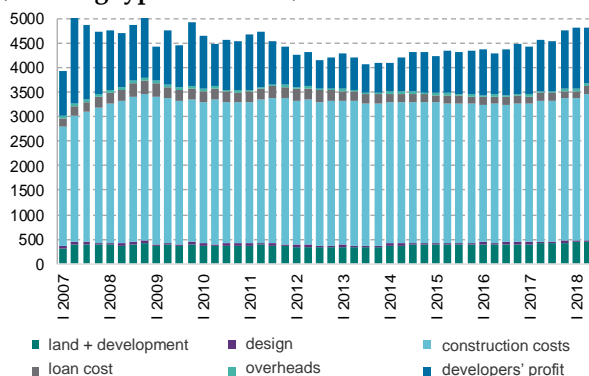
Source: NBP based on Sekocenbud, REAS

Figure 43 Wrocław – estimated structure of price per square meter of housing usable area in the PM (building type 1122-302^{35/}) for consumers



Source: NBP based on Sekocenbud, REAS

Figure 44 Łódź – estimated structure of price per square meter of housing usable area in the PM (building type 1122-302^{35/}) for consumers



Source: NBP based on Sekocenbud, REAS

Figure 45 Loans to corporations for real estate purchases (in PLN billion, left-hand scale) and the share of loans recognised as non-performing loans (in % right-hand scale)

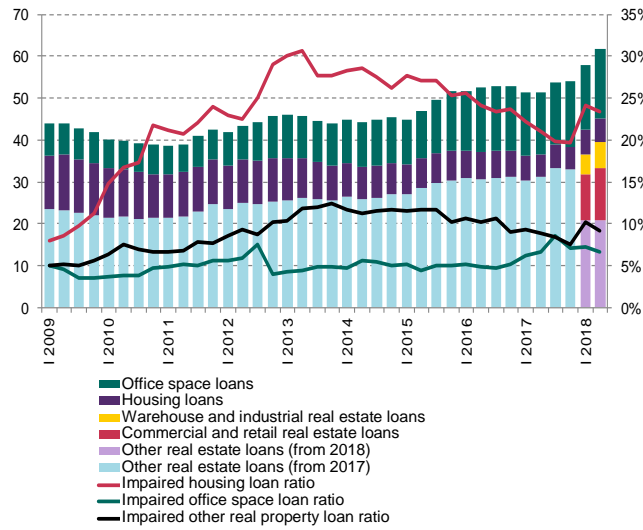
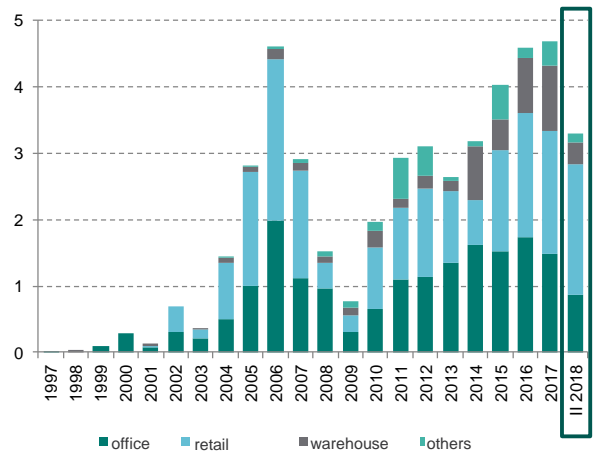


Figure 46 Value of investment transactions (EUR billion)



Note: Data exclusive of BGK. Since the beginning of 2018, new accounting standards have been applicable.

Source: Comparables.pl

Source: NBP

5. Residential construction and the housing market in Poland’s selected cities

Figure 47 Structure of residential construction investors in Poland in two quarters of the years 2015-2018

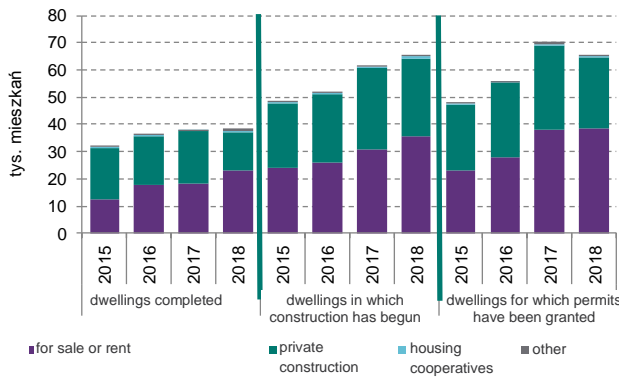
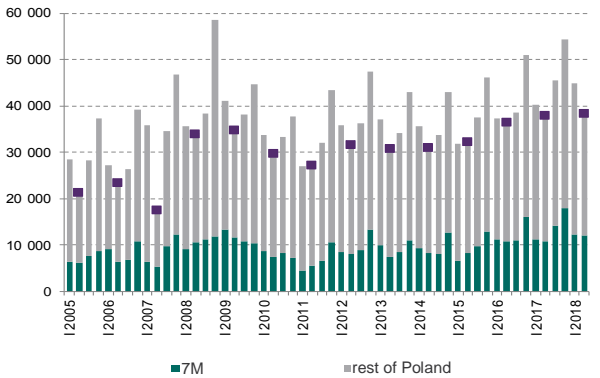


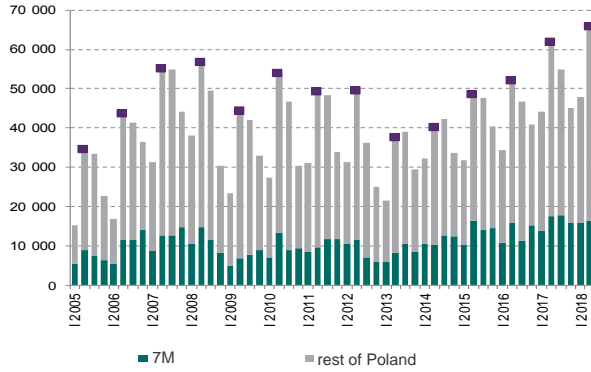
Figure 48 Completed dwellings in Poland, in quarter-quarter terms



Source: GUS

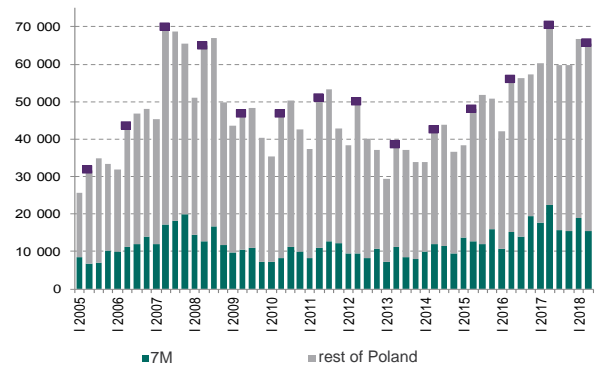
Note to Figures 48-50: in violet colour only second quarters have been marked. Source: GUS

Figure 49 Housing units under construction in Poland in quarter-on-quarter terms



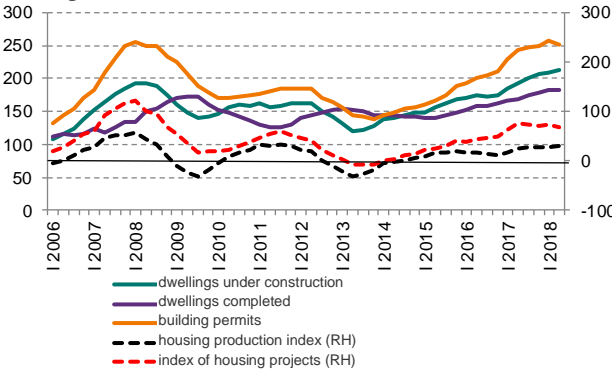
Source: GUS

Figure 50 Issued building permits in Poland, in quarter-on-quarter terms



Source: GUS

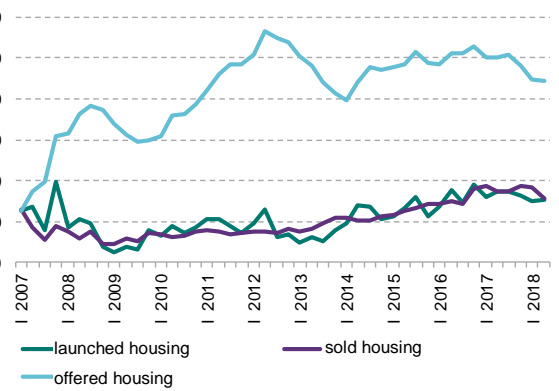
Figure 51 Housing construction (thousand housing units) and home construction indicator in Poland (housing units under construction minus completed housing units)



Note: rolling averages for four subsequent quarters.

