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Information on home prices and the situation in the housing and commercial real estate market in Poland in 2018 Q4.

Prepared by the team led by

Piotr Szpunar, Director, Economic Analysis Department

Jarosław Jakubik, Deputy Director, Economic Analysis Department

Authors' team:

Hanna Augustyniak

Jacek Łaszek

Krzysztof Olszewski

Joanna Waszczuk

Marzena Zaczek

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The analysis of the situation in the real estate market in Poland in 2018 Q4¹ leads to the following conclusions:

- **In 2018 Q4, the housing market continued to experience heightened activity.** Housing demand measured by the number of sold contracts for the construction of dwellings in the largest primary markets (including the estimated investment demand) rose as compared to the low level recorded in the previous quarter. The primary market saw a significant rise in the sale of dwellings. In the secondary market a larger number of more expensive dwellings in a better location, built after 2010, were sold. As a result of the level of supply being matched with demand, no excessive market tensions were observed. On the other hand, the secondary market saw a rise in home prices which are lower than in the primary market.
- **In the analysed period, as compared to the previous quarter, the average offer and transaction prices per square metre of developer housing², grew in the analysed cities, both in the primary markets (PM) and in the secondary markets (SM.)** The increase in transaction prices in both markets was mainly associated with the sale of more expensive housing of better quality and location. The sale of cheaper housing decreased for another consecutive quarter, which may be the consequence of the termination of the government-subsidized Housing for the Young (MDM) scheme which used to support demand in the segment of the cheapest dwellings. Prices determined with the use of the hedonic index³ increased in 6 cities (by approx. 2.4% q/q and by 12.1% y/y) which means a considerable increase in the price per square metre of comparable housing. In Warsaw, hedonic prices, determined on a significantly smaller sample, increased by 5.7% q/q and by 12.1% y/y. The difference between average transaction and average offer prices remains insignificant, which means that buyers are in a less favourable position than sellers. Average rents (offer and transaction) per square metre of housing (excluding administration fees and utility charges) increased in the analysed quarter. High rental demand in the largest cities resulted in a shorter waiting time to conclude a rental agreement.
- **The index of the estimated availability of housing in large cities** (based on average wages in the enterprise sector and home prices) **slightly decreased as compared to the previous quarter** and stood at 0.80 square metre in the analysed quarter; consequently it was higher by 0.32 square metre against the

¹ The analysis carried out in this issue of the *Information* is based on data available till 2018 Q4. Due to delays in access to certain data some charts contain information until 2018 Q3 (inclusive). Data series with average prices per square metre of housing, commercial rents and transaction prices per square metre of retail space reflect the pool of data available at that time. Historic data are subject to revision. In 2018, the Central Statistical Office (GUS) introduced changes in the method of calculating the average gross wages for the smallest territorial units - the system of data imputation was implemented for the surveyed companies which did not submit DG-1 reports. The data were recalculated back to 2015 Q1. In 2018, GUS changed the definitions of residential construction. In price listings (BaRN database) concerning 2018 Q4, approx. 110.6 thousand records were collected, including approx. 29.1% records concerning transactions and 70.9% records concerning offers. Altogether over 3.1 million records were collected in the database, including 23.1% records concerning transactions and 76.9% records concerning offers.

² As regards transactions in the primary market the period of the past three years saw an increase in the number of dwellings ready for habitation sold, especially among housing purchased for investment purposes. This concerns in particular real estate developers quoted on the Warsaw Stock Exchange.

³ 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.

record low observed in 2007 Q3. The index of the estimated maximum availability of a housing loan⁴ slightly increased whereas the loan-financed availability of housing for an average household in Warsaw and in the six analysed cities decreased. The growth in wages and home prices were the main drivers behind the changes in the availability of housing and loan-financed availability of housing 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 the six cities (6M), the profitability of housing investment continued to exceed the interest on bank deposits, slightly decreased in relation to yields on 10-year government bonds and remained close to the return likely to be achieved in the commercial property market. The relation of the housing debt servicing costs to rent still enables to finance the cost of credit with income from rent.
- **In the analysed quarter the value of newly granted residential mortgage loans⁵ in PLN** (excluding renegotiated agreements) **stood at approx. PLN 12.6 billion**, i.e. was 3.4% lower as compared with the figures recorded in the previous quarter and 18.1% higher as compared with the 2017 Q4 figures. The NBP survey concerning the situation in the credit market⁶ has found that banks considerably tightened the criteria of granting residential mortgage loans reducing, at the same time, credit margin and non-interest lending costs. At the same time, banks recorded a slight growth in the demand for residential mortgage loans. Also the share of loans in financing home purchases increased. In 2019 Q1, banks anticipate a slight tightening of lending policy and expect a major decline in demand.
- **Since 2012 the share of FX denominated loans⁷ in the currency structure of residential mortgage loans in banks has been on a steady decline, supporting financial and macroeconomic stability.** The decreasing share of FX loans⁸ is due to the fact that banks ceased to grant such loans to persons not being

⁴ The maximum residential mortgage 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

⁵ Data concerning the interest rate and the value of new residential mortgage loans based on the NBP data available in the "4OPN2PLN" tab on the NBP internet site: http://www.nbp.pl/home.aspx?f=statystyka/pieniezna_i_bankowa/oprocentowanie.html.

⁶ "Situation in the credit market - results of the senior loan officer opinion survey, 2019 Q1" NBP, January 2019 http://www.nbp.pl/home.aspx?f=aktualnosci/wiadomosci_2018/kredytowy2018_4.htm. The main reasons of changes in lending policy included the expectations regarding future economic situation and the change in the procedures for calculation of creditworthiness taking into account the change in borrowers' retirement age.

⁷ The share of foreign currency denominated loans in the currency structure of residential mortgage loans extended by banks as at the end of 2018 slightly decreased and stood at approx. 31% as compared to 32% recorded at the end of 2018 Q3, and the peak 71% share recorded in 2009 Q1.

⁸ According to the BIK data, in 2018 Q4 banks granted the total of 52.3 thousand residential mortgage loans totaling PLN 13.5 billion (a 15.5% y/y increase as expressed in figures and a 22.5% y/y increase in terms of value). In 2018 banks granted the total of 226.0 thousand housing loans amounting to PLN 55.9 billion (i.e. 9.7% y/y more residential loans granted, for the amount higher by 19.3%). BIK experts point out that the growth in the value of residential mortgage loans resulted mainly from the 15.2% growth in the average value of a loan granted (PLN 247.2 thousand). The high sale of mortgage contracts recorded in 2018 was driven by growing wages of households, continuing low interests, growing real estate prices and the MDM housing scheme which provided financing for approx. PLN 5.5 billion. According to AMRON report, 2018 Q4 saw a growth in the average amount of granted residential mortgage loan (by 8.7% y/y), whereas the percentage of new loans with LTV ranging from 30% to 50% slightly decreased (approximately 6.7%), with minor decreases in the share of loans with other LTV ranges. The share of residential mortgage loans with the maturity from 25 to 35 years in the total structure of new loan agreements slightly decreased, whereas the share of loans up to 25 years' maturity increased. At the end of 2018 there were approx. 2.25 million active mortgage contracts i.e. the number increased by 105.4 thousand.

in receipt of a regular income in a given currency and also due to regular amortisation, earlier repayments, the fact that those loans are refinanced with PLN denominated loans as well as due to the appreciation of the zloty.

- **The estimated profitability of residential development projects continues to be high, despite its slight decline in the second half of 2018.** Falling margins result from growing costs of home producers as a result of growing prices of construction materials⁹, increasing wages in the construction sector and growing prices of building sites. Consequently, budgets planned a year ahead for investment projects become obsolete even after the lapse of several months. This has a lesser impact on real estate development sector which operates on large margins, yet poses higher risk than the construction sector. According to Coface experts¹⁰ the number of bankruptcies and restructuring proceedings in the construction industry in 2018 increased slightly on the 2017 figures. At the same time, the share of the construction sector in the total number of bankruptcy and restructuring proceedings decreased by 0.7 percentage points in year-on-year terms, mainly as a result of growth in the number of bankruptcies in transport, production and other industries.
- **2018 Q4 saw an increase in the number of issued new home building permits, as compared to the previous quarter¹¹.** The estimated high margins on developers' profits and the rates of return on housing projects as well as high demand urged real estate developers to apply for subsequent home building permits¹². A large number of completed dwellings¹³ and a growing the number of dwellings under construction were recorded¹⁴ means that supply responds elastically to price growth which limits the risk of excessive tensions in the market.

⁹ Real estate developers claim that in the current situation, the fact of having own labour force enables to control costs more effectively and meet construction deadlines. Developers cope with the situation in different ways. Some of them have own general contractors in their group. Others have extended their competence. Still others focus on creating packages, i.e. segmenting construction works into smaller portions in order to reduce costs. Optimisation of investment costs has become a significant issue in the real estate market.

¹⁰ According to Coface experts (Bankruptcy and restructuring proceedings of firms in Poland in 2018) construction has a lot of orders, for both residential and infrastructure development projects. Growing costs of labour and construction materials increase the risk of loss of liquidity or add to problems with profitability. So far the scale of insolvency has not increased considerably, especially in the case of larger real estate developers. Among smaller developers liquidity problems are quite common. In the opinion of Coface experts, the situation should remain generally unchanged at least during the first half of 2019. How the situation develops will depend mainly on the investment level.

¹¹ The statistics published by the Statistics Poland (GUS) concerning dwellings for sale and rental as well as single-family construction were affected by the change of the definition of residential construction introduced in 2018. As a result, the levels of development construction have increased (single-family construction for sale and rental was included in the construction for sale and for rental; before, it used to be single-family construction). Data for completed dwellings were recalculated (for the years 2016-2017) whereas data for construction projects commenced and building permits issued are still missing.

¹² According to the GUS data, in 2018 Q4 approx. 63.8 thousand home building permits were issued in Poland, i.e. approx. 1.1 thousand more than in 2017 Q4 and approx. 2.9 thousand more than in the previous quarter. In 2018 the total of approx. 257.1 thousand permits were issued, i.e. 6.9 thousand more than in 2017 (a 2.7% y/y rise).

¹³ According to the GUS data, in 2018 Q4 the total of 55.1 thousand dwellings were completed and made ready for occupancy i.e. approx. 8.7 thousand more than in 2017 Q4 and approx. 1.1 thousand more as compared to the previous quarter. In 2018 the number of completions totaled 184.8 thousand i.e. 6.5 thousand more than in 2017 (a 3.7% y/y rise).

¹⁴ According to the GUS data, in 2018 Q4, the construction of 48.0 thousand dwellings was launched in Poland, i.e. approx. 2.8 thousand more as compared to 2017 Q4 and approx. 12.3 thousand less as compared to the previous quarter. In 2018, the construction of the total of approx. 221.9 thousand dwellings was launched, i.e. approx. 15.9 thousand more than in 2017 (a 7.7% y/y rise).

- The sale of dwellings in Poland's six largest primary markets¹⁵ increased against two previous quarters to reach approx. 16.5 thousand, i.e. remaining at the average sale level from the years 2016-2017 (expansion phase of the business cycle in the housing market). The pool of unsold completed dwellings and contracts for their construction in the largest markets increased by approx. 3.9 thousand dwellings** as compared with the preceding quarter to reach approx. 50.7 thousand at the end of 2018. **Also the number of completed dwellings put on sale increased.** The home selling time in the primary market in the six largest markets slightly increased in the analysed period to reach 3.1 quarters. It still means that new offers sell quickly and home buyers have limited opportunities to choose housing. The home selling time in the secondary market estimated by NBP slightly decreased in all cities which means that demand was shifted into this currently cheaper market.
- In the analysed period, the number of new home constructions under way¹⁶ in Poland rose, mainly as a result of a higher number of dwellings whose construction was launched.** A decreasing difference between transaction prices in the primary market and the secondary market in the six cities (6M) and ten cities (10M) means that home buyers do not accept higher developers' prices and shift their demand to the secondary market, triggering price growth there. Warsaw was the only market to see a greater price difference between both markets (transactions in dwellings with better location). The structure of dwellings on offer fails to meet buyers' preferences - not enough relatively small dwellings to meet the demand.
- High home sales and construction of dwellings in the primary market make it necessary to replenish land banks. **High demand for construction land boosted prices of land for developer construction,** particularly in city districts with good transport links, with well-developed urban infrastructure and retail facilities, especially in Wrocław and Warsaw. This resulted from high activity in the construction sector and the simultaneous introduction of new legal regulations and the fact that construction land owned by the State Treasury was "blocked" for residential development under the government-subsidized scheme "Housing Plus". Also cheaper land in poorer location and with less developed infrastructure is purchased. Maintaining flexible supply amid such a high demand is the main challenge of the current market situation and the condition of maintaining stable prices is to maintain flexible supply amid high demand.

Table 1 Housing programmes implemented in Poland

Programmes	Legal basis for the operation of the programme	Programme launch	Anticipated expenditure	Expected effects	Effects until now
National Housing Scheme					
1. Housing plus					
1.1) Scheme supporting the creation of dwellings for rent, protected	Journal of Laws of 2018 item 756	2007	PLN 6 210 billion in 2018-2025		Under the Scheme, 1,591 projects worth over PLN 3.6 billion were qualified for financing. The scheme assumes the creation of over

¹⁵ Based on REAS/JLL data.

¹⁶ The ratio calculated on the basis of GUS data as the sum of the last four quarters of a difference between dwellings for which a building permit was issued and completed dwellings made ready for occupancy.

housing, dormitories, shelters for the homeless, heating rooms and temporary dwellings					27 thousand dwellings/ accommodation places.
1.2) Support scheme for the construction of social rental dwellings	Journal of Laws of 2018, item 1020, as amended	2016	PLN 4.5 billion over 10 years	30 thousand dwellings over 10 years	Under the scheme: -186 applications have been submitted for the total amount of PLN 1,067 billion, for the construction of 8,668 dwellings, -80 loan agreements have been signed for the total amount of PLN 406 million intended to finance of 3 564 dwellings, - 1271 dwellings in 30 development projects were completed.
1.3) Housing Plus - equity (PFR Nieruchomości)	Resolution of the Council of Ministers No. 115/2016 of 27 September 2016	2016			In 2018 the total of 480 dwellings were completed and made ready for occupancy; 1027 dwellings are under construction and nearly 10 thousand are at the pre-construction stage.
2) "Housing for the start" scheme	Journal of Laws of 2018, item 1540	2019	Maximum limit of expenditure in 2019-2028 - PLN 16 billion		In January 2019, 3 agreements regarding rental subsidies in 2019-2034 were signed with an anticipated amount of PLN 7.1 million.
Other (besides NHS)					
Housing for the Young	Journal of Laws of 2018, item 604	2014	PLN 3.45 billion in the years 2014-2018		In the years 2014-2018 subsidies were granted to 109.4 thousand home buyers in the amount of PLN 2.9 billion, including PLN 0.85 billion for secondary market housing. Financial support allocated for a partial repayment of a loan is still granted. Loans with co-financing of home buyers' down payment granted in 2014-2018 will continue to be controlled.
Borrowers' Support Fund	Journal of Laws of 2015, item 1925	19 February 2016	PLN 593.8 million		Cumulatively, 888 agreements for granting the support for the total of PLN 19.6 million have been concluded. Subsidies in the amount of PLN 15.0 million have been disbursed.
Rental Housing Fund (BGK Nieruchomości)		2014			The offer comprises over 1743 dwellings in 15 projects developed in 6 cities

- In October 2018, the draft **Act on companies investing in rental of residential real estate (FINN)** was submitted to the Sejm (Sejm paper 2855). The draft Act introduces to the Polish law companies investing in the rental of real estate which will enjoy a special tax status, based on the model of REIT (Real Estate Investment Trust) operating in the EU.