Source: NBP based on PABB and GUS

Figure 52 Number of dwellings put on the market, both sold and offered for sale in Poland's 6 largest markets*



*/Warsaw, Kraków, Tricity, Wrocław, Poznań, Łódź.

Source: REAS

Figure 53 Housing supply and estimated rate of return on housing investment in the PM in 7M

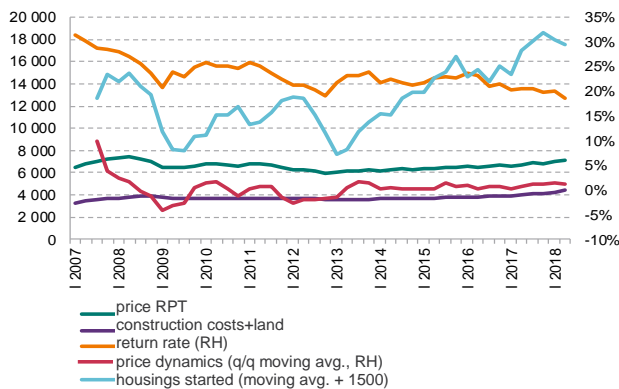
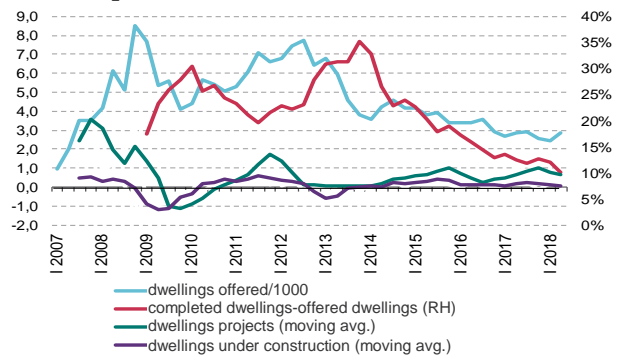


Figure 54 Housing projects and housing under construction as well as the offer of completed housing units compared to sales in 7M



Note to Figure 54: Housing projects under construction=building permits for housing units minus completed housing units; housing units under construction=housing units whose construction has begun minus completed housing units; cumulative values of the last 4 quarters, divided by sales in the given period.

Source: NBP, GUS, REAS, Sekocenbud

Source: NBP based on GUS

Figure 55 Measure of adjustment of housing units on offer to demand in terms of area ≤ 50 sq. m, PM in selected cities in Poland

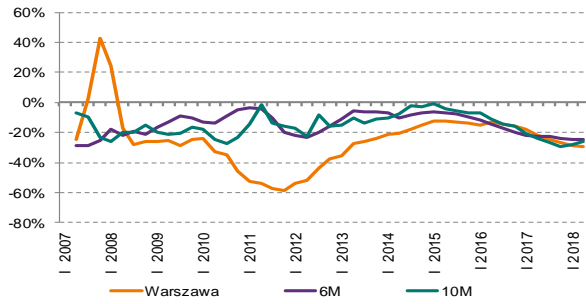
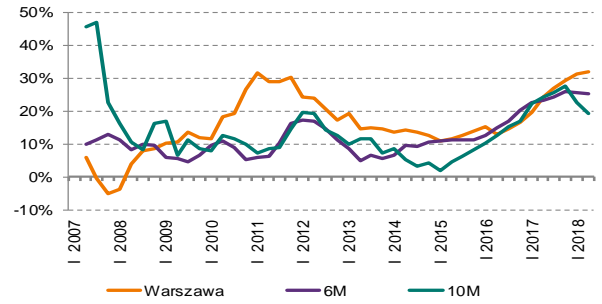


Figure 56 Measure of adjustment of housing units on offer to demand in terms of area > 50 sq. m, PM in selected cities in Poland



Note: Figure 55 presents, in percentage terms, a short-term mismatch in the primary market between supply (developers' housing offer) and the estimated demand (housing transactions) in terms of the dwelling's size, according to the data from the BaRN database. The mismatch is calculated as the ratio of the share of housing units with usable area of up to 50 square meters offered for sale to the number of transactions involving housing units with a total area of up to 50 square meters (the average figure for the last four quarters). The positive result (above the black line) indicates a surplus of housing of this particular size, whereas the negative result indicates a shortage thereof. Figure 56 is parallel for the space above 50 sq.m. Figures 57-58 are parallel, but they concern the SM only.

Source: NBP

Source: NBP

Figure 57 Structure of housing supply and demand* for housing with an area ≤ 50 sq. m, SM in Poland's selected cities

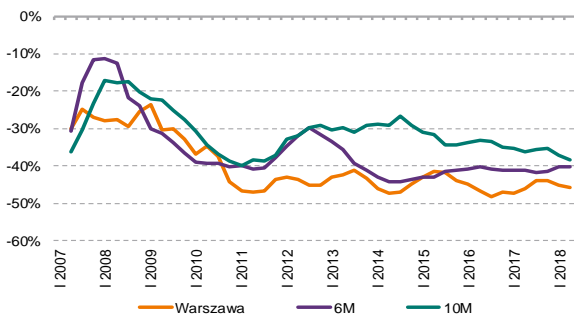
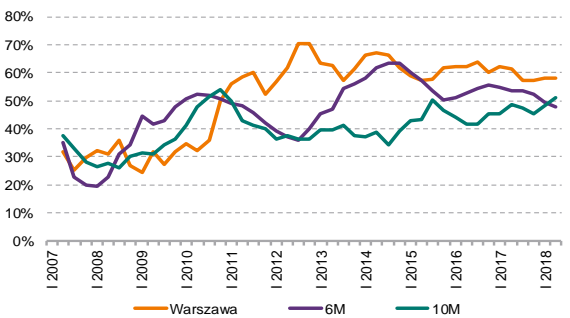


Figure 58 Structure of housing supply and demand* for housing with an area > 50 sq. m, SM in Poland's selected cities



Source: NBP

Source: NBP

Figure 59 Selling time of dwellings on offer in the primary market in selected cities (number of quarters)

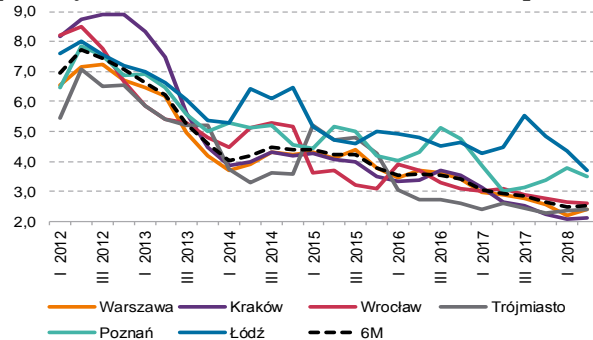
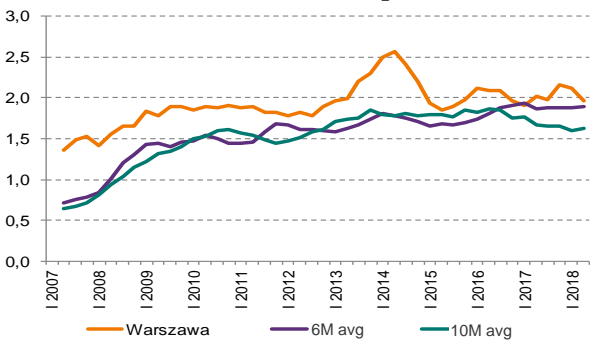


Figure 60 Selling time of housing units on offer in the SM in selected cities (number of quarters)



Note: selling time is the relation of the number of housing units on offer at the end of the current quarter in relation to the number of housing units sold in the last four quarters.

Note: real selling time, average of the last four quarters; data are not comparable with Figure 59. Selling time of housing in the secondary real estate market take into account only transactions concluded with sales. The data are underestimated since they do not contain offers entered but not sold yet.