- According to the data of the coordinator of the Housing Council at the Prime Minister, the undertaken regulatory changes are aimed at speeding up the implementation of the Housing Plus programme.
- In January 2019, a programme of rental subsidies entered into force (the so-called **Housing for the Start** programme - the Act on State aid in the payment of housing expenses in the first years of home rental). The programme is only addressed to tenants of new housing, created or revitalised as part of investors' cooperation with municipalities.
- The Ministry of Investment and Development is working on the draft Act on the National Housing Stock, changing the principles of land contribution to the National Housing Stock (KZM)¹⁷.
- As of 1 January 2019 the perpetual usufruct right to the land underneath apartment buildings and single-family houses changed, by operation of law, into ownership right¹⁸ to such land. Implementation of this Act means that significant amounts of assets will be transferred to households which may have a positive impact on consumer demand.
- The draft amendment to the Act on the formation of the agricultural system prepared by the Ministry of Agriculture is currently being examined by the Law Committee. It provides for certain derogations, e.g. agricultural land of up to 1 ha (currently up to 0.3 ha) may be purchased by a person not being a farmer, and farmers may purchase agricultural land located in the administrative areas of towns and cities. The draft provides for amendments to the Act on the Management of Real Estate held by the State Treasury to enable the National Agricultural Support Centre (KOWR) to develop residential projects in rural areas (this is to supplement the Housing Plus Scheme in rural areas). The draft also relaxes the provisions regulating the sale of purchased agricultural property - the purchaser of agricultural land will have to run an agricultural farm for the period of 5 years (so far for 10 years); it will be possible to sell such land before the lapse of 5 years with the consent of the director of the National Agricultural Support Centre (KOWR), on the basis of an administrative decision instead of a court decision.
- **In the office real estate market, imbalances resulting from oversupply of rental space as compared to demand were reduced.** A strong growth in supply has been accompanied by a high demand. This was fostered by the favorable economic situation, including the creation of new jobs, also by multinational companies. According to the market estimates, at the end of 2018 Q4 the office space supply in the nine largest office markets¹⁹ exceeded 10.4 million square metres with approx. 1.8 million square metres of

¹⁷ The draft of the Act (under debate by the Standing Committee of the Council of Ministers, last meeting held on 21 November 2018) assumes that state institutions, i.e. the National Agricultural Support Centre or the Military Property Agency will be able to receive a refund of 90% of the value of the land transferred. They will also be able to contribute land to companies not only with local governments, but also with other entities within the framework of public private partnership.

¹⁸ Journal of Laws of 2018, item 1716 (the Act of 20 July 2018, amended on 4 December 2018). The total of 2.5 million home owners will be granted this ownership right. Transfer of ownership fee may be paid over a period of 20 years. The amount of the fee will equal the annual fee for perpetual usufruct right. In the case of land held by the State Treasury the Law provides for obligatory rebates (in the case of single-time payment); in the case of municipal real estate the amount of rebates will be fixed by municipalities. In the cooperative apartment buildings after the right to the land is changed into ownership right the fees will be included in home maintenance fees; if the transfer of ownership fee includes rebates, the cooperative will have to take them into account and reduce the cooperative owner's fee proportionally to the dwelling's area to which the cooperative owner holds cooperative ownership right.

¹⁹ The nine cities include: Warsaw, Kraków, Wrocław, Trójmiasto, Katowice, Łódź, Poznań, Szczecin, Lublin.

office space under construction. The vacancy rate in the nine largest office space markets declined to the level of 8.5% as compared to 10.8 % at the end of 2017²⁰.

- **The retail space market continues to see a slight oversupply of space**, whereas the vacancy rate all over Poland at the end of 2018 Q4 remained at a level of approx. 3.1%²¹. At the end of 2018 Q4 the total stock of modern commercial space reached 11.9 million square metres²². High availability of foreign financing contributed and will continue to favor a rapid surface growth in office and retail real estate. This phenomenon may be largely combined with a low level of interest rates in developed countries, and thus a low opportunity cost.
- **The warehouse market in Poland has been growing rapidly since 2014**. There is demand for warehouse space from logistics, courier and manufacturing companies, which is a natural consequence of the development of trade and e-commerce. At the end of 2018 Q4, the total stock of the warehouse space market exceeded 16 million square metres and the vacancy rate all over Poland remained at the level of 5.1%²³.
- **The estimated value of investment transactions²⁴ in the commercial real estate market at the end of 2018 Q4 amounted to EUR 7.03 billion**, with office space accounting for 38.5% of the value of transactions, retail space for 35.2% and warehouse space for 23.8%.
- **The value of corporate loans granted by domestic banks to enterprises for real estate development at the end of 2018 Q4 amounted to approx. PLN 63.5 billion**, which comprised loans granted to real estate developers and loans for office space, retail space, warehouse space and industrial space and other real estate²⁵. The debt of real estate developers at the end of 2018 Q4 amounted to PLN 5.2 billion against PLN 5.6 billion in 2018 Q3. The value of loans for office real estate increased to PLN 16.7 billion, as compared to PLN 16.2 billion in 2018 Q3. The value of loans for retail real estate amounted to PLN 17.3 billion (a PLN 1.3 billion growth as compared to 2018 Q3) and for warehouse and industrial real estate totaled PLN 8.1 billion (a PLN 0.2 billion growth as compared to 2018 Q3). The value of loans granted for other real estate²⁶ amounted to PLN 16.2 billion against PLN 16 billion in 2018 Q3. Changes in debt levels stem partially from the fact that banks adjust their reporting to the requirements of the new FINREP. In 2018 the previously used category of “other real estate” was divided into “retail real estate”, “warehouse and industrial real estate” and “other real estate”.

²⁰ See Colliers International Report: Market Insights, Annual Report 2019 Poland.

²¹ See Colliers International Report: Market Insights, Annual Report 2019, Poland.

²² See Colliers International Report: Market Insights, Annual Report 2019, Poland.

²³ See Colliers International Report: Market Insights, Annual Report 2019, Poland.

²⁴ The above investments concern the sale of the entire operating company which rents the building and derives income from it. Such transactions are concluded between: 1/ the real estate developer who has commercialized 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 accounted for in the statistics on commercial investment.

²⁵ In 2018, the category of loans granted for other real estate was divided into three categories, i.e. loans for warehouse and industrial real estate, loans for retail real estate, loans for other real estate

²⁶ See FINREP definition of 2018 “Loans for other real estate – loans for real estate other than housing, office, retail, industrial and warehouse real estate (subcategory of loans for other real estate).”

- **The ratio of non-performing loans in the total corporate loans for real estate stood at 24%**, which results mainly from the fact that banks' loan portfolios include non-performing loans from the previous years²⁷. The rise in the non-performing loans ratio recorded at the beginning of 2019 is probably the result of changes in banks' accounting and reporting standards. The share of non-performing loans in the total loans for office real estate at the end of 2018 Q4 stood at 6.9% against 7% in 2018 Q3 and for loans granted for retail space it stood at 11% as compared to 6.7% in 2018 Q3. The same indicator for loans for warehouse and industrial space amounted to 7.3% as compared to 6% in 2018 Q3 and for other real estate - to 9.2% as compared to 9% in 2018 Q3.
- **Transaction rents for A class office space in Warsaw, quoted in EUR per square metre per month, were stable.** The highest monthly rents in Poland in this class were recorded in Warsaw where they amounted to approx. EUR 20/sq. m/month. In other analysed cities, i.e. in the eight large cities²⁸ and in the seven 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 hedonic index of rents²⁹, which is resistant to the change in the analysed sample, remains stable for Warsaw and Poznań. However, for Tri City, this index shows a slight increase which means that space of similar quality is leased at a higher rent than half a year ago. At the end of 2018 Q4 the vacancy rate in Warsaw stood at 8.7%³⁰. The vacancy rate of office space depends on the age³¹ and mainly on the location of the office building³².
- **Transaction rents for retail space in shopping centres in Warsaw increased slightly, whereas they are following a slight downward trend in the markets of other cities³³.** In the first half of 2018 hedonic rents in Poznań, Tri City and Warsaw remained stable. In the market of small retail real estate the median of the offer price all over Poland slightly increased, whereas in the market of office real estate the median of the offer price all over Poland rose somewhat.

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

²⁸ In the case of commercial real estate, the breakdown of the analysed cities is different than in the case of residential real estate. The six large cities include: Katowice, Kraków, Łódź, Poznań, Tri City, Wrocław. The seven cities include: Białystok, Bydgoszcz, Kielce, Olsztyn, Opole, Rzeszów, Zielona Góra.

²⁹ Hedonic index of rents for commercial space includes an adjustment taking into account differences in attributes of buildings and space of the leased premises (e.g. location, usable area, finishing standard) in individual periods. The hedonic index is calculated with the imputed method.

³⁰ See Colliers International Report: Market Insights, Annual Report 2019, Poland.

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

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

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

The figures below describe the key developments in the housing market in Poland's major cities in 2018 Q4. 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) housing 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) rents and transaction prices of commercial real estate (Figures 61-67).

The analysis of housing prices (offer, transaction and hedonic) in the primary and secondary markets as well as housing rents relies on the data derived from the housing market survey of the Real Estate Market Database (BaRN, NBP). On the other hand, as part of the survey of the commercial real estate market, the Commercial Real Estate Market Database (BaNK, NBP) 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/JLL, 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 largest cities: Gdańsk, Kraków, Łódź, Poznań, Wrocław
6M	6 largest cities: Gdańsk, Gdynia, Kraków, Łódź, Poznań, Wrocław
7M	7 largest cities: Gdańsk, Gdynia, Kraków, Łódź, Poznań, Warsaw, Wrocław
10M	10 large: Białystok, Bydgoszcz, Katowice, Kielce, Lublin, Olsztyn, Opole, Rzeszów, Szczecin, Zielona Góra
BaNK	Commercial Real Estate Market Database, created by NBP
BaRN	Real Estate Market Database, created by NBP
BIK	Credit Information Bureau
CPI	Consumer Price Index
DFD	Large real estate developer
GD	Households
GUS	Statistics Poland
EURIBOR	Euro Interbank Offer Rate
KNF	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/JLL	REAS, JLL Residential Advisory
RNS	Government-subsidized housing scheme Rodzina na Swoim (Family on their Own)
RP	Primary housing market
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

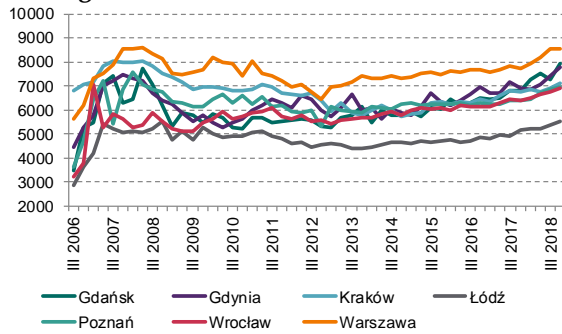
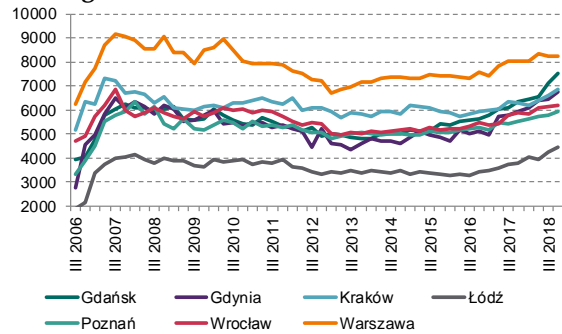


Figure 2 Transaction prices per square metre of housing in Warsaw and 6M- SM



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 2017" available on the bank's website.