Source: NBP based on REAS

Source: NBP

6. Housing policy

Figure 61 Upper limits of prices per square meter of housing in the PM within thresholds set under the government-subsidised housing schemes in Poland's largest cities (in PLN/sq. m)

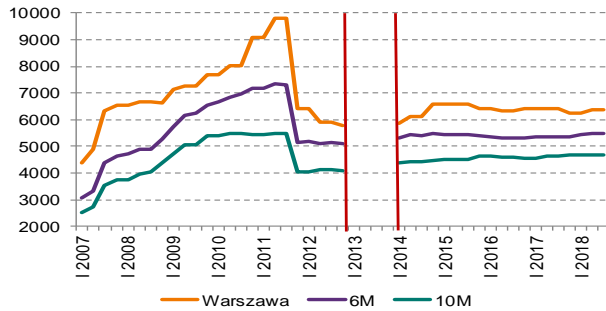
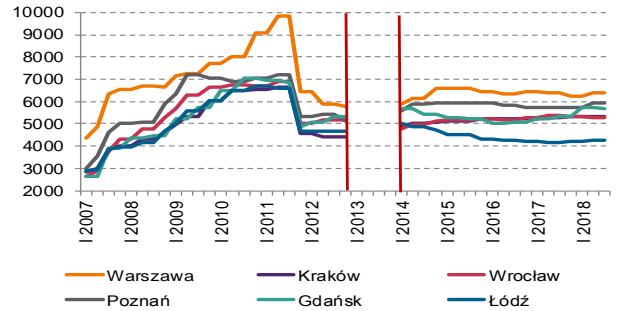


Figure 62 Upper limits of prices per square meter of housing in the PM within thresholds set under the government-subsidised housing schemes in selected cities in Poland (in PLN/sq.m)



Notes to figures 61-66: red lines separate the period without government-subsidised housing schemes.

Source: BGK

Source: BGK

Figure 63 Upper limits of prices per square meter of housing in the SM within thresholds set under the government-subsidised housing schemes in Poland's largest cities (in PLN/sq.m)

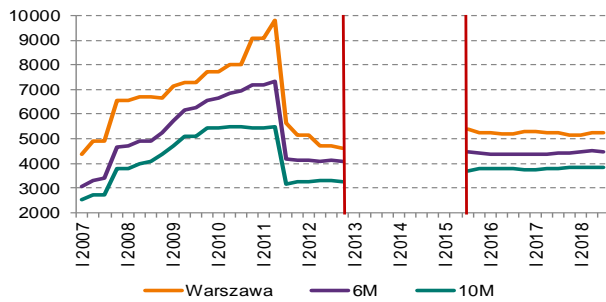
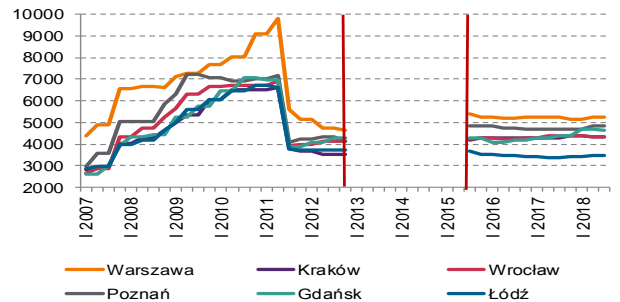


Figure 64 Upper limits of prices per square meter of housing in the SM within thresholds set under the government-subsidised housing schemes in selected cities in Poland (in PLN/sq.m)



Source: BGK.

Source: BGK.

Figure 65 Gap in the limit of government-subsidized housing schemes as compared to the median of transaction price per square m of housing in the PM

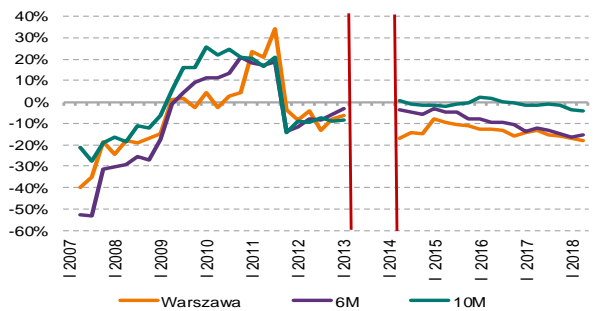
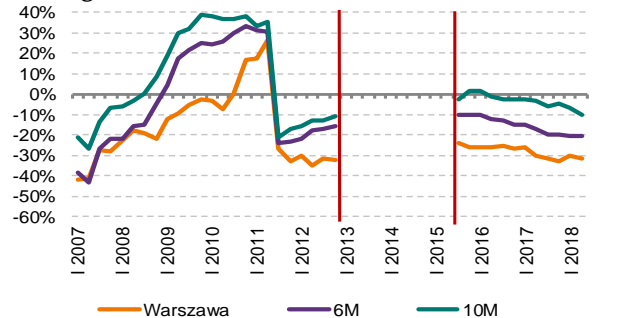


Figure 66 Gap in the limit of government-subsidized housing schemes as compared to the median of transaction price per square m of housing in the SM

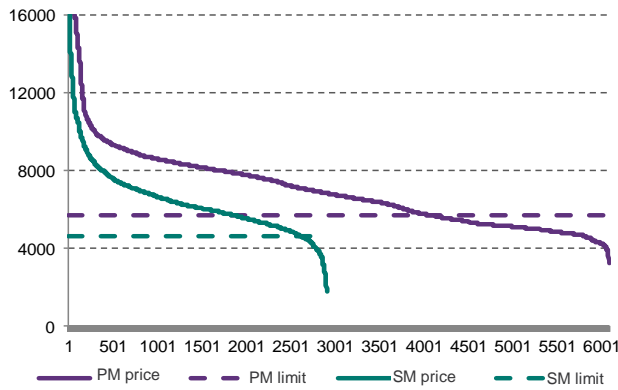


Note to Figures 65-66: the gap is calculated as the difference of the maximum price (upper limit) in the RNS/MDM government subsidised housing scheme in the PM and SM in relation to the median of transaction price. The positive difference means that the scheme finances housing with prices exceeding the median, the negative difference means the opposite.

Source: NBP, BGK

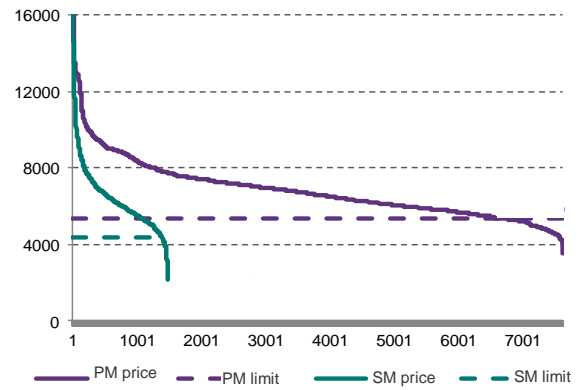
Source: NBP, BGK

Figure 67 Transactions involving housing units in Gdańsk according to the BaRN database



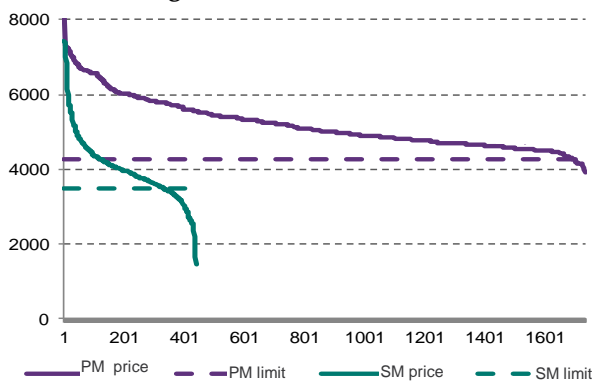
Source: NBP

Figure 68 Transactions involving housing units in Kraków according to the BaRN database



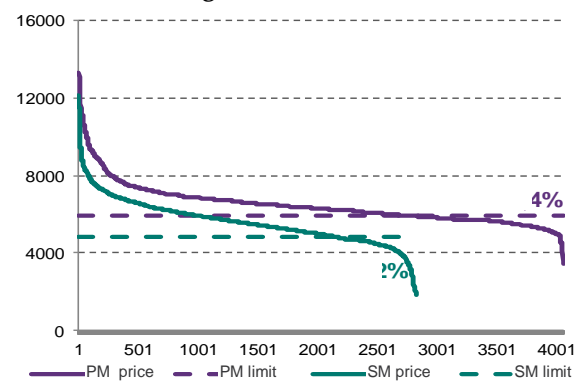
Source: NBP

Figure 69 Transactions involving housing units in Łódź according to the BaRN database



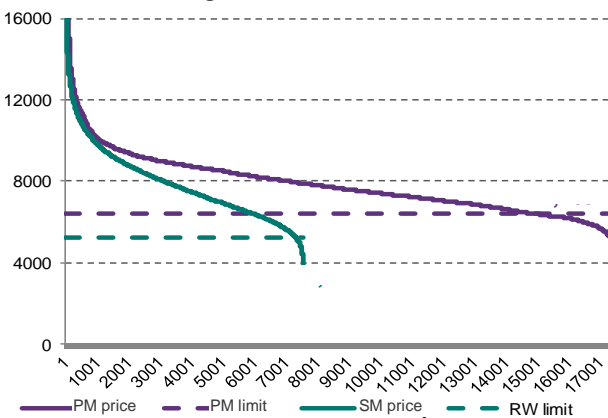
Source: NBP

Figure 70 Transactions involving housing units in Poznań according to the BaRN database