Source: NBP

Source: NBP

Figure 3 Weighted average price per square metre of housing, offers (O) and transactions (T)- PM

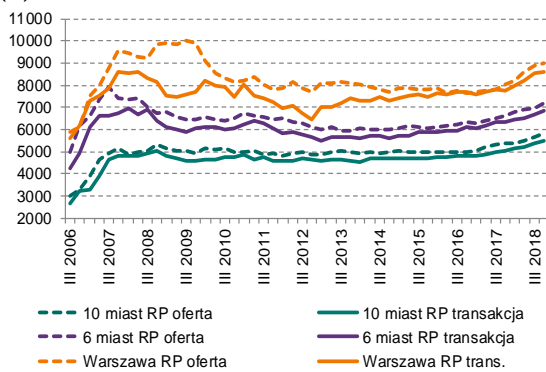
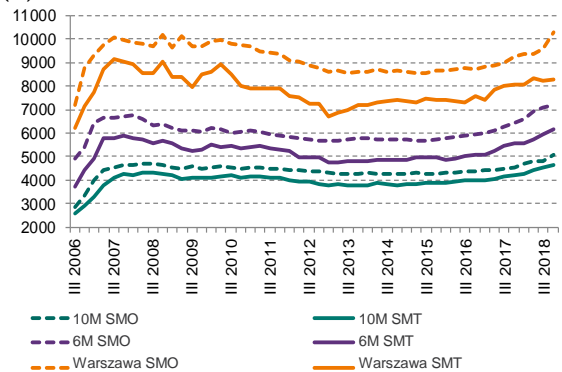


Figure 4 Weighted average price per square metre of housing, offers (O) and transactions (T)- SM



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

Source: NBP

Source: NBP

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

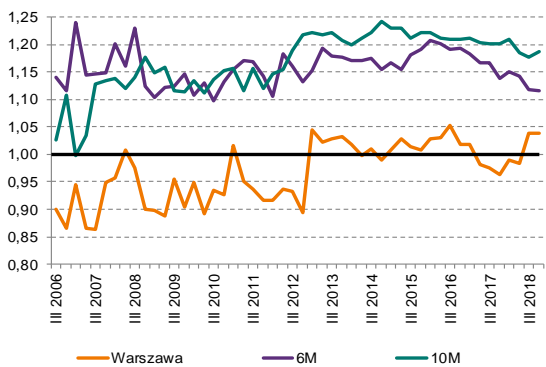
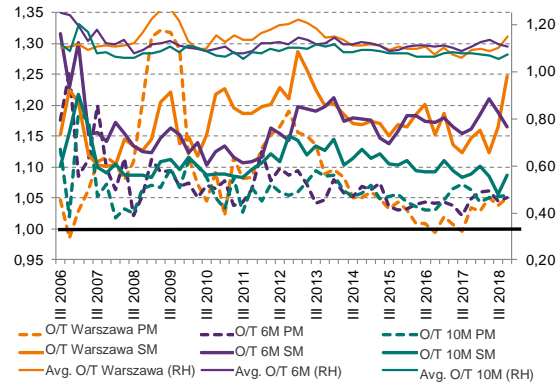


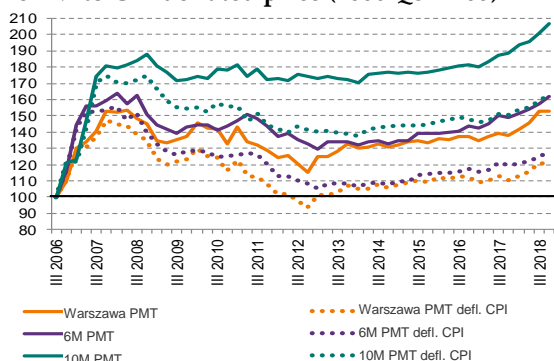
Figure 6 Ratio of the average weighted offer price (O) to transaction price (T) per square metre of housing – PM and SM



Source: NBP

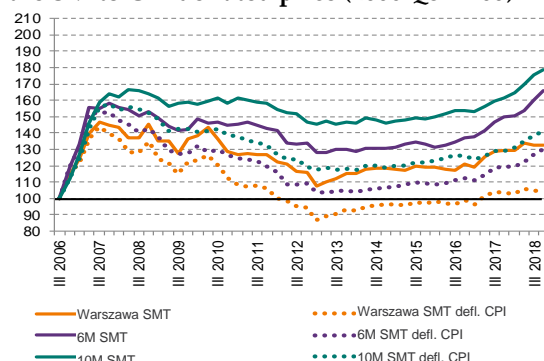
Source: NBP

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



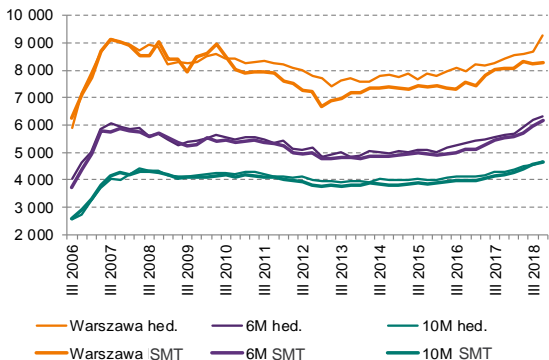
Source: NBP, ZBP (AMRON), GUS

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



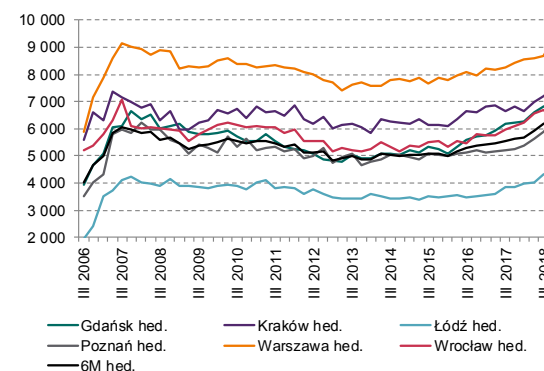
Source: NBP, ZBP (AMRON), GUS

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 metre of housing in the SM, adjusted by the hedonic price index, in 6M



Source: NBP

Figure 11 Average offer prices per square metre of housing in PM, selected market

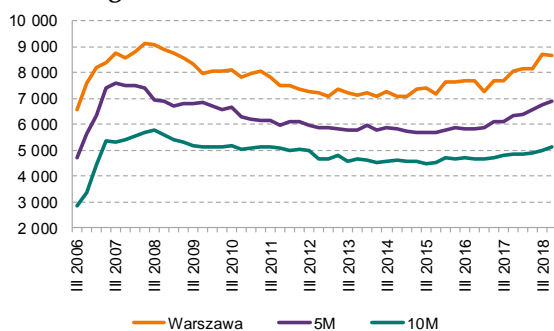
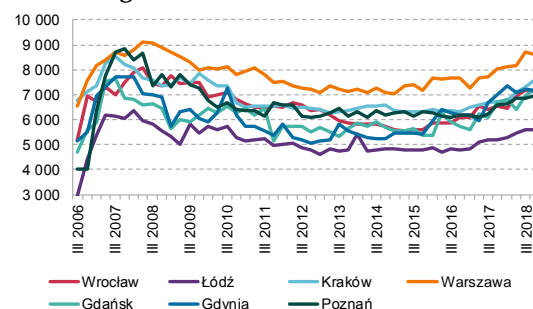


Figure 12 Average offer prices per square metre of housing in PM (Warsaw and 6M)

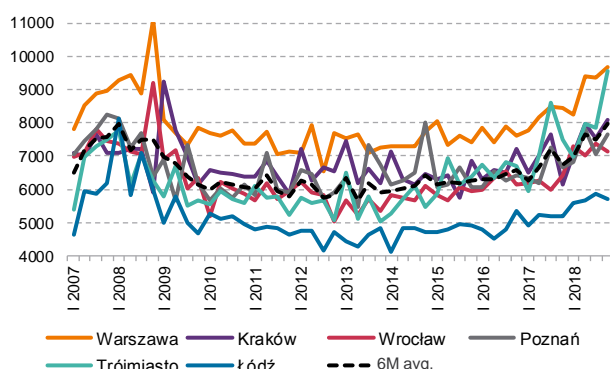


Note to Figures 11-12: prices are collected from all available sources.

Source: PONT Info Nieruchomości

Source: PONT Info Nieruchomości

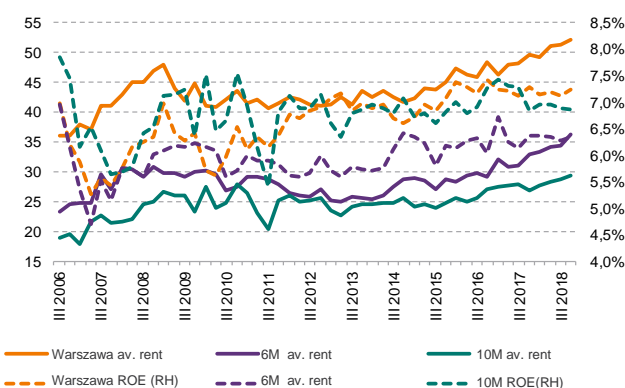
Figure 13 Average offer prices per square metre of housing, new home construction contracts launched-PM, selected markets



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

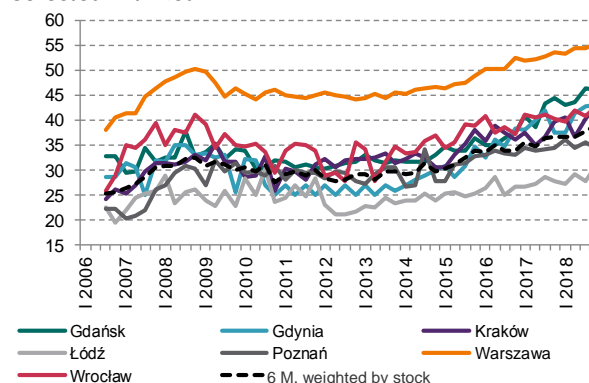
Source: REAS/JLL

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

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

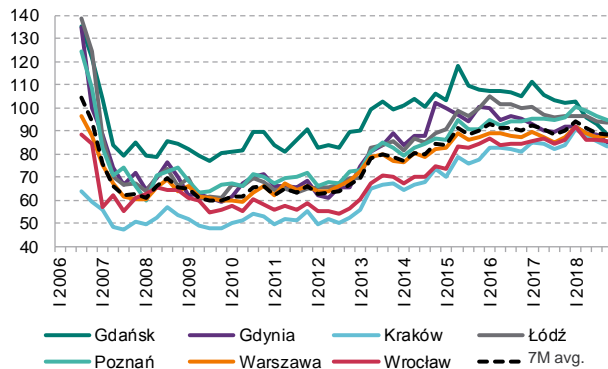


Source: NBP

Note to Figure 15: price per square metre of housing 40% SM and 60% SM; the price per square metre 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)



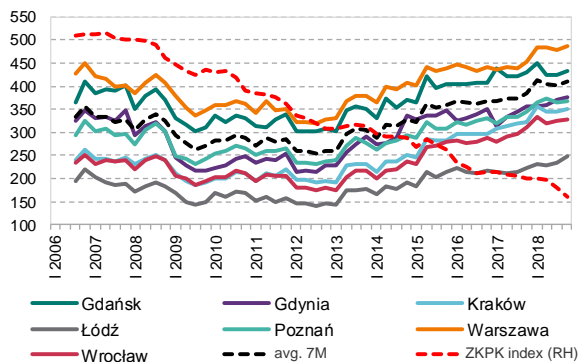
Source: NBP, GUS

Available residential mortgage loan – a measure specifying the potential maximum residential mortgage 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 metres of housing may be purchased with a residential 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.

ZKPK Index – accumulated index of changes in banks’ lending policy criteria; positive values mean easing, and negative values tightening of the 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

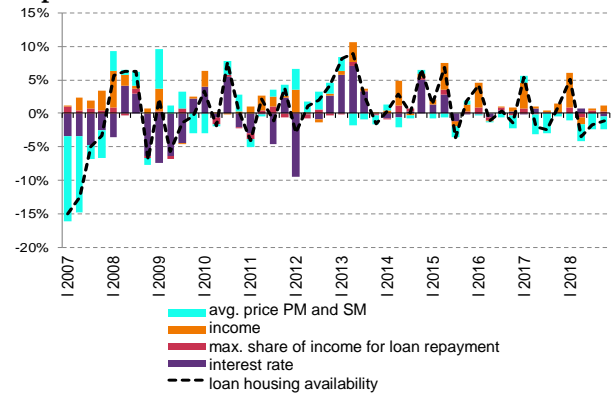
Figure 18 Estimated availability of residential mortgage loan and accumulated index of banks’ housing credit policy (ZKPK, right-hand scale)



Note: positive values of ZKPK mean easing and negative values - tightening of the banks’ lending policy in relation to the initial period, i.e. 2003 Q4

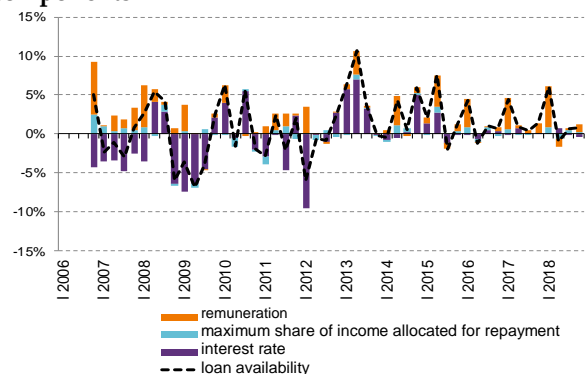
Source: NBP, GUS

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



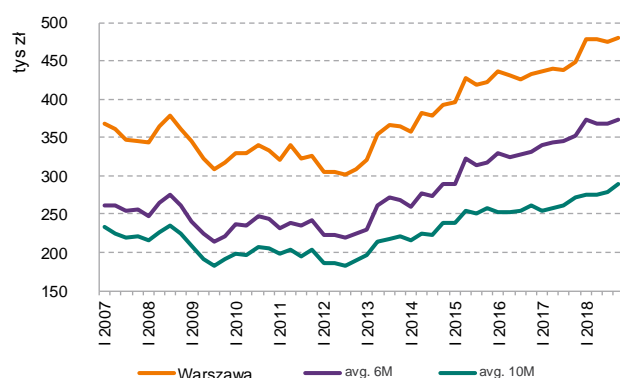
Source: NBP, GUS

Figure 19 Quarterly changes in the estimated availability of residential mortgage loan in 7M and the force and directions of the impact of individual components



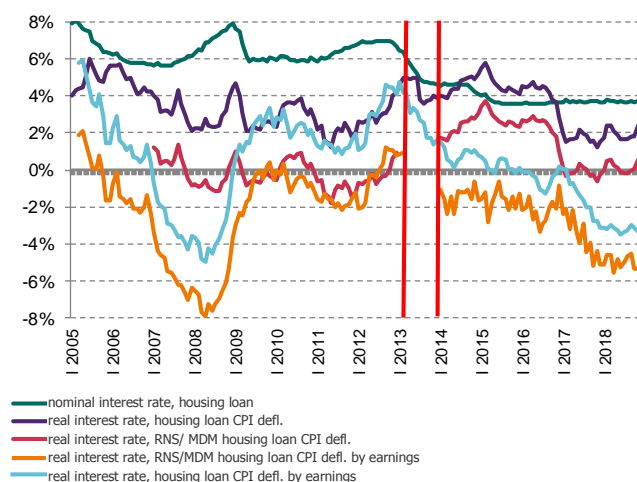
Source: NBP, GUS

Figure 20 Estimated available residential mortgage loan in selected cities



Source: NBP, GUS, BGK

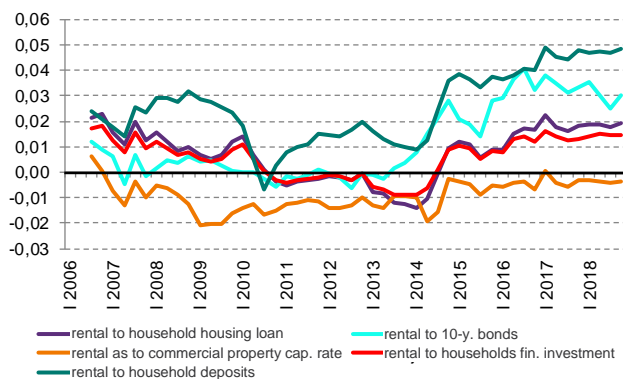
Figure 21 Residential mortgage loan burden for consumer deflated with CPI or wage growth in the enterprise sector



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

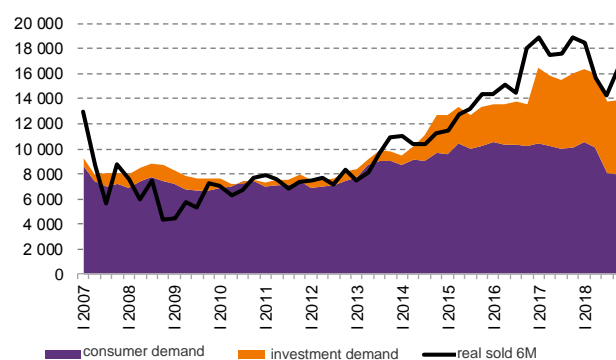


Note to Figure 22: values exceeding 0 denote higher profitability of purchasing property for rental than other GD investment. This analysis does not take into account high transaction costs in the housing market and potentially long payback periods.

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 - 2013 Q3), 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).

Source: NBP, GUS

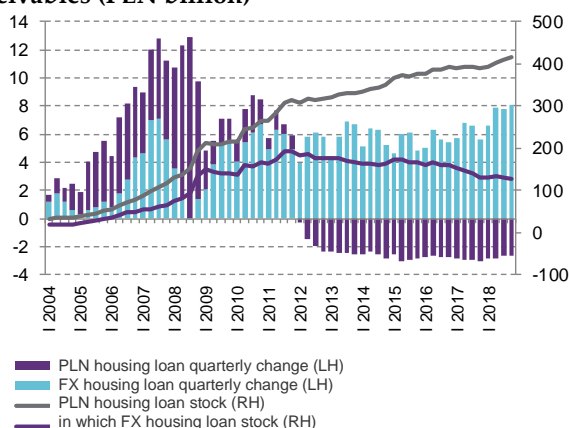
Figure 23 Estimated housing demand in PM (average in Warsaw and 6M) and its components



Source: NBP, REAS/JLL, GUS

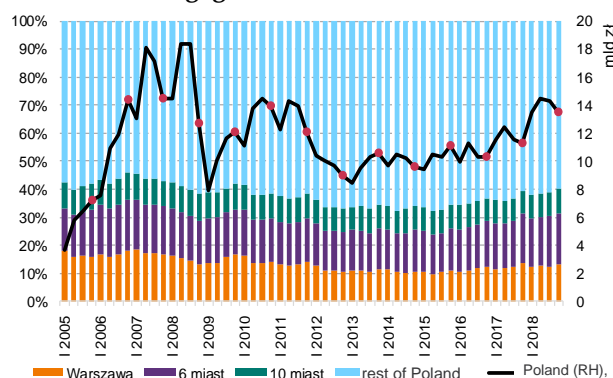
3. Disbursement of residential mortgage loans, interest rates

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



Source: NBP

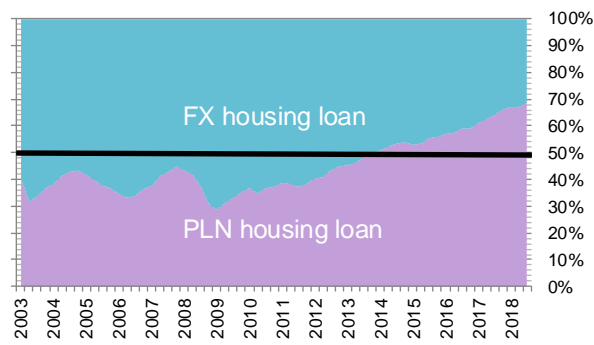
Figure 26 Geographical structure of the value of new residential mortgage loan contracts in Poland



Note to Figures 26 and 28: the data inform about the residential mortgage loan contracts signed and not the actual disbursement of residential mortgage loans. Only fourth quarters are marked by red points.

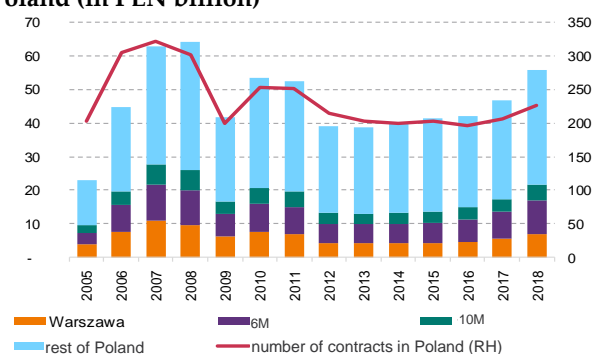
Source: BIK

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



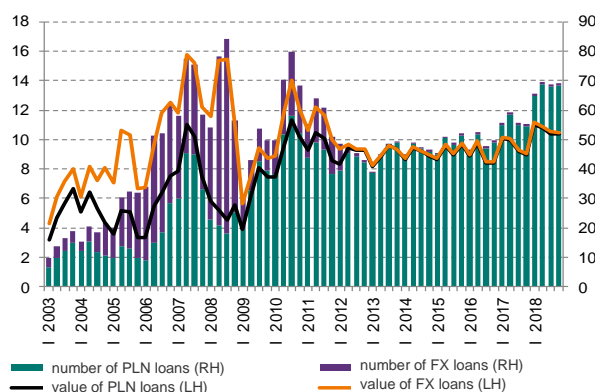
Source: NBP

Figure 27 Value of contracts for residential mortgage loans in the years 2005-2018 in selected towns in Poland (in PLN billion)



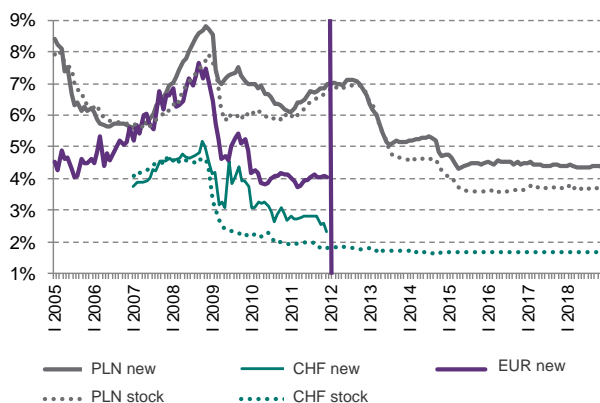
Source: BIK

Figure 28 New residential mortgage loans: value and number



Source: ZBP

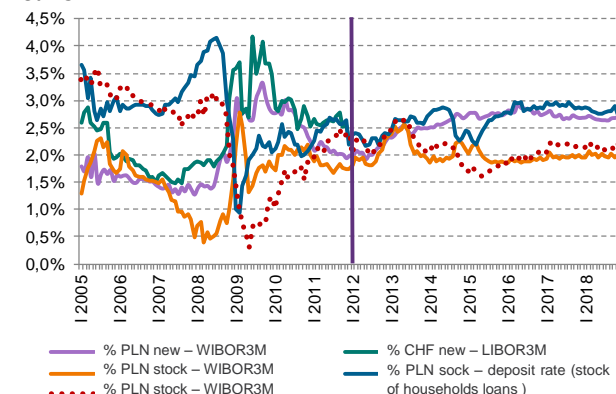
Figure 29 Interest rates on housing loans for households in Poland



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

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



Source: NBP

Table 2 Estimated gross residential mortgage loan disbursements to households in Poland and the estimated value of cash and loan-financed*/ purchases of developer housing in 7 cities (7M; in PLN million)

Date	Estimated value of residential mortgage loans in Poland	Estimated value of home purchase transactions in the PM and 7M	Demand for loan-financed housing including client's down-payment in the PM in 7M	Buyers' down-payment to loans in the PM in 7M	Demand for cash-financed housing (without down-payment in the PM in 7M)	Estimated value of cash-financed home purchases with Buyers' down-payment in the PM in 7M
2014 Q1	7 571	3 870	1 726	432	2 144	67%
2014 Q2	8 899	3 673	2 029	507	1 644	59%
2014 Q3	8 894	3 709	2 028	507	1 681	59%
2014 Q4	8 416	3 953	1 919	480	2 034	64%
2015 Q1	8 996	3 980	2 051	513	1 929	61%
2015 Q2	10 640	4 437	2 426	606	2 011	59%
2015 Q3	10 341	4 712	2 358	589	2 354	62%
2015 Q4	11 237	5 115	2 562	641	2 553	62%
2016 Q1	9 742	5 142	2 221	555	2 921	68%
2016 Q2	11 661	5 409	2 659	665	2 750	63%
2016 Q3	9 632	5 218	2 196	549	3 022	68%
2016 Q4	9 933	6 617	2 265	566	4 352	74%
2017 Q1	10 945	6 958	2 495	624	4 463	73%
2017 Q2	12 139	6 582	2 768	692	3 815	68%
2017 Q3	11 794	6 781	2 689	672	4 092	70%
2017 Q4	10 652	7 259	2 429	607	4 830	75%
2018 Q1	11 914	7 219	2 716	679	4 502	72%
2018 Q2	12 807	6 240	2 920	730	3 320	65%
2018 Q3	13 024	5 855	2 969	742	2 886	62%
2018 Q4	12 584	6 916	2 869	717	4 047	69%

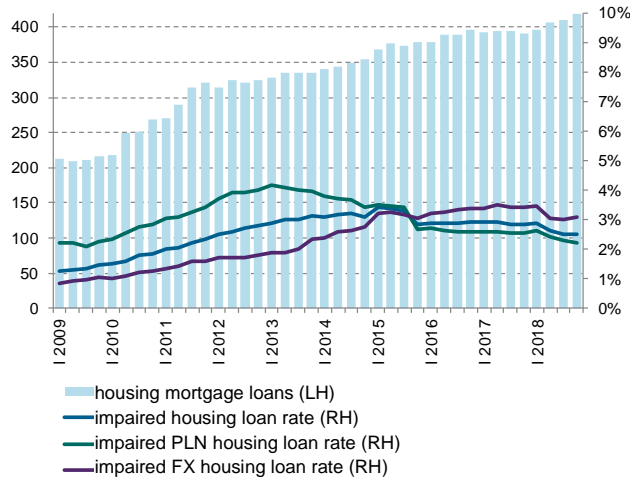
Note to Table 1: the estimates are based on the following assumptions:

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 cash contribution (a down payment of 25% was assumed; in large cities, down-payment of 20% more prudently than the requirement of the amended S Recommendation), whereas cash-financed home purchases make a difference between the value of transactions and credit funds. In order to calculate the estimated value of primary market transactions in 7M (Gdańsk, Gdynia, Kraków, Łódź, Poznań, Warsaw, 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 (REAS/JLL). 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 down payment. Data concerning prices for all the periods have been updated.

Source: NBP, REAS/JLL, ZBP, GUS

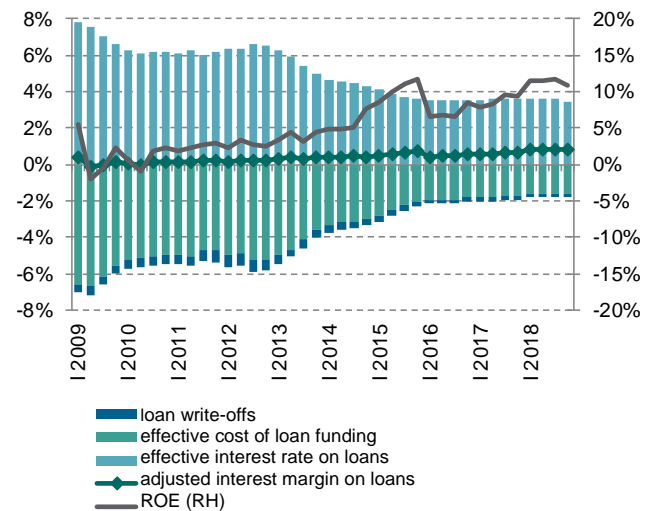
Figure 31 Household loans for housing real estate and indicator of loans recognised as non-performing loans



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 impaired 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 RORAC on residential mortgage loans denominated in PLN for banks in Poland, taking into account the result of interest and non-interest profit and operating costs

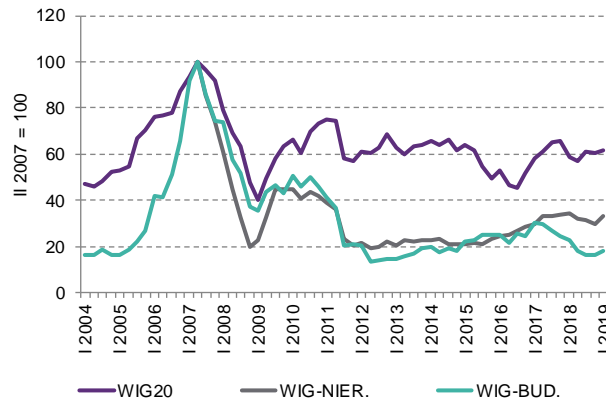


Note: for calculation, interest and non-interest income as well as operating costs were taken into account. The estimated RORAC (Return On Risk-Adjusted Capital) is calculated as the adjusted interest margin plus the non-interest result less operating cost for housing loans in relation to the required own capital. 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 WIBOR3M rates by adding estimative costs related to bank's own financing.

Source: NBP, KNF

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

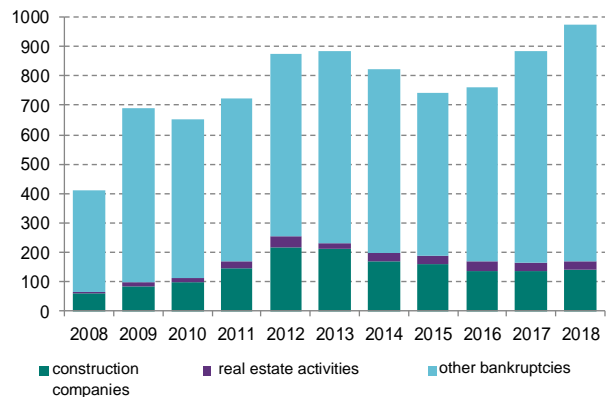
Figure 33 Rescaled exchange indices: WIG20 and for real estate developers and construction companies (2007 Q2=100)



Note: harmonized data, 2007 Q2 = 100. The WIG index for real estate developers has been recorded since 2007 Q2; 2019 Q1 as at 7 March 2019.