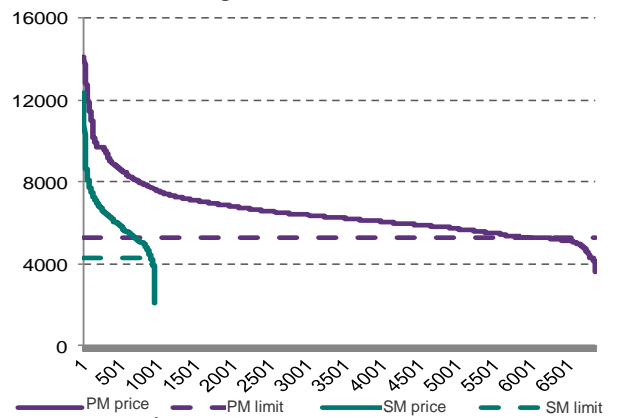
Source: NBP

Figure 71 Transactions involving housing units in Warsaw according to the BaRN database



Source: NBP

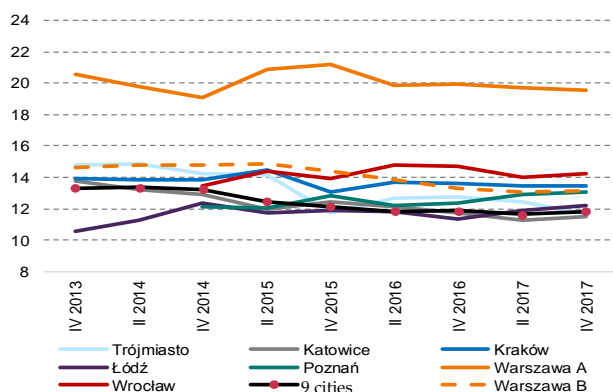
Figure 72 Transactions involving housing units in Wrocław according to the BaRN database



Source: NBP

7. Rents and transaction prices of commercial real estate

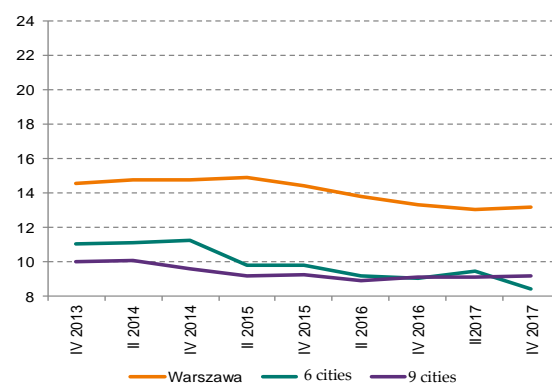
Figure 73 Transaction rents for A class office space (average prices in EUR/sq.m./month)



Note: Warsaw A - office A class office buildings, Warsaw B - office B class office buildings. The nine cities include: Białystok, Bydgoszcz, Kielce, Lublin, Olsztyn, Opole, Rzeszów, Szczecin, Wrocław.

Source: NBP

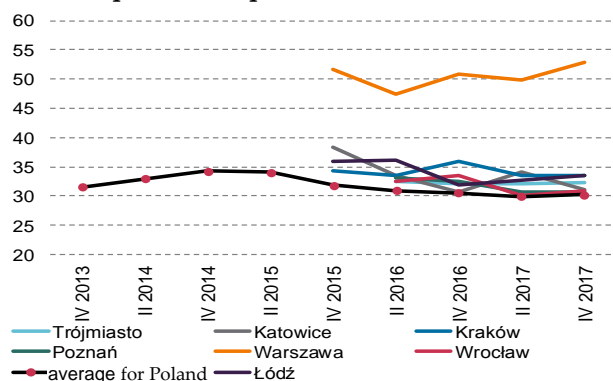
Figure 74 Transaction rents for B class office space (average prices in EUR/sq.m./month)



Note: The six cities include: Katowice, Kraków, Łódź, Poznań, Tri City, Wrocław. The nine cities include: Białystok, Bydgoszcz, Kielce, Lublin, Olsztyn, Opole, Rzeszów, Szczecin, Wrocław.

Source: NBP

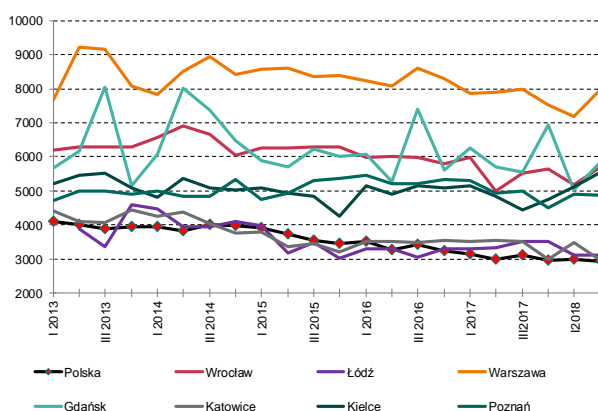
Figure 75 Transaction rents for retail space in shopping centres (shopping malls) with an area of 100-500 sq. m (EUR/sq.m./month)



Source: NBP

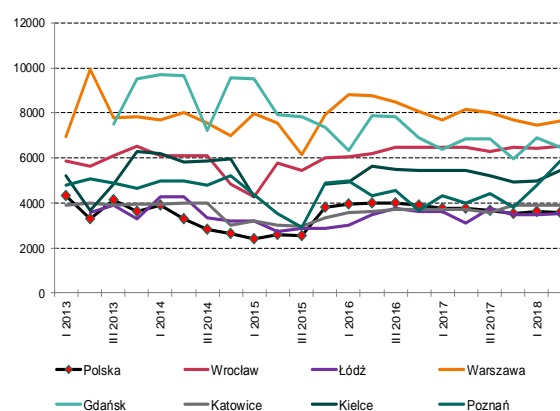
Note to Figure 75: as of the beginning of 2015 Q4, the number of records in the base, including respondents, has increased significantly, consequently changing the analysed sample. Rents for facilities located in economically significant parts of the city are analysed.

Figure 76 Median of offer selling price of small retail and service premises in the SM (PLN/sq.m)



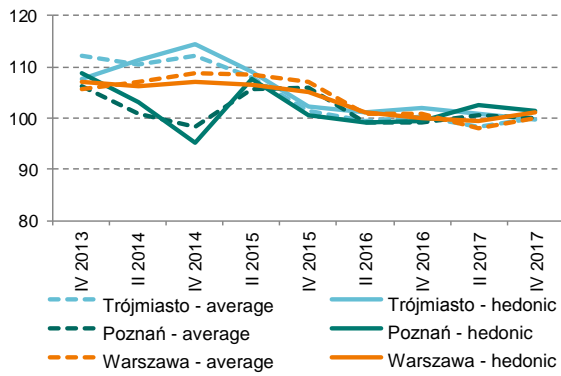
Source: PONT, NBP report.

Figure 77 Median of offer selling price of small retail and service premises in the SM (PLN/sq.m)



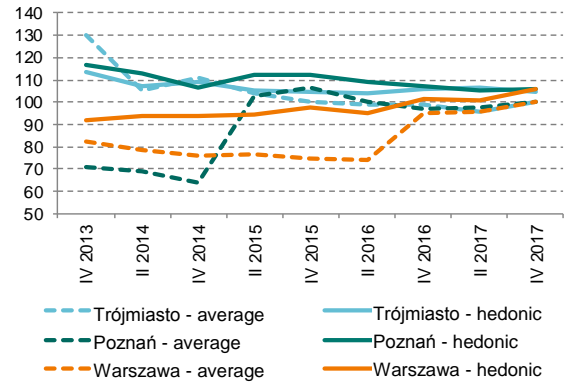
Source: PONT, NBP report.

Figure 78 Index of rents for offices, average and hedonic (2017 IV = 100)



Source: NBP

Figure 79 Index of rents for shopping centres, average and hedonic (2017 IV = 100)



Source: NBP

Table 2 Estimated rate of return on equity from investment in B class office building in Warsaw

Date	Hedonic rent per sq.m of space in EUR	Hedonic price per sq.m of space in EUR	Calculated capitalisation rate (yield)	Market capitalisation rate (yield)	ROE (LTC = 50%)	ROE (LTC = 80%)	Average market rates of 10-year Treasury bonds
IV 2013	14.4	2309	7.5%	7.0%	5.0%	9.9%	4.3%
II 2014	14.7	2163	8.2%	7.0%	5.5%	11.4%	3.9%
IV 2014	14.9	2163	8.2%	7.0%	5.6%	11.6%	2.9%
II 2015	14.9	2496	7.2%	7.0%	4.9%	9.4%	2.5%
IV 2015	14.9	2496	7.2%	7.0%	4.9%	9.4%	2.9%
II 2016	14.6	2489	7.0%	6.5%	4.7%	8.9%	3.0%
IV 2016	14.8	2489	7.1%	6.5%	4.8%	9.2%	3.1%
II 2017	14.4	2700	6.4%	6.0%	4.1%	7.3%	3.2%
IV 2017	14.5	2700	6.4%	6.0%	4.1%	7.3%	3.3%

Source: NBP (data and calculations), Colliers International (market yield), MF (rates of return on 10-year bonds)

Table 3 Average prices of housing sq. m in the PM in Gdańsk

specification	II Q 2017		III Q 2017		IV Q 2017		I Q 2018		II Q 2018	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	6 775	6 501	7 329	6 816	7 371	6 829	8 054	7 255	8 422	7 543
growth (q-o-q)	104,9	101,1	108,2	104,9	100,6	100,2	109,3	106,2	104,6	104,0
growth (y-o-y)	102,9	105,1	112,1	108,5	112,5	105,4	124,6	112,8	124,3	116,0
dwelling price range	4 211	1 655	3 656	1 669	3 503	1 817	3 990	1 566	3 371	1 524
<=4 000 PLN/sq.m	28	61	23	14	8	7	3	5	5	5
(4 001; 6 000] PLN/sq.m	1 572	691	1 284	535	1 122	688	1 042	611	884	516
(6 001; 8 000] PLN/sq.m	1 446	604	1 105	715	1 285	640	1 373	427	1 096	502
(8 001; 10 000] PLN/sq.m	1 054	231	924	366	780	449	950	405	741	353
>10 001 PLN/sq.m	111	68	320	39	308	33	622	118	645	148
dwelling space range	4 211	1 655	3 656	1 669	3 503	1 817	3 990	1 566	3 371	1 524
<= 40 sq.m	828	444	584	511	491	500	630	398	468	437
(40,1; 60] sq.m	1865	784	1650	756	1485	889	1675	694	1392	664
(60,1; 80] sq.m	1243	345	1151	326	1243	363	1367	392	1212	346
> 80,1 sq.m	275	82	271	76	284	65	318	82	299	77
average price of 1 sq.m. of dwelling	6 775	6 501	7 329	6 816	7 371	6 829	8 054	7 255	8 422	7 543
<=4 000 sq.m	7 301	6 798	7 587	6 909	7 524	6 882	9 322	7 939	10 883	8 747
(40,1; 60] sq.m	6 583	6 441	7 019	6 751	7 030	6 752	7 738	6 952	8 044	6 815
(60,1; 80] sq.m	6 518	6 186	7 102	6 674	7 179	6 742	7 500	7 007	7 570	7 147
> 80,1 sq.m	7 660	6 787	9 627	7 450	9 731	7 977	9 587	7 683	9 779	8 775
average offer price deviation	4,2%	x	7,5%	x	7,9%	x	11,0%	x	11,6%	x
<= 40 sq.m	7,4%	x	9,8%	x	9,3%	x	17,4%	x	24,4%	x
(40,1; 60] sq.m	2,2%	x	4,0%	x	4,1%	x	11,3%	x	18,0%	x
(60,1; 80] sq.m	5,4%	x	6,4%	x	6,5%	x	7,0%	x	5,9%	x
> 80,1 sq.m	12,9%	x	29,2%	x	22,0%	x	24,8%	x	11,4%	x

Source: NBP

Table 4 Average prices of housing sq. m in the SM in Gdańsk

specification	II Q 2017		III Q 2017		IV Q 2017		I Q 2018		II Q 2018	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	6 970	6 030	7 035	6 065	7 345	6 337	7 712	6 448	8 570	6 563
growth (q-o-q)	106,2	104,4	100,9	100,6	104,4	104,5	105,0	101,8	111,1	101,8
growth (y-o-y)	110,3	109,2	113,0	109,2	113,8	113,0	117,5	111,6	123,0	108,8
dwelling price range	1 207	747	1 098	968	1 182	899	1 043	723	744	857
<=4 000 PLN/sq.m	44	53	41	65	30	39	27	25	10	39
(4 001; 6 000] PLN/sq.m	502	391	438	476	378	407	306	293	144	320
(6 001; 8 000] PLN/sq.m	408	218	367	330	466	337	362	310	256	360
(8 001; 10 000] PLN/sq.m	116	57	108	66	125	73	141	58	124	94
>10 001 PLN/sq.m	137	28	144	31	183	43	207	37	210	44
dwelling space range	1 207	747	1 098	968	1 182	899	1 043	723	744	857
<= 40 sq.m	167	184	153	223	164	203	164	174	101	190
(40,1; 60] sq.m	404	342	378	421	460	398	362	321	247	374
(60,1; 80] sq.m	353	179	335	210	324	203	299	163	216	178
> 80,1 sq.m	283	42	232	114	234	95	218	65	180	115
average price of 1 sq.m. of dwelling	6 970	6 030	7 035	6 065	7 345	6 337	7 712	6 448	8 570	6 563
<=4 000 sq.m	7 629	6 642	7 494	6 637	8 011	7 037	8 459	7 078	9 143	7 206
(40,1; 60] sq.m	6 929	5 943	7 142	6 063	7 469	6 301	7 882	6 447	8 831	6 609
(60,1; 80] sq.m	6 876	5 762	6 937	5 619	7 223	5 814	7 234	5 930	7 998	6 120
> 80,1 sq.m	6 755	5 209	6 700	5 778	6 805	6 111	7 523	6 064	8 577	6 035
average offer price deviation	15,6%	x	16,0%	x	15,9%	x	19,6%	x	30,6%	x
<= 40 sq.m	14,9%	x	12,9%	x	13,8%	x	19,5%	x	26,9%	x
(40,1; 60] sq.m	16,6%	x	17,8%	x	18,5%	x	22,3%	x	33,6%	x
(60,1; 80] sq.m	19,3%	x	23,5%	x	24,2%	x	22,0%	x	30,7%	x
> 80,1 sq.m	29,7%	x	16,0%	x	11,4%	x	24,1%	x	42,1%	x

Source: NBP

Table 5 Average prices of housing sq. m in the PM in Kraków

specification	II Q 2017		III Q 2017		IV Q 2017		I Q 2018		II Q 2018	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	6 746	6 583	6 931	6 810	6 924	6 755	6 907	6 840	6 901	6 744
growth (q-o-q)	101,9	103,3	102,7	103,4	99,9	99,2	99,8	101,3	99,9	98,6
growth (y-o-y)	101,1	103,8	106,2	108,1	103,2	104,7	104,4	107,3	102,3	102,4
dwelling price range	6 210	2 225	5 916	1 689	5 757	2 292	4 195	1 942	4 192	1 772
<=4 000 PLN/sq.m	11	4	7	2	6	0	8	2	7	4
(4 001; 6 000] PLN/sq.m	1 741	815	1 536	530	1 483	722	1 162	646	1 020	498
(6 001; 8 000] PLN/sq.m	3 508	1 063	3 359	860	3 303	1 263	2 322	928	2 494	1 024
(8 001; 10 000] PLN/sq.m	844	311	821	269	752	264	536	309	568	216
>10 001 PLN/sq.m	106	32	193	28	213	43	167	57	103	30
dwelling space range	6 210	2 225	5 916	1 689	5 757	2 292	4 195	1 942	4 192	1 772
<= 40 sq.m	938	619	1126	513	991	609	610	493	608	404
(40,1; 60] sq.m	3480	1177	3312	857	3266	1235	2312	1052	2293	960
(60,1; 80] sq.m	1370	342	1125	245	1157	355	979	321	1018	331
> 80,1 sq.m	422	87	353	74	343	93	294	76	273	77
average price of 1 sq.m. of dwelling	6 746	6 583	6 931	6 810	6 924	6 755	6 907	6 840	6 901	6 744
<=4 000 sq.m	7166	6883	7600	7263	7527	7284	7592	7424	7487	7017
(40,1; 60] sq.m	6513	6405	6630	6472	6695	6502	6681	6571	6735	6596
(60,1; 80] sq.m	6821	6505	6884	6902	6928	6529	6902	6755	6904	6773
> 80,1 sq.m	7491	7177	7782	7287	7349	7524	7278	7140	6981	7026
average offer price deviation	2,5%	x	1,8%	x	2,5%	x	1,0%	x	2,3%	x
<= 40 sq.m	4,1%	x	4,6%	x	3,3%	x	2,3%	x	6,7%	x
(40,1; 60] sq.m	1,7%	x	2,4%	x	3,0%	x	1,7%	x	2,1%	x
(60,1; 80] sq.m	4,9%	x	-0,3%	x	6,1%	x	2,2%	x	1,9%	x
> 80,1 sq.m	4,4%	x	6,8%	x	-2,3%	x	1,9%	x	-0,6%	x