Source: Warsaw Stock Exchange

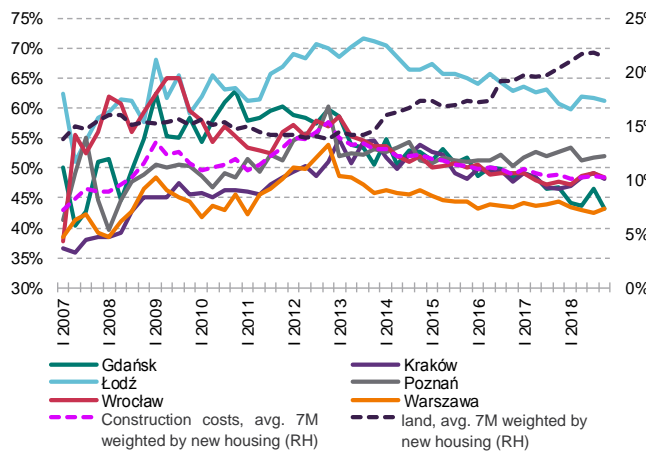
Figure 34 Number of bankruptcies in particular sectors (as at the end of the third quarter)



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

Source: Coface Poland

Figure 35 Estimated share of direct construction costs per square metre of the residential building's usable area (type 1122-302³⁴) in net transaction price in the PR

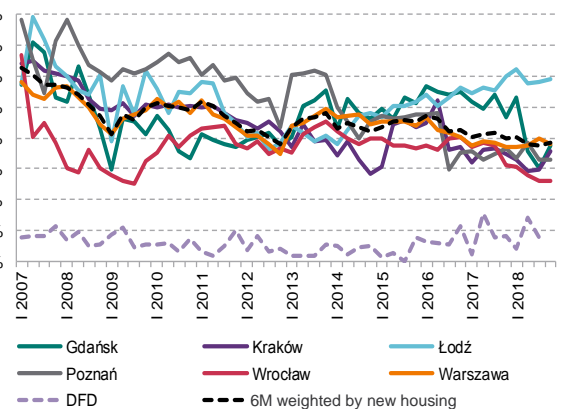


Note to Figure 36: the estimated rate of return on equity from typical new investment projects assuming the currently applicable interest rates, banks' requirements and production costs; calculated on the basis of the diagram included in Annex 3 of the Report on the situation of the Polish market of 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 =>50 persons).

Source: NBP na podstawie Sekocenbud

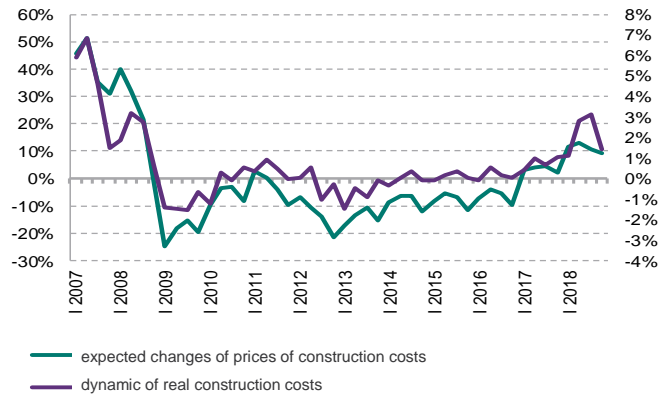
Figure 36 Estimated rate of return from investment projects (type 1122-302³⁴) in the largest cities and the reported rate of return of real estate developers (DFD*)



Source: NBP na podstawie Sekocenbud, GUS (F01)

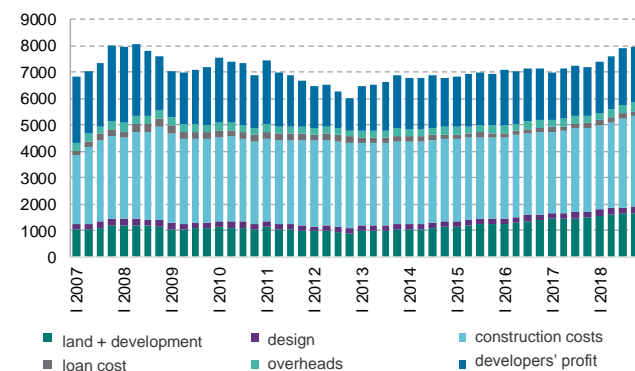
³⁴ Half of the building (type 1122-302) monitored by NBP since 2016 Q2 based on Sekocenbud data: An average residential multifamily building, with an underground garage constructed in the technology: foundation footings, construction walls and ceilings - monolithic reinforced concrete, curtain walling - 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 37 Predicted changes in prices of construction and assembly works (+3M) and growth in construction costs of usable area of a residential building (type 1122-302^{34/})



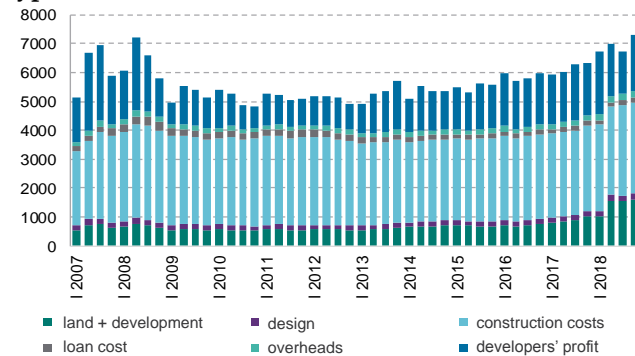
Source: NBP based on GUS data (business conditions survey), Sekocenbud

Figure 39 Warsaw – estimated structure of price per square metre of housing usable area in the PM (building type 1122-302^{34/}) for consumer



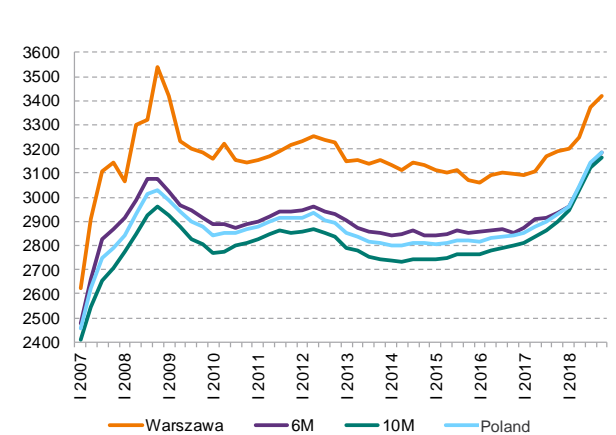
Source: NBP based on Sekocenbud, REAS/JLL

Figure 41 Gdańsk – estimated structure of price per square metre of housing usable area in the PM building type 1122-302^{34/}) for consumer



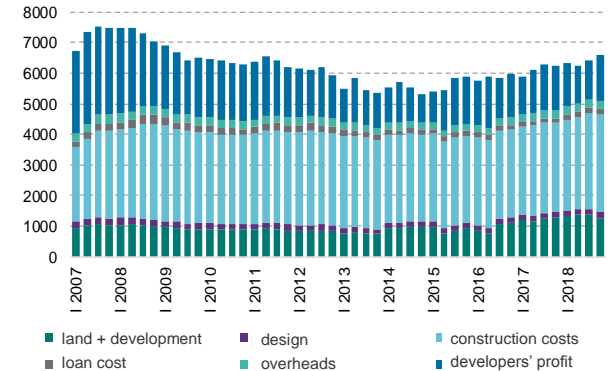
Source: NBP based on Sekocenbud, REAS/JLL

Figure 38 Average cost of construction of square metre of the residential building's usable area (type 1122-302^{34/}) in selected markets (PLN/sq.m)



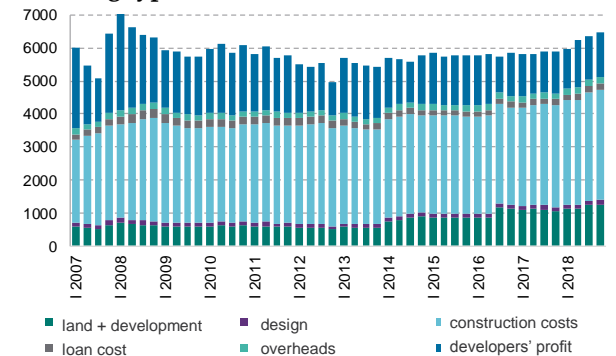
Source: NBP based on Sekocenbud

Figure 40 Kraków - estimated structure of price per square metre of housing usable area in the PM (building type 1122-302^{34/}) for consumer



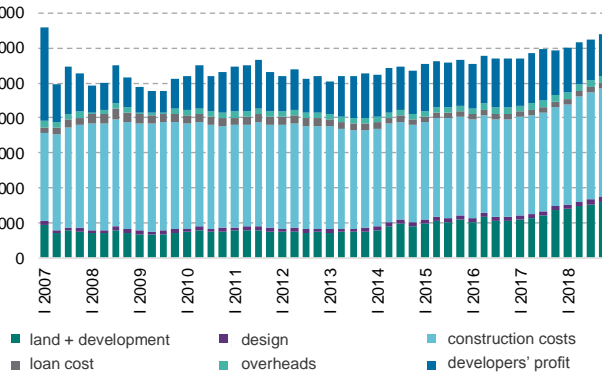
Source: NBP based on Sekocenbud, REAS/JLL

Figure 42 Poznań – estimated structure of price per square metre of housing usable area in the PM (building type 1122-302^{34/}) for consumer



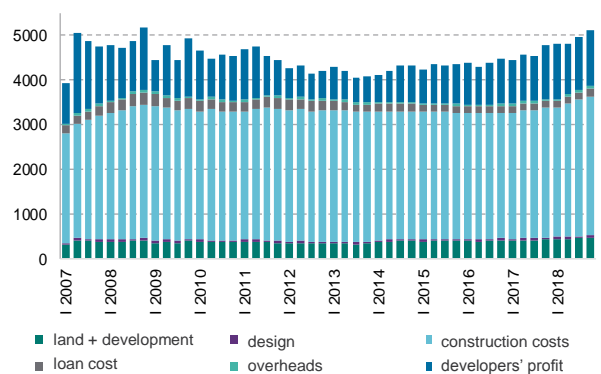
Source: NBP based on Sekocenbud, REAS/JLL

Figure 43 Wrocław – estimated structure of price per square metre of housing usable area in the PM (building type 1122-302³⁴) for consumer



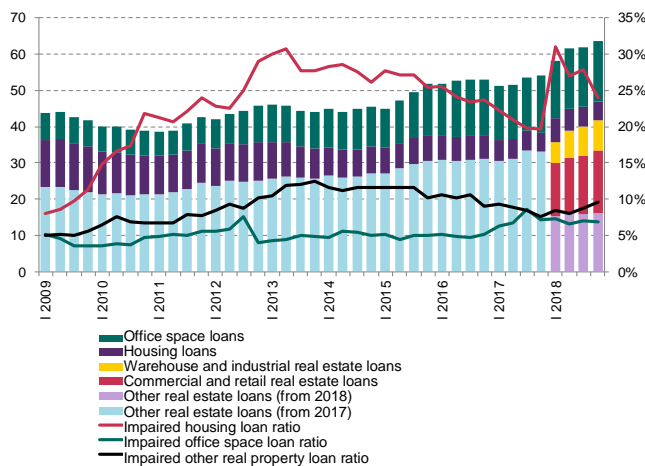
Source: NBP based on Sekocenbud, REAS/JLL

Figure 44 Łódź – estimated structure of price per square metre of housing usable area in the PM (building type 1122-302³⁴) for consumer



Source: NBP based on Sekocenbud, REAS/JLL

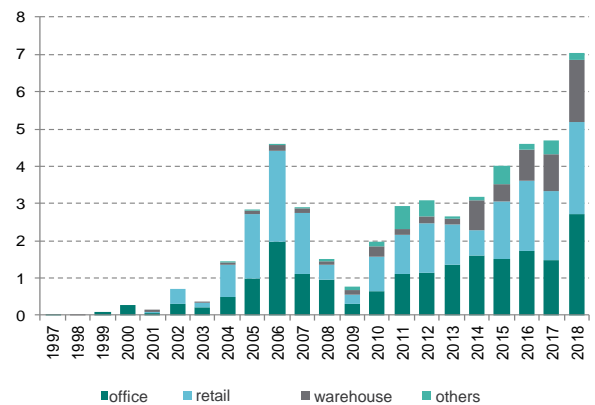
Figure 45 Loans to corporations for real estate purchases (in PLN billion, left-hand scale) and the share of loans recognised as impaired loans (in % right-hand scale)



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

Source: NBP

Figure 46 Value of investment transactions (in EUR billion)



Source: Comparables.pl

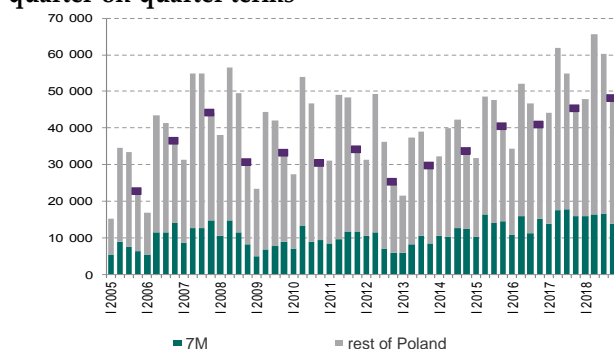
5. Residential construction and the housing market in Poland's selected cities

Figure 47 Structure of investors in residential construction in Poland in the years 2015-2018 (in thousand housing units)



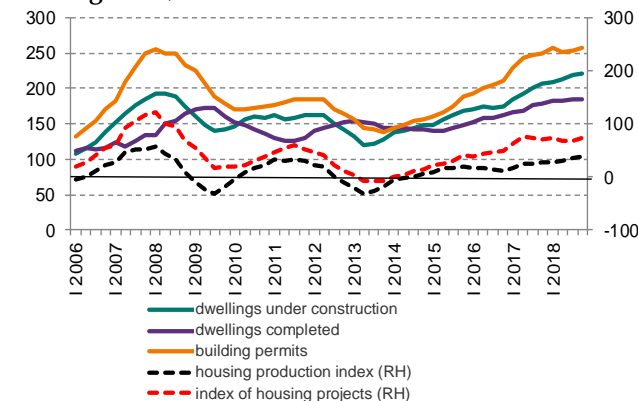
Source: GUS

Figure 49 Dwellings under construction in Poland, in quarter-on-quarter terms



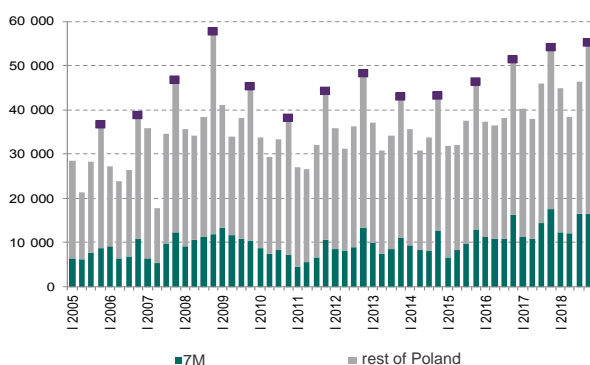
Source: GUS

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

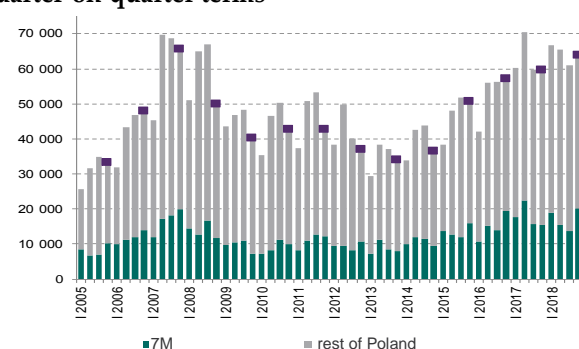
Figure 48 Dwellings completed in Poland, in quarter-on-quarter terms