Source: NBP

Table 6 Average prices of housing sq. m in the SM in Kraków

specification	II Q 2017		III Q 2017		IV Q 2017		I Q 2018		II Q 2018	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	6 992	6 038	7 205	6 347	7 593	6 276	7 767	6 215	8 006	6 400
growth (q-o-q)	101,9	101,0	103,0	105,1	105,4	98,9	102,3	99,0	103,1	103,0
growth (y-o-y)	103,5	105,2	105,4	109,1	109,9	105,5	113,2	103,9	114,5	106,0
dwelling price range	1 301	486	766	475	1 505	402	906	361	1 245	278
<=4 000 PLN/sq.m	3	5	0	0	1	12	0	2	1	3
(4 001; 6 000] PLN/sq.m	399	263	214	222	341	186	160	177	211	123
(6 001; 8 000] PLN/sq.m	631	176	350	200	700	157	442	142	554	119
(8 001; 10 000] PLN/sq.m	192	36	145	40	287	36	190	31	285	27
>10 001 PLN/sq.m	76	6	57	13	176	11	114	9	194	6
dwelling space range	1 301	486	766	475	1 505	402	906	361	1 245	278
<= 40 sq.m	266	183	155	187	305	164	203	116	255	107
(40,1; 60] sq.m	559	213	302	215	591	159	365	178	474	108
(60,1; 80] sq.m	304	65	214	59	380	69	229	55	309	51
> 80,1 sq.m	172	25	95	14	229	10	109	12	207	12
average price of 1 sq.m. of dwelling	6 992	6 038	7 205	6 347	7 593	6 276	7 767	6 215	8 006	6 399
<=4 000 sq.m	7 645	6 384	8 079	6 758	8 837	6 761	8 881	6 768	9 037	7 148
(40,1; 60] sq.m	6 799	5 788	6 824	6 123	7 173	5 905	7 427	6 055	7 623	6 007
(60,1; 80] sq.m	6 781	5 776	7 020	6 006	7 229	6 112	7 167	5 668	7 554	5 847
> 80,1 sq.m	6 987	6 314	7 405	5 759	7 626	5 348	8 093	5 745	8 288	5 605
average offer price deviation	15,8%	x	13,5%	x	21,0%	x	25,0%	x	25,1%	x
<= 40 sq.m	19,8%	x	19,6%	x	30,7%	x	31,2%	x	26,4%	x
(40,1; 60] sq.m	17,5%	x	11,5%	x	21,5%	x	22,6%	x	26,9%	x
(60,1; 80] sq.m	17,4%	x	16,9%	x	18,3%	x	26,4%	x	29,2%	x
> 80,1 sq.m	10,7%	x	28,6%	x	42,6%	x	40,9%	x	47,9%	x

Source: NBP

Table 7 Average prices of housing sq. m in the PM in Łódź

specification	II Q 2017		III Q 2017		IV Q 2017		I Q 2018		II Q 2018	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	5 180	4 940	5 147	4 911	5 332	5 148	5 524	5 211	5 475	5 206
growth (q-o-q)	104,8	103,1	99,4	99,4	102,9	104,2	107,3	106,1	99,1	99,9
growth (y-o-y)	105,8	106,3	105,0	103,9	108,8	108,9	108,1	107,4	105,7	105,4
dwelling price range	1 394	237	1 881	352	2 015	435	1 574	328	1 457	475
<=4 000 PLN/sq.m	2	0	1	3	0	3	2	1	2	1
(4 001; 4 500] PLN/sq.m	141	43	104	50	67	31	65	31	67	27
(4 501; 5 000] PLN/sq.m	418	95	709	186	477	162	268	122	275	195
(5 001; 5 500] PLN/sq.m	467	63	648	69	862	135	626	69	595	130
(5 501; 6 000] PLN/sq.m	257	31	302	25	339	62	291	73	211	54
> 6 001 PLN/sq.m	109	5	117	19	270	42	322	32	307	68
dwelling space range	1 394	237	1 881	352	2 015	435	1 574	328	1 457	475
<= 40 sq.m	143	51	189	82	228	126	166	54	129	79
(40,1; 60] sq.m	658	118	839	175	904	211	742	166	692	213
(60,1; 80] sq.m	459	50	676	82	699	78	527	88	500	145
> 80,1 sq.m	134	18	177	13	184	20	139	20	136	38
average price of 1 sq.m. of dwelling	5 180	4 940	5 147	4 911	5 332	5 148	5 524	5 211	5 475	5 206
<=4 000 sq.m	5 284	5 069	5 304	4 853	5 602	5 250	6 024	5 566	6 071	5 783
(40,1; 60] sq.m	5 189	4 884	5 135	4 938	5 354	5 152	5 546	5 126	5 539	5 234
(60,1; 80] sq.m	5 142	4 829	5 102	4 875	5 232	5 006	5 344	5 121	5 253	4 918
> 80,1 sq.m	5 157	5 248	5 208	5 130	5 266	5 011	5 489	5 354	5 402	4 950
average offer price deviation	4,9%	x	4,8%	x	3,6%	x	6,0%	x	5,2%	x
<= 40 sq.m	4,2%	x	9,3%	x	6,7%	x	8,2%	x	5,0%	x
(40,1; 60] sq.m	6,3%	x	4,0%	x	3,9%	x	8,2%	x	5,8%	x
(60,1; 80] sq.m	6,5%	x	4,7%	x	4,5%	x	4,4%	x	6,8%	x
> 80,1 sq.m	-1,7%	x	1,5%	x	5,1%	x	2,5%	x	9,1%	x

Source: NBP

Table 8 Average prices of housing sq. m in the SM in Łódź

specification	II Q 2017		III Q 2017		IV Q 2017		I Q 2018		II Q 2018	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	4 203	3 582	4 241	3 762	4 314	3 784	4 432	4 022	4 642	3 959
growth (q-o-q)	102,6	104,8	103,5	110,1	104,0	107,8	105,4	112,1	104,7	98,4
growth (y-o-y)	106,7	109,3	107,7	114,8	107,6	113,1	109,8	122,5	110,4	110,3
dwelling price range	842	131	829	123	629	144	631	115	598	112
<= 3 000 PLN/sq.m	84	27	68	18	44	19	27	13	19	11
(3 001; 3 500] PLN/sq.m	109	33	116	21	79	28	71	16	50	17
(3 501; 4 000] PLN/sq.m	210	38	202	38	152	47	133	35	95	35
(4 001; 4 500] PLN/sq.m	177	20	188	31	142	31	149	18	127	26
(4 500; 5 000] PLN/sq.m.	111	4	97	8	94	6	112	19	125	16
> 5 001 PLN/sq.m	151	9	158	7	118	13	139	14	182	7
dwelling space range	842	131	829	123	629	144	631	115	598	112
<= 40 sq.m	123	39	122	45	91	48	62	32	66	30
(40,1; 60] sq.m	313	65	282	56	233	59	243	52	214	51
(60,1; 80] sq.m	167	15	190	14	140	23	154	20	153	18
> 80,1 sq.m	239	12	235	8	175	14	172	11	165	13
average price of 1 sq.m. of dwelling	4 203	3 588	4 241	3 762	4 314	3 784	4 432	4 022	4 642	3 959
<=4 000 sq.m	4 067	3 594	4 118	3 900	3 988	4 087	4 208	4 114	4 821	4 307
(40,1; 60] sq.m	4 138	3 607	4 252	3 868	4 434	3 688	4 576	4 157	4 775	3 896
(60,1; 80] sq.m	4 403	3 809	4 246	3 108	4 347	3 596	4 508	3 908	4 618	3 959
> 80,1 sq.m	4 220	3 193	4 289	3 393	4 305	3 458	4 243	3 320	4 420	3 406
average offer price deviation	17,3%	x	12,7%	x	14,0%	x	10,2%	x	17,3%	x
<= 40 sq.m	13,2%	x	5,6%	x	-2,4%	x	2,3%	x	11,9%	x
(40,1; 60] sq.m	14,7%	x	9,9%	x	20,3%	x	10,1%	x	22,6%	x
(60,1; 80] sq.m	15,6%	x	36,6%	x	20,9%	x	15,4%	x	16,6%	x
> 80,1 sq.m	32,2%	x	26,4%	x	24,5%	x	27,8%	x	29,8%	x

Source: NBP

Table 9 Average prices of housing sq. m in the PM in Poznań

specification	II Q 2017		III Q 2017		IV Q 2017		I Q 2018		II Q 2018	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	6 435	6 260	6 479	6 379	6 551	6 382	6 678	6 442	6 865	6 687
growth (q-o-q)	100,1	100,0	100,7	101,9	101,1	100,1	101,9	100,9	102,8	103,8
growth (y-o-y)	99,6	99,4	100,4	103,0	102,3	101,2	103,9	102,9	106,7	106,8
dwelling price range	4 332	1 371	3 977	1 078	3 632	1 277	4 081	1 012	4 351	1 014
<=4 000 PLN/sq.m	11	1	8	4	9	3	8	3	6	5
(4 001; 6 000] PLN/sq.m	1 527	622	1 250	400	1 075	510	1 136	408	1 072	300
(6 001; 8 000] PLN/sq.m	2 567	718	2 512	632	2 259	703	2 541	517	2 738	589
(8 001; 10 000] PLN/sq.m	185	26	178	38	257	42	360	67	417	80
>10 001 PLN/sq.m	42	4	29	4	32	19	36	17	118	40
dwelling space range	4 332	1 371	3 977	1 078	3 632	1 277	4 081	1 012	4 351	1 014
<= 40 sq.m	648	324	578	242	517	314	585	191	775	186
(40,1; 60] sq.m	2539	755	2329	587	2103	731	2424	569	2477	570
(60,1; 80] sq.m	877	227	832	194	779	182	824	190	850	176
> 80,1 sq.m	268	65	238	55	233	50	248	62	249	82
average price of 1 sq.m. of dwelling	6 435	6 260	6 479	6 379	6 551	6 382	6 678	6 442	6 865	6 687
<=4 000 sq.m	6 700	6 484	6 763	6 552	6 725	6 560	6 918	6 751	6 827	7 208
(40,1; 60] sq.m	6 379	6 201	6 439	6 323	6 506	6 321	6 607	6 354	6 840	6 546
(60,1; 80] sq.m	6 385	6 163	6 376	6 384	6 485	6 386	6 658	6 285	6 933	6 702
> 80,1 sq.m	6 481	6 175	6 548	6 195	6 783	6 149	6 864	6 781	7 003	6 451
average offer price deviation	2,8%	x	1,6%	x	2,6%	x	3,7%	x	2,7%	x
<= 40 sq.m	3,3%	x	3,2%	x	2,5%	x	2,5%	x	-5,3%	x
(40,1; 60] sq.m	2,9%	x	1,8%	x	2,9%	x	4,0%	x	4,5%	x
(60,1; 80] sq.m	3,6%	x	-0,1%	x	1,6%	x	5,9%	x	3,5%	x
> 80,1 sq.m	5,0%	x	5,7%	x	10,3%	x	1,2%	x	8,6%	x

Source: NBP

Table 10 Average prices of housing sq. m in the SM in Poznań

specification	II Q 2017		III Q 2017		IV Q 2017		I Q 2018		II Q 2018	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	6 080	5 465	6 053	5 433	6 349	5 550	6 525	5 604	6 655	5 633
growth (q-o-q)	102,1	106,0	99,6	99,4	104,9	102,1	102,8	101,0	102,0	100,5
growth (y-o-y)	100,6	105,6	99,3	103,8	103,7	105,1	109,6	108,7	109,5	103,1
dwelling price range	740	876	547	993	448	806	374	800	317	485
<=4 000 PLN/sq.m	35	79	39	89	18	72	11	52	9	17
(4 001; 6 000] PLN/sq.m	402	556	284	630	203	461	148	497	121	307
(6 001; 8 000] PLN/sq.m	220	217	160	243	160	253	159	222	132	152
(8 001; 10 000] PLN/sq.m	63	20	51	27	54	17	45	23	42	7
>10 001 PLN/sq.m	20	4	13	4	13	3	11	6	13	2
dwelling space range	740	876	547	993	448	806	374	800	317	485
<= 40 sq.m	113	278	70	291	51	254	52	245	41	147
(40,1; 60] sq.m	276	376	186	453	169	355	141	352	116	232
(60,1; 80] sq.m	182	171	143	183	108	145	93	154	92	83
> 80,1 sq.m	169	51	148	66	120	52	88	49	68	23
average price of 1 sq.m. of dwelling	6080	5465	6053	5433	6349	5550	6525	5604	6655	5633
<=4 000 sq.m	6690	5969	6387	6029	6895	6023	7165	5951	7478	6161
(40,1; 60] sq.m	6173	5409	6330	5398	6527	5516	6823	5651	6734	5551
(60,1; 80] sq.m	5799	4998	5763	4914	6096	5068	6279	5226	6481	5155
> 80,1 sq.m	5821	4702	5826	4485	6095	4808	5927	4719	6257	4806
average offer price deviation	11,2%	x	11,4%	x	14,4%	x	16,4%	x	18,1%	x
<= 40 sq.m	12,1%	x	5,9%	x	14,5%	x	20,4%	x	21,4%	x
(40,1; 60] sq.m	14,1%	x	17,3%	x	18,3%	x	20,8%	x	21,3%	x
(60,1; 80] sq.m	16,0%	x	17,3%	x	20,3%	x	20,2%	x	25,7%	x
> 80,1 sq.m	23,8%	x	29,9%	x	26,8%	x	25,6%	x	30,2%	x

Source: NBP

Table 11 Average prices of housing sq. m in the PM in Warszawa

specification	II Q 2017		III Q 2017		IV Q 2017		I Q 2018		II Q 2018	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	7 740	7 683	7 788	7 820	8 020	7 751	8 200	7 965	8 608	8 186
growth (q-o-q)	100,4	101,6	100,6	101,8	103,0	99,1	102,2	102,8	105,0	102,8
growth (y-o-y)	101,2	101,3	100,2	101,6	105,0	100,8	106,4	105,3	111,2	106,6
dwelling price range	14 057	4 782	14 288	4 606	13 587	5 455	11 797	4 857	13 110	4 415
<=4 000 PLN/sq.m	0	0	0	0	0	2	0	0	0	0
(4 001; 6 000] PLN/sq.m	1 189	285	888	252	958	393	692	259	602	208
(6 001; 8 000] PLN/sq.m	7 852	2 841	8 251	2 507	7 583	3 008	6 195	2 600	5 649	2 115
(8 001; 10 000] PLN/sq.m	4 043	1 430	4 290	1 577	3 745	1 731	3 650	1 599	4 697	1 681
>10 001 PLN/sq.m	973	226	859	270	1 301	321	1 260	399	2 162	411
dwelling space range	14 057	4 782	14 288	4 606	13 587	5 455	11 797	4 857	13 110	4 415
<= 40 sq.m	1 769	928	1 708	1 066	1 713	1 288	1 358	976	1 575	862
(40,1; 60] sq.m	6 445	2 467	6 282	2 227	5 978	2 582	5 065	2 381	5 585	2 125
(60,1; 80] sq.m	4 110	975	4 571	938	4 220	1 148	3 946	1 099	4 368	1 068
> 80,1 sq.m	1 733	412	1 727	375	1 676	437	1 428	401	1 582	360
average price of 1 sq.m. of dwelling	7 740	7 683	7 788	7 820	8 020	7 751	8 200	7 965	8 608	8 186
<=4 000 sq.m	7 734	7 643	7 662	8 015	9 290	7 894	9 599	8 366	10 019	8 587
(40,1; 60] sq.m	7 603	7 602	7 672	7 687	7 651	7 648	7 906	7 747	8 363	7 983
(60,1; 80] sq.m	7 698	7 621	7 784	7 744	7 820	7 584	7 937	7 860	8 197	8 073
> 80,1 sq.m	8 354	8 397	8 349	8 244	8 540	8 374	8 637	8 570	9 204	8 763
average offer price deviation	0,7%	x	-0,4%	x	3,5%	x	2,9%	x	5,2%	x
<= 40 sq.m	1,2%	x	-4,4%	x	17,7%	x	14,7%	x	16,7%	x
(40,1; 60] sq.m	0,0%	x	-0,2%	x	0,0%	x	2,1%	x	4,8%	x
(60,1; 80] sq.m	1,0%	x	0,5%	x	3,1%	x	1,0%	x	1,5%	x
> 80,1 sq.m	-0,5%	x	1,3%	x	2,0%	x	0,8%	x	5,0%	x