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

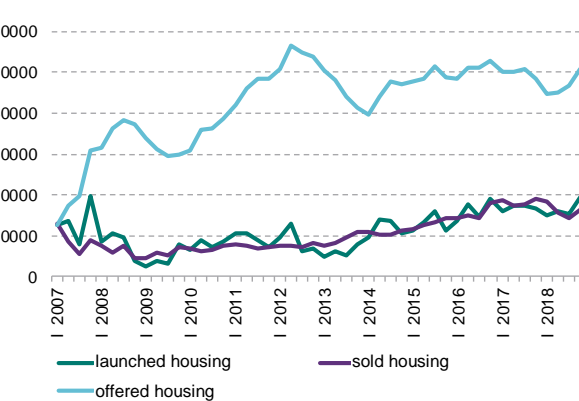
Source: GUS

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



Source: GUS

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



*Warsaw, Kraków, Trójmiasto, Wrocław, Poznań, Łódź.
Source: REAS/JLL

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

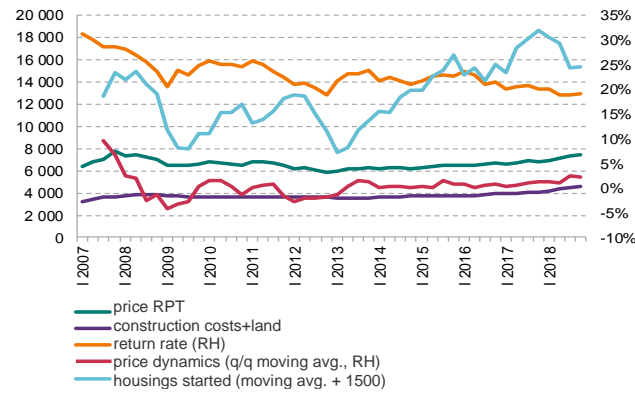
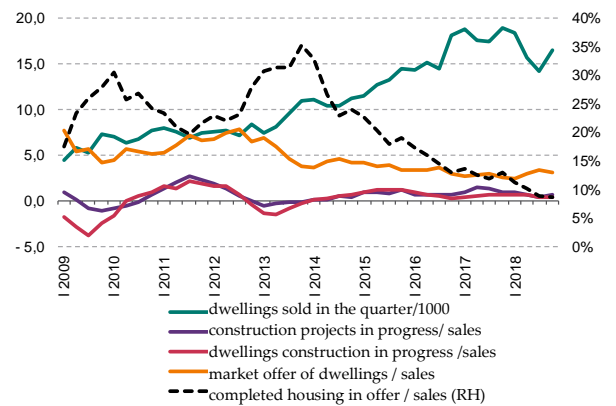


Figure 54 Housing projects and dwellings under construction and dwellings offered for sale in 7M



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/JLL, 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

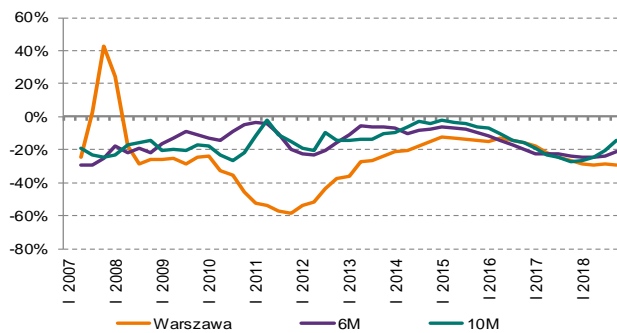
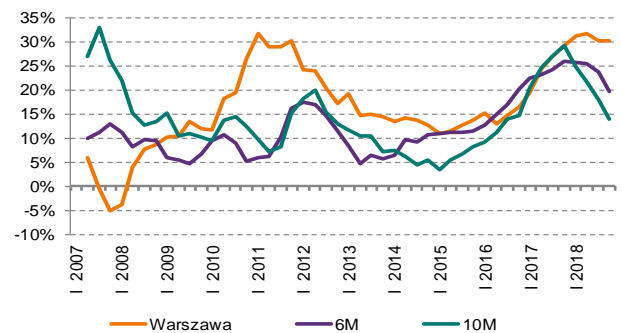


Figure 56 Measure of adjustment of housing units on offer to demand in terms of area > 50 sq. m, PM in selected cities in Poland

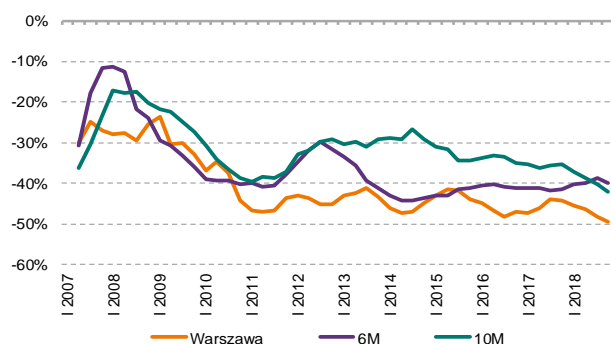


Note: figure 55 presents, in percentage terms, a short-term mismatch in the primary market between supply (developers' housing offer) and the estimated demand (housing transactions) in terms of the dwelling's size, according to the data from the BaRN database. The mismatch is calculated as the ratio of the share of housing units with usable area of up to 50 square metres offered for sale to the number of transactions involving housing units with a total area of up to 50 square metres (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

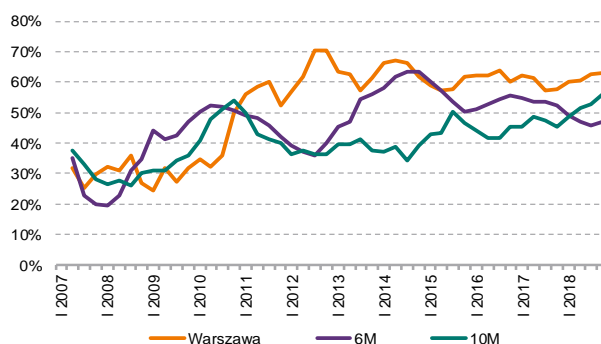
Source: NBP

Figure 57 Measure of adjustment of housing units on offer to demand* in terms of area ≤ 50 sq. m, SM in selected cities



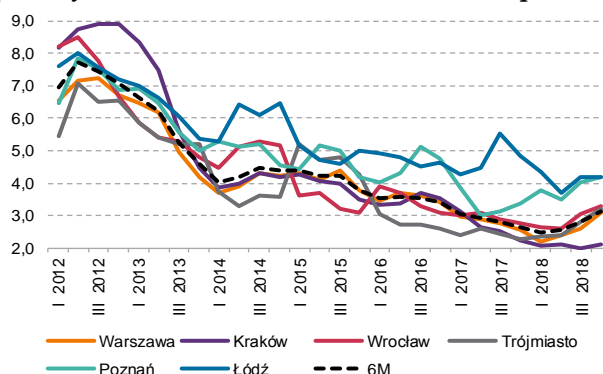
Source: NBP

Figure 58 Measure of adjustment of housing units on offer to demand* in terms of area > 50 sq. m, SM in selected cities



Source: NBP

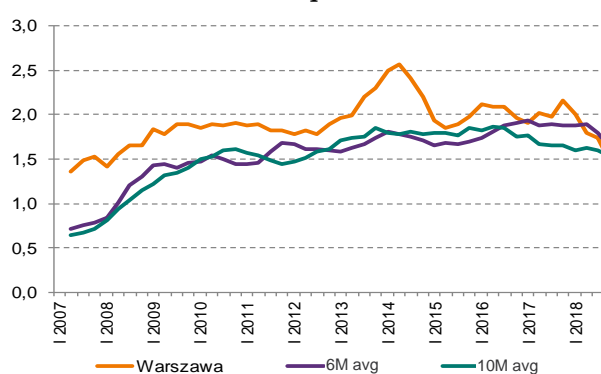
Figure 59 Selling time of dwellings on offer in the primary market in selected cities (number of quarters)



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.

Source: NBP na podstawie REAS/JLL

Figure 60 Selling time of dwellings in the SM in selected cities (number of quarters)

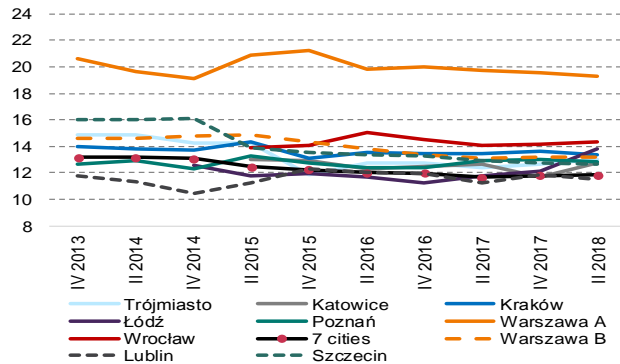


Note: the actual selling time, average of the last four quarters; data are not comparable with Figure 59. Selling time of housing in the secondary real estate market takes into account only transactions closed with a sales deal. The data are underestimated since they do not contain offers entered but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

Source: NBP

6. Rents and transaction prices of commercial real estate

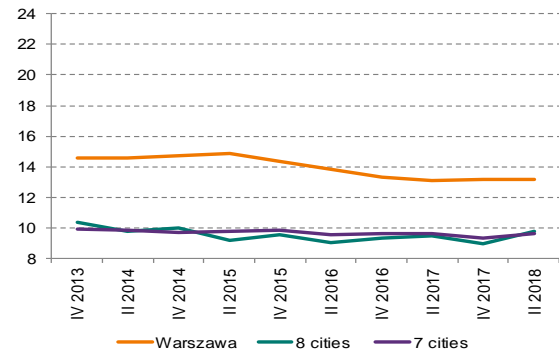
Figure 61 Transaction rents for A class office space (average prices in EUR/sq.m./month)



Note: Warsaw A – A class office buildings, Warsaw B – B class office buildings. 7 cities include: Białystok, Bydgoszcz, Kielce, Olsztyn, Opole, Rzeszów, Zielona Góra.

Source: NBP

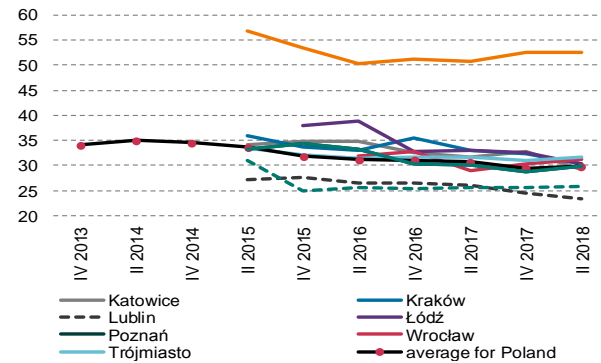
Figure 62 Transaction rents for B class office space (average prices in EUR/sq.m./month)



Note: 8 cities include: Katowice, Kraków, Lublin, Łódź, Poznań, Szczecin, Trójmiasto, Wrocław. 7 cities include: Białystok, Bydgoszcz, Kielce, Olsztyn, Opole, Rzeszów, Zielona Góra.

Source: NBP

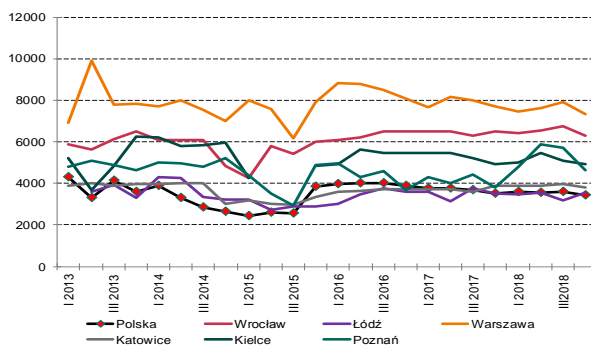
Figure 63 Transaction rents for retail space in shopping centres (shopping malls) with an area of 100-500 sq. m (EUR/sq.m./month)



Source: NBP

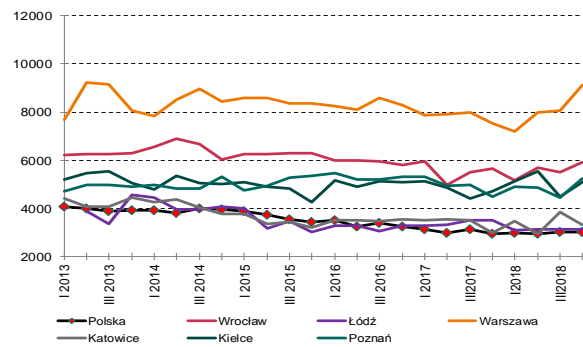
Note to Figure 63: as of the beginning of 2015 Q4, the number of records in the base, including respondents, has increased significantly, consequently changing the analysed sample. Rents for facilities located in economically significant parts of the city are analysed.