Source: NBP

Table 12 Average prices of housing sq. m in the SM in Warszawa

specification	II Q 2017		III Q 2017		IV Q 2017		I Q 2018		II Q 2018	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	8 885	7 821	9 009	7 960	9 235	7 592	9 346	7 680	9 347	7 973
growth (q-o-q)	100,8	105,3	101,4	101,8	102,5	95,4	101,2	97,0	100,0	103,8
growth (y-o-y)	101,9	106,3	102,6	108,9	106,0	100,5	106,0	103,4	105,2	101,9
dwelling price range	4 558	2 933	4 764	2 962	3 499	1 206	3 312	1 190	3 338	1 358
<=4 000 PLN/sq.m	2	1	0	0	0	0	0	0	0	2
(4 001; 6 000] PLN/sq.m	345	426	335	388	229	188	190	203	146	167
(6 001; 8 000] PLN/sq.m	1 617	1 359	1 618	1 333	1 073	586	1 019	548	1 033	629
(8 001; 10 000] PLN/sq.m	1 530	822	1 618	849	1 183	332	1 118	323	1 136	381
>10 001 PLN/sq.m	1 064	325	1 193	392	1 014	100	985	116	1 023	179
dwelling space range	4 558	2 933	4 764	2 962	3 499	1 206	3 312	1 190	3 338	1 358
<= 40 sq.m	701	949	730	898	565	406	449	407	474	425
(40,1; 60] sq.m	1 640	1 272	1 674	1 277	1 253	542	1 187	508	1 268	585
(60,1; 80] sq.m	1 083	462	1 107	500	808	193	801	203	821	253
> 80,1 sq.m	1 134	250	1 253	287	873	65	875	72	775	95
average price of 1 sq.m. of dwelling	8 885	7 821	9 009	7 960	9 235	7 592	9 346	7 680	9 347	7 973
<=4 000 sq.m	9 301	8 261	9 450	8 298	9 818	8 180	9 923	8 387	10 139	8 773
(40,1; 60] sq.m	8 559	7 455	8 671	7 637	8 901	7 333	9 098	7 414	9 111	7 736
(60,1; 80] sq.m	8 450	7 422	8 514	7 558	8 692	7 042	8 930	6 908	8 780	7 187
> 80,1 sq.m	9 515	8 752	9 640	9 036	9 841	7 703	9 768	7 735	9 849	7 955
average offer price deviation	13,6%	x	13,2%	x	21,7%	x	21,7%	x	17,2%	x
<= 40 sq.m	12,6%	x	13,9%	x	20,0%	x	18,3%	x	15,6%	x
(40,1; 60] sq.m	14,8%	x	13,5%	x	21,4%	x	22,7%	x	17,8%	x
(60,1; 80] sq.m	13,8%	x	12,6%	x	23,4%	x	29,3%	x	22,2%	x
> 80,1 sq.m	8,7%	x	6,7%	x	27,8%	x	26,3%	x	23,8%	x

Source: NBP

Table 13 Average prices of housing sq. m in the PM in Wrocław

specification	II Q 2017		III Q 2017		IV Q 2017		I Q 2018		II Q 2018	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	6 461	6 314	6 390	6 433	6 526	6 389	6 745	6 508	7 020	6 651
growth (q-o-q)	100,0	102,9	98,9	101,9	102,1	99,3	103,4	101,9	104,1	102,2
growth (y-o-y)	104,2	101,4	100,9	104,4	101,3	103,7	104,4	106,1	108,7	105,3
dwelling price range	5 584	1 850	5 343	1 751	5 853	2 156	5 538	1 633	5 777	1 676
<=4 000 PLN/sq.m	2	3	9	7	7	2		1	7	1
(4 001; 6 000] PLN/sq.m	2 431	817	2 338	762	2 451	875	2 125	583	1 955	653
(6 001; 8 000] PLN/sq.m	2 501	868	2 456	778	2 719	1 077	2 482	901	2 469	787
(8 001; 10 000] PLN/sq.m	415	110	419	155	509	179	731	131	1 018	172
>10 001 PLN/sq.m	235	52	121	49	167	23	200	17	328	63
dwelling space range	5 584	1 850	5 343	1 751	5 853	2 156	5 538	1 633	5 777	1 676
<= 40 sq.m	734	428	593	365	752	374	752	289	949	292
(40,1; 60] sq.m	2884	980	2781	907	2900	1171	2752	824	2739	821
(60,1; 80] sq.m	1626	363	1606	412	1805	511	1694	442	1753	474
> 80,1 sq.m	340	79	363	67	396	100	340	78	336	89
average price of 1 sq.m. of dwelling	6 461	6 314	6 390	6 433	6 526	6 389	6 745	6 508	7 020	6 651
<=4 000 sq.m	7431	6718	7082	7432	7010	6986	7469	6945	8279	7152
(40,1; 60] sq.m	6387	6192	6358	6239	6508	6369	6713	6420	6861	6573
(60,1; 80] sq.m	6133	6103	6160	5998	6335	5969	6469	6377	6566	6474
> 80,1 sq.m	6559	6620	6515	6300	6614	6547	6774	6564	7136	6674
average offer price deviation	2,3%	x	-0,7%	x	2,1%	x	3,6%	x	5,5%	x
<= 40 sq.m	10,6%	x	-4,7%	x	0,3%	x	7,5%	x	15,7%	x
(40,1; 60] sq.m	3,2%	x	1,9%	x	2,2%	x	4,6%	x	4,4%	x
(60,1; 80] sq.m	0,5%	x	2,7%	x	6,1%	x	1,4%	x	1,4%	x
> 80,1 sq.m	-0,9%	x	3,4%	x	1,0%	x	3,2%	x	6,9%	x

Source: NBP

Table 14 Average prices of housing sq. m in the SM in Wrocław

specification	II Q 2017		III Q 2017		IV Q 2017		I Q 2018		II Q 2018	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	6 267	5 445	6 293	5 764	6 365	5 906	6 423	5 841	6 485	6 077
growth (q-o-q)	100,2	101,0	100,4	105,9	101,2	102,5	100,9	98,9	101,0	104,0
growth (y-o-y)	104,7	104,7	103,8	108,1	103,3	107,8	102,7	108,4	103,5	111,6
dwelling price range	1 501	267	1 542	254	1 512	294	1 406	289	1 544	272
<=4 000 PLN/sq.m	33	23	29	17	25	13	20	12	18	7
(4 001; 6 000] PLN/sq.m	745	167	749	136	715	148	648	159	686	141
(6 001; 8 000] PLN/sq.m	572	73	615	89	609	115	580	105	649	103
(8 001; 10 000] PLN/sq.m	99	3	102	12	108	17	99	12	125	19
>10 001 PLN/sq.m	52	1	47		55	1	59	1	66	2
dwelling space range	1 501	267	1 542	254	1 512	294	1 406	289	1 544	272
<= 40 sq.m	208	47	220	55	227	65	206	48	231	41
(40,1; 60] sq.m	580	117	598	118	599	128	561	123	592	122
(60,1; 80] sq.m	452	69	468	61	441	73	418	80	477	83
> 80,1 sq.m	261	34	256	20	245	28	221	38	244	26
average price of 1 sq.m. of dwelling	6 267	5 445	6 293	5 764	6 365	5 906	6 423	5 841	6 485	6 077
<=4 000 sq.m	7 182	6 371	7 140	6 524	7 175	6 819	7 236	6 607	7 330	7 079
(40,1; 60] sq.m	6 341	5 379	6 362	5 848	6 396	5 888	6 464	5 985	6 498	6 248
(60,1; 80] sq.m	6 013	5 196	6 021	5 220	6 113	5 385	6 143	5 366	6 220	5 611
> 80,1 sq.m	5 812	4 895	5 898	4 836	5 994	5 226	6 090	5 410	6 170	5 184
average offer price deviation	15,1%	x	9,2%	x	7,8%	x	10,0%	x	6,7%	x
<= 40 sq.m	12,7%	x	9,4%	x	5,2%	x	9,5%	x	3,5%	x
(40,1; 60] sq.m	17,9%	x	8,8%	x	8,6%	x	8,0%	x	4,0%	x
(60,1; 80] sq.m	15,7%	x	15,4%	x	13,5%	x	14,5%	x	10,9%	x
> 80,1 sq.m	18,7%	x	22,0%	x	14,7%	x	12,6%	x	19,0%	x

Source: NBP

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