Figure 64 Median of offer selling price of small retail premises in the SM (PLN/sq.m)

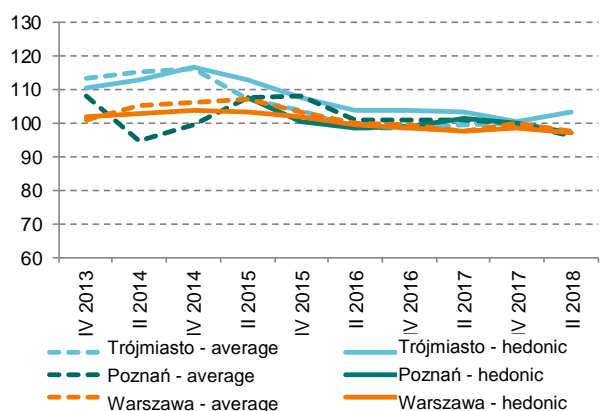


Source: PONT, opracowanie NBP

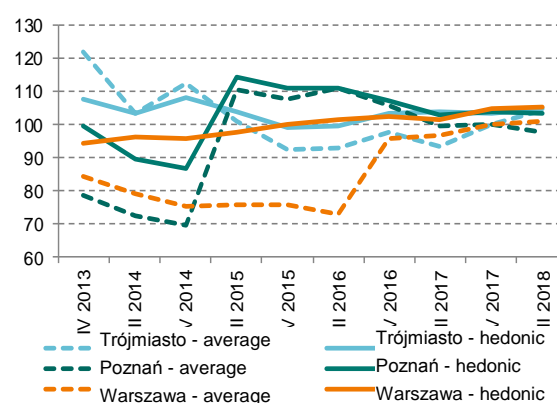
Figure 65 Median of offer selling price of small retail premises in the SM (PLN/sq.m)



Source: PONT, opracowanie NBP

Figure 66 Index of rents for offices, average and hedonic (2017 IV = 100)


Source: NBP

Figure 67 Index of rents for shopping centres, average and hedonic (2017 IV = 100)


Source: NBP

Table 3 Estimated rate of return on equity from investment in B class office space 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 return on 10-year Treasury bonds
2013 Q4	14.6	2309	7.6%	7.0%	5.1%	10.1%	4.4%
2014 Q2	15.0	2163	8.3%	7.0%	5.7%	11.9%	3.4%
2014 Q4	15.0	2163	8.3%	7.0%	5.7%	11.9%	2.6%
2015 Q2	15.2	2496	7.3%	7.0%	5.1%	10.0%	2.8%
2015 Q4	15,0	2496	7.2%	7.0%	4.9%	9.5%	2.8%
2016 Q2	14,8	2489	7.1%	6.5%	4.8%	9.3%	3.0%
2016 Q4	14.9	2489	7.2%	6.5%	4.9%	9.4%	3.3%
2017 Q2	14.7	2700	6.5%	6.0%	4.3%	7.7%	3.3%
2017 Q4	15.0	2700	6.6%	6.0%	4.5%	8.1%	3.4%
2018 Q2	14.8	3000	6.1%	6.0%	3.9%	6.5%	3.2%

Assumptions: Loan in EUR granted for 25 years, equal instalments payable four times a year. Amortization of 2.5%, standard for commercial real estate. The calculated capitalization rate includes amortization costs. Taxable with CIT. ROE – net income/ equity.

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

Table 4 Estimated rate of return on investment in housing of 50 sq.m. in Warsaw

Date	Transaction rent (PLN/sq.m.)	Transaction price PM (PLN/sq.m.)	Calculated capitalisation rate	ROE when LTV = 0%	ROE when LTV = 50%	ROE when LTV = 80%	Average market rates of return on 10-year Treasury bonds
2013 Q4	43.5	7989	6.4%	3.8%	2.4%	-0.4%	4.4%
2014 Q2	43.4	8132	6.3%	3.6%	1.6%	-0.7%	3.4%
2014 Q4	41.4	8187	5.9%	3.4%	1.5%	-0.5%	2.6%
2015 Q2	43.8	8108	6.3%	3.7%	2.6%	0.3%	2.8%
2015 Q4	45.0	8201	6.4%	3.8%	2.7%	0.3%	2.8%
2016 Q2	46.4	8155	6.7%	4.0%	3.0%	0.5%	3.0%
2016 Q4	48.4	8356	6.8%	4.1%	3.3%	0.7%	3.3%
2017 Q2	47.9	8621	6.5%	3.9%	2.9%	0.5%	3.3%
2017 Q4	49.7	8854	6.6%	3.9%	3.1%	0.6%	3.4%
2018 Q2	51.2	9120	6.6%	4.0%	3.2%	0.6%	3.2%
2018 Q4	52.2	8259	6.8%	4.1%	3.4%	0.8%	3.1%

Assumptions: Transaction price per square metre of housing in the primary market increased by finishing costs (+PLN 800.00/sq.m.). Loan in PLN granted for 25 years, equal instalments payable four times a year. Amortization of 1.5% (two complete renovations in the period of 100 years). Occupancy 95%.

Taxable with lump-sum tax of 8.5%. The calculated capitalization rate includes amortization costs. CIT. ROE – net income/ equity.

Source: NBP (data and calculations), MF (rate of return on 10-year bonds)

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

specification	IV Q 2017		I Q 2018		II Q 2018		III Q 2018		IV Q 2018	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	7 371	6 829	8 054	7 255	8 422	7 543	8 293	7 257	8 603	7 915
growth (q-o-q)	100,6	100,2	109,3	106,2	104,6	104,0	98,5	96,2	103,7	109,1
growth (y-o-y)	112,5	105,4	124,6	112,8	124,3	116,0	113,2	106,5	116,7	115,9
dwelling price range	3 503	1 817	3 990	1 566	3 371	1 524	4 337	1 463	4 164	1 351
<=4 000 PLN/sq.m	8	7	3	5	5	5	8	7	1	8
(4 001; 6 000] PLN/sq.m	1 122	688	1 042	611	884	516	1 377	491	1 061	295
(6 001; 8 000] PLN/sq.m	1 285	640	1 373	427	1 096	502	1 285	567	1 065	535
(8 001; 10 000] PLN/sq.m	780	449	950	405	741	353	636	278	1 037	351
>10 001 PLN/sq.m	308	33	622	118	645	148	1 031	120	1 000	162
dwelling space range	3 503	1 817	3 990	1 566	3 371	1 524	4 333	1 463	4 164	1 351
<= 40 sq.m	491	500	630	398	468	437	667	340	626	280
(40,1; 60] sq.m	1485	889	1675	694	1392	664	1851	646	1828	631
(60,1; 80] sq.m	1243	363	1367	392	1212	346	1420	402	1334	367
> 80,1 sq.m	284	65	318	82	299	77	395	75	376	73
average price of 1 sq.m. of dwelling	7 371	6 829	8 054	7 255	8 422	7 543	8 293	7 257	8 603	7 915
<=4 000 sq.m	7 524	6 882	9 322	7 939	10 883	8 747	9 483	7 395	9 872	9 506
(40,1; 60] sq.m	7 030	6 752	7 738	6 952	8 044	6 815	8 018	7 133	8 310	7 402
(60,1; 80] sq.m	7 179	6 742	7 500	7 007	7 570	7 147	7 698	7 126	8 023	7 460
> 80,1 sq.m	9 731	7 977	9 587	7 683	9 779	8 775	9 712	8 397	9 979	8 524
average offer price deviation	7,9%	x	11,0%	x	11,6%	x	14,3%	x	8,7%	x
<= 40 sq.m	9,3%	x	17,4%	x	24,4%	x	28,2%	x	3,8%	x
(40,1; 60] sq.m	4,1%	x	11,3%	x	18,0%	x	12,4%	x	12,3%	x
(60,1; 80] sq.m	6,5%	x	7,0%	x	5,9%	x	8,0%	x	7,5%	x
> 80,1 sq.m	22,0%	x	24,8%	x	11,4%	x	15,7%	x	17,1%	x

Source: NBP

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

specification	IV Q 2017		I Q 2018		II Q 2018		III Q 2018		IV Q 2018	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	7 345	6 337	7 712	6 448	8 570	6 563	8 593	7 115	8 856	7 508
growth (q-o-q)	104,4	104,5	105,0	101,8	111,1	101,8	100,3	108,4	103,1	105,5
growth (y-o-y)	113,8	113,0	117,5	111,6	123,0	108,8	122,1	117,3	120,6	118,5
dwelling price range	1 182	899	1 043	723	744	857	1 833	1 258	1 769	1 035
<=4 000 PLN/sq.m	30	39	27	25	10	39	11	34	4	20
(4 001; 6 000] PLN/sq.m	378	407	306	293	144	320	320	345	240	253
(6 001; 8 000] PLN/sq.m	466	337	362	310	256	360	650	561	621	434
(8 001; 10 000] PLN/sq.m	125	73	141	58	124	94	377	218	431	196
>10 001 PLN/sq.m	183	43	207	37	210	44	475	100	473	132
dwelling space range	1 182	899	1 043	723	744	857	1 833	1 258	1 769	1 035
<= 40 sq.m	164	203	164	174	101	190	300	316	268	238
(40,1; 60] sq.m	460	398	362	321	247	374	668	558	624	463
(60,1; 80] sq.m	324	203	299	163	216	178	529	308	558	209
> 80,1 sq.m	234	95	218	65	180	115	336	76	319	125
average price of 1 sq.m. of dwelling	7 345	6 337	7 712	6 448	8 570	6 563	8 593	7 115	8 856	7 508
<=4 000 sq.m	8 011	7 037	8 459	7 078	9 143	7 206	9 161	7 653	9 808	7 986
(40,1; 60] sq.m	7 469	6 301	7 882	6 447	8 831	6 609	8 900	7 098	9 034	7 506
(60,1; 80] sq.m	7 223	5 814	7 234	5 930	7 998	6 120	8 027	6 742	8 242	7 144
> 80,1 sq.m	6 805	6 111	7 523	6 064	8 577	6 035	8 366	6 519	8 784	7 219
average offer price deviation	15,9%	x	19,6%	x	30,6%	x	20,8%	x	18,0%	x
<= 40 sq.m	13,8%	x	19,5%	x	26,9%	x	19,7%	x	22,8%	x
(40,1; 60] sq.m	18,5%	x	22,3%	x	33,6%	x	25,4%	x	20,4%	x
(60,1; 80] sq.m	24,2%	x	22,0%	x	30,7%	x	19,1%	x	15,4%	x
> 80,1 sq.m	11,4%	x	24,1%	x	42,1%	x	28,3%	x	21,7%	x

Source: NBP

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

specification	IV Q 2017		I Q 2018		II Q 2018		III Q 2018		IV Q 2018	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	6 924	6 755	6 907	6 840	6 901	6 744	7 042	6 915	7 384	7 136
growth (q-o-q)	99,9	99,2	99,8	101,3	99,9	98,6	102,0	102,5	104,9	103,2
growth (y-o-y)	103,2	104,7	104,4	107,3	102,3	102,4	101,6	101,5	101,6	101,5
dwellings price range	5 757	2 292	4 195	1 942	4 192	1 772	3 864	1 629	3 856	1 572
<=4 000 PLN/sq.m	6	0	8	2	7	4	1	2	0	0
(4 001; 6 000] PLN/sq.m	1 483	722	1 162	646	1 020	498	870	356	495	264
(6 001; 8 000] PLN/sq.m	3 303	1 263	2 322	928	2 494	1 024	2 226	986	2 336	956
(8 001; 10 000] PLN/sq.m	752	264	536	309	568	216	610	249	870	308
>10 001 PLN/sq.m	213	43	167	57	103	30	157	36	155	44
dwellings space range	5 757	2 292	4 195	1 942	4 192	1 772	3 864	1 629	3 856	1 572
<= 40 sq.m	991	609	610	493	608	404	561	410	583	418
(40,1; 60] sq.m	3266	1235	2312	1052	2293	960	2062	888	2033	780
(60,1; 80] sq.m	1157	355	979	321	1018	331	980	252	979	311
> 80,1 sq.m	343	93	294	76	273	77	261	79	261	63
average price of 1 sq.m. of dwelling	6 924	6 755	6 907	6 840	6 901	6 744	7 042	6 915	7 384	7 136
<=4 000 sq.m	7527	7284	7592	7424	7487	7017	7559	7218	7943	7618
(40,1; 60] sq.m	6695	6502	6681	6571	6735	6596	6919	6765	7339	6887
(60,1; 80] sq.m	6928	6529	6902	6755	6904	6773	6936	6850	7168	7084
> 80,1 sq.m	7349	7524	7278	7140	6981	7026	7299	7240	7299	7272
average offer price deviation	2,5%	x	1,0%	x	2,3%	x	1,8%	x	3,5%	x
<= 40 sq.m	3,3%	x	2,3%	x	6,7%	x	4,7%	x	4,3%	x
(40,1; 60] sq.m	3,0%	x	1,7%	x	2,1%	x	2,3%	x	6,6%	x
(60,1; 80] sq.m	6,1%	x	2,2%	x	1,9%	x	1,3%	x	1,2%	x
> 80,1 sq.m	-2,3%	x	1,9%	x	-0,6%	x	0,8%	x	0,4%	x

Source: NBP

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

specification	IV Q 2017		I Q 2018		II Q 2018		III Q 2018		IV Q 2018	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	7 593	6 276	7 767	6 215	8 006	6 400	8 059	6 621	8 466	6 849
growth (q-o-q)	105,4	98,9	102,3	99,0	103,1	103,0	100,7	103,5	105,0	103,4
growth (y-o-y)	109,9	105,5	113,2	103,9	114,5	106,0	111,9	104,3	111,5	109,1
dwellings price range	1 505	402	906	361	1 245	278	1 115	318	722	340
<=4 000 PLN/sq.m	1	12	0	2	1	3	0	0	0	0
(4 001; 6 000] PLN/sq.m	341	186	160	177	211	123	153	127	79	123
(6 001; 8 000] PLN/sq.m	700	157	442	142	554	119	501	144	284	158
(8 001; 10 000] PLN/sq.m	287	36	190	31	285	27	298	36	218	41
>10 001 PLN/sq.m	176	11	114	9	194	6	163	11	141	18
dwellings space range	1 505	402	906	361	1 245	278	1 115	318	722	340
<= 40 sq.m	305	164	203	116	255	107	232	130	146	137
(40,1; 60] sq.m	591	159	365	178	474	108	442	145	280	148
(60,1; 80] sq.m	380	69	229	55	309	51	264	35	177	45
> 80,1 sq.m	229	10	109	12	207	12	177	8	119	10
average price of 1 sq.m. of dwelling	7 593	6 276	7 767	6 215	8 006	6 399	8 059	6 621	8 466	6 849
<=4 000 sq.m	8 837	6 761	8 881	6 768	9 037	7 148	8 678	7 026	9 366	7 284
(40,1; 60] sq.m	7 173	5 905	7 427	6 055	7 623	6 007	7 857	6 400	8 108	6 652
(60,1; 80] sq.m	7 229	6 112	7 167	5 668	7 554	5 847	7 814	6 240	8 094	6 321
> 80,1 sq.m	7 626	5 348	8 093	5 745	8 288	5 605	8 120	5 716	8 757	6 157
average offer price deviation	21,0%	x	25,0%	x	25,1%	x	21,7%	x	23,6%	x
<= 40 sq.m	30,7%	x	31,2%	x	26,4%	x	23,5%	x	28,6%	x
(40,1; 60] sq.m	21,5%	x	22,6%	x	26,9%	x	22,8%	x	21,9%	x
(60,1; 80] sq.m	18,3%	x	26,4%	x	29,2%	x	25,2%	x	28,1%	x
> 80,1 sq.m	42,6%	x	40,9%	x	47,9%	x	42,0%	x	42,2%	x

Source: NBP

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

specification	IV Q 2017		I Q 2018		II Q 2018		III Q 2018		IV Q 2018	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	5 332	5 148	5 524	5 211	5 475	5 206	5 528	5 355	5 664	5 512
growth (q-o-q)	103,6	104,8	103,6	101,2	99,1	99,9	101,0	102,9	102,5	102,9
growth (y-o-y)	104,3	106,1	111,8	108,7	105,7	105,4	107,4	109,0	106,2	107,1
dwelling price range	2 015	435	1 574	328	1 457	475	1 902	483	1 662	397
<=4 000 PLN/sq.m	0	3	2	1	2	1	2	4	1	1
(4 001; 4 500] PLN/sq.m	67	31	65	31	67	27	18	6	7	5
(4 501; 5 000] PLN/sq.m	477	162	268	122	275	195	225	111	97	67
(5 001; 5 500] PLN/sq.m	862	135	626	69	595	130	953	208	614	151
(5 501; 6 000] PLN/sq.m	339	62	291	73	211	54	322	100	551	85
> 6 001 PLN/sq.m	270	42	322	32	307	68	382	54	392	88
dwelling space range	2 015	435	1 574	328	1 457	475	1 903	482	1 662	397
<= 40 sq.m	228	126	166	54	129	79	268	89	200	79
(40,1; 60] sq.m	904	211	742	166	692	213	928	263	836	182
(60,1; 80] sq.m	699	78	527	88	500	145	575	109	525	104
> 80,1 sq.m	184	20	139	20	136	38	132	21	101	32
average price of 1 sq.m. of dwelling	5 332	5 148	5 524	5 211	5 475	5 206	5 527	5 356	5 664	5 512
<=4 000 sq.m	5 602	5 250	6 024	5 566	6 071	5 783	5 848	5 462	6 033	5 794
(40,1; 60] sq.m	5 354	5 152	5 546	5 126	5 539	5 234	5 492	5 343	5 628	5 551
(60,1; 80] sq.m	5 232	5 006	5 344	5 121	5 253	4 918	5 433	5 303	5 588	5 300
> 80,1 sq.m	5 266	5 011	5 489	5 354	5 402	4 950	5 524	5 350	5 628	5 284
average offer price deviation	3,6%	x	6,0%	x	5,2%	x	3,2%	x	2,8%	x
<= 40 sq.m	6,7%	x	8,2%	x	5,0%	x	7,1%	x	4,1%	x
(40,1; 60] sq.m	3,9%	x	8,2%	x	5,8%	x	2,8%	x	1,4%	x
(60,1; 80] sq.m	4,5%	x	4,4%	x	6,8%	x	2,4%	x	5,4%	x
> 80,1 sq.m	5,1%	x	2,5%	x	9,1%	x	3,2%	x	6,5%	x

Source: NBP

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

specification	IV Q 2017		I Q 2018		II Q 2018		III Q 2018		IV Q 2018	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	4 314	3 784	4 432	4 022	4 642	3 959	4 711	4 256	4 811	4 465
growth (q-o-q)	101,7	100,6	102,7	106,3	104,7	98,4	101,5	107,5	102,1	104,9
growth (y-o-y)	105,3	110,7	106,8	114,6	110,4	110,3	111,1	113,1	111,5	118,0
dwelling price range	629	144	631	115	598	112	892	123	422	76
<= 3 000 PLN/sq.m	44	19	27	13	19	11	32	9	9	1
(3 001; 3 500] PLN/sq.m	79	28	71	16	50	17	75	11	27	7
(3 501; 4 000] PLN/sq.m	152	47	133	35	95	35	109	32	46	14
(4 001; 4 500] PLN/sq.m	142	31	149	18	127	26	180	28	81	15
(4 500; 5 000] PLN/sq.m.	94	6	112	19	125	16	199	19	113	27
>] 5 001 PLN/sq.m	118	13	139	14	182	7	297	24	146	12
dwelling space range	629	144	631	115	598	112	892	123	422	76
<= 40 sq.m	91	48	62	32	66	30	114	33	51	22
(40,1; 60] sq.m	223	59	243	52	214	51	318	60	161	39
(60,1; 80] sq.m	140	23	154	20	153	18	203	21	76	11
> 80,1 sq.m	175	14	172	11	165	13	257	9	134	4
average price of 1 sq.m. of dwelling	4 314	3 784	4 432	4 022	4 642	3 959	4 711	4 256	4 811	4 465
<=4 000 sq.m	3 988	4 087	4 208	4 114	4 821	4 307	4 820	4 541	5 002	4 791
(40,1; 60] sq.m	4 434	3 688	4 576	4 157	4 775	3 896	4 777	4 287	4 923	4 398
(60,1; 80] sq.m	4 347	3 596	4 508	3 908	4 618	3 959	4 837	3 957	4 962	4 518
> 80,1 sq.m	4 305	3 458	4 243	3 320	4 420	3 406	4 480	3 700	4 516	3 193
average offer price deviation	14,0%	x	10,2%	x	17,3%	x	10,7%	x	7,7%	x
<= 40 sq.m	-2,4%	x	2,3%	x	11,9%	x	6,1%	x	0,04	x
(40,1; 60] sq.m	20,3%	x	10,1%	x	22,6%	x	11,4%	x	0,12	x
(60,1; 80] sq.m	20,9%	x	15,4%	x	16,6%	x	22,2%	x	0,10	x
> 80,1 sq.m	24,5%	x	27,8%	x	29,8%	x	21,1%	x	41,5%	x

Source: NBP

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

specification	IV Q 2017		I Q 2018		II Q 2018		III Q 2018		IV Q 2018	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	6 551	6 382	6 678	6 427	6 865	6 699	6 959	6 855	7 114	6 969
growth (q-o-q)	101,1	100,1	101,9	100,7	102,8	104,2	101,4	102,3	102,2	101,7
growth (y-o-y)	102,3	101,2	103,9	102,6	106,7	107,0	107,4	107,5	108,6	109,2
dwelling price range	3 632	1 277	4 081	1 043	4 351	1 083	4 927	1 009	5 595	1 226
<=4 000 PLN/sq.m	9	3	8	3	6	5	6	5	2	4
(4 001; 6 000] PLN/sq.m	1 075	510	1 136	427	1 072	304	1 130	233	1 006	241
(6 001; 8 000] PLN/sq.m	2 259	703	2 541	529	2 738	646	3 019	640	3 623	814
(8 001; 10 000] PLN/sq.m	257	42	360	67	417	84	654	101	876	135
>10 001 PLN/sq.m	32	19	36	17	118	44	118	30	88	32
dwelling space range	3 632	1 277	4 081	1 043	4 351	1 083	4 927	1 009	5 595	1 226
<= 40 sq.m	517	314	585	199	775	208	835	240	983	347
(40,1; 60] sq.m	2103	731	2424	588	2477	600	2669	552	3025	646
(60,1; 80] sq.m	779	182	824	193	850	186	1076	167	1223	169
> 80,1 sq.m	233	50	248	63	249	89	347	50	364	64
average price of 1 sq.m. of dwelling	6 551	6 382	6 678	6 427	6 865	6 699	6 959	6 855	7 114	6 969
<=4 000 sq.m	6 725	6 560	6 918	6 730	6 827	7 178	7 072	7 153	7 284	7 292
(40,1; 60] sq.m	6 506	6 321	6 607	6 335	6 840	6 551	6 926	6 757	7 117	6 863
(60,1; 80] sq.m	6 485	6 386	6 658	6 282	6 933	6 708	6 877	6 607	6 927	6 731
> 80,1 sq.m	6 783	6 149	6 864	6 768	7 003	6 554	7 190	7 341	7 259	6 908
average offer price deviation	2,6%	x	3,9%	x	2,5%	x	1,5%	x	2,1%	x
<= 40 sq.m	2,5%	x	2,8%	x	-4,9%	x	-1,1%	x	-0,1%	x
(40,1; 60] sq.m	2,9%	x	4,3%	x	4,4%	x	2,5%	x	3,7%	x
(60,1; 80] sq.m	1,6%	x	6,0%	x	3,4%	x	4,1%	x	2,9%	x
> 80,1 sq.m	10,3%	x	1,4%	x	6,8%	x	-2,1%	x	5,1%	x

Source: NBP

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

specification	IV Q 2017		I Q 2018		II Q 2018		III Q 2018		IV Q 2018	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	6 349	5 550	6 525	5 622	6 652	5 752	6 763	5 795	6 928	5 937
growth (q-o-q)	104,9	102,1	102,8	101,3	101,9	102,3	101,7	100,7	102,4	102,5
growth (y-o-y)	103,7	105,1	109,6	109,1	109,4	105,2	111,7	106,7	109,1	107,0
dwelling price range	448	806	374	967	316	820	249	548	211	406
<=4 000 PLN/sq.m	18	72	11	67	9	35	8	17	7	2
(4 001; 6 000] PLN/sq.m	203	461	148	591	121	484	87	322	63	237
(6 001; 8 000] PLN/sq.m	160	253	159	274	131	266	110	188	97	156
(8 001; 10 000] PLN/sq.m	54	17	45	29	42	28	27	18	27	8
>10 001 PLN/sq.m	13	3	11	6	13	7	17	3	17	3
dwelling space range	448	806	374	967	316	820	249	548	211	406
<= 40 sq.m	51	254	52	278	40	245	33	185	20	128
(40,1; 60] sq.m	169	355	141	426	116	367	88	241	71	185
(60,1; 80] sq.m	108	145	93	197	92	146	67	101	59	79
> 80,1 sq.m	120	52	88	66	68	62	61	21	61	14
average price of 1 sq.m. of dwelling	6349	5550	6525	5622	6652	5752	6763	5795	6928	5937
<=4 000 sq.m	6895	6023	7165	5988	7475	6257	7754	6358	8297	6475
(40,1; 60] sq.m	6527	5516	6823	5667	6734	5704	6654	5713	6966	5872
(60,1; 80] sq.m	6096	5068	6279	5233	6481	5283	6843	5086	6962	5235
> 80,1 sq.m	6095	4808	5927	4949	6257	5150	6295	5179	6403	5849
average offer price deviation	14,4%	x	16,1%	x	15,6%	x	16,7%	x	16,7%	x
<= 40 sq.m	14,5%	x	19,7%	x	19,5%	x	22,0%	x	28,1%	x
(40,1; 60] sq.m	18,3%	x	20,4%	x	18,1%	x	16,5%	x	18,6%	x
(60,1; 80] sq.m	20,3%	x	20,0%	x	22,7%	x	34,5%	x	33,0%	x
> 80,1 sq.m	26,8%	x	19,8%	x	21,5%	x	21,6%	x	9,5%	x

Source: NBP

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

specification	IV Q 2017		I Q 2018		II Q 2018		III Q 2018		IV Q 2018	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	8 020	7 751	8 200	7 965	8 608	8 186	8 880	8 560	9 015	8 573
growth (q-o-q)	103,0	99,1	102,2	102,8	105,0	102,8	103,2	104,6	101,5	100,1
growth (y-o-y)	105,0	100,8	106,4	105,3	111,2	106,6	114,0	109,5	112,4	110,6
dwellings price range	13 587	5 455	11 797	4 857	13 110	4 415	13 925	3 937	13 424	4 257
<=4 000 PLN/sq.m	0	2	0	0	0	0	0	0	0	0
(4 001; 6 000] PLN/sq.m	958	393	692	259	602	208	534	96	320	152
(6 001; 8 000] PLN/sq.m	7 583	3 008	6 195	2 600	5 649	2 115	5 076	1 649	4 977	1 669
(8 001; 10 000] PLN/sq.m	3 745	1 731	3 650	1 599	4 697	1 681	5 334	1 553	5 288	1 748
>10 001 PLN/sq.m	1 301	321	1 260	399	2 162	411	2 981	639	2 839	688
dwellings space range	13 587	5 455	11 797	4 857	13 110	4 415	13 925	3 937	13 424	4 257
<= 40 sq.m	1 713	1 288	1 358	976	1 575	862	1 812	831	1 529	859
(40,1; 60] sq.m	5 978	2 582	5 065	2 381	5 585	2 125	5 860	1 852	5 861	2 006
(60,1; 80] sq.m	4 220	1 148	3 946	1 099	4 368	1 068	4 548	923	4 384	1 049
> 80,1 sq.m	1 676	437	1 428	401	1 582	360	1 705	331	1 650	343
average price of 1 sq.m. of dwelling	8 020	7 751	8 200	7 965	8 608	8 186	8 880	8 560	9 015	8 573
<=4 000 sq.m	9 290	7 894	9 599	8 366	10 019	8 587	10 357	9 214	10 605	9 160
(40,1; 60] sq.m	7 651	7 648	7 906	7 747	8 363	7 983	8 604	8 360	8 751	8 390
(60,1; 80] sq.m	7 820	7 584	7 937	7 860	8 197	8 073	8 461	8 133	8 517	8 318
> 80,1 sq.m	8 540	8 374	8 637	8 570	9 204	8 763	9 378	9 228	9 800	8 947
average offer price deviation	3,5%	x	2,9%	x	5,2%	x	3,7%	x	5,2%	x
<= 40 sq.m	17,7%	x	14,7%	x	16,7%	x	12,4%	x	15,8%	x
(40,1; 60] sq.m	0,0%	x	2,1%	x	4,8%	x	2,9%	x	4,3%	x
(60,1; 80] sq.m	3,1%	x	1,0%	x	1,5%	x	4,0%	x	2,4%	x
> 80,1 sq.m	2,0%	x	0,8%	x	5,0%	x	1,6%	x	9,5%	x

Source: NBP

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

specification	IV Q 2017		I Q 2018		II Q 2018		III Q 2018		IV Q 2018	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	9 235	8 054	9 346	8 057	9 347	8 320	9 612	8 243	10 276	8 259
growth (q-o-q)	102,5	100,4	101,2	100,0	100,0	103,3	102,8	99,1	106,9	100,2
growth (y-o-y)	106,0	106,6	106,0	108,5	105,2	106,4	106,7	102,8	111,3	102,5
dwellings price range	3 499	3 222	3 312	2 785	3 338	3 183	2 996	1 637	2 756	1 227
<=4 000 PLN/sq.m	0	4	0	1	0	2	0	1	0	0
(4 001; 6 000] PLN/sq.m	229	411	190	375	146	309	144	141	69	97
(6 001; 8 000] PLN/sq.m	1 073	1 368	1 019	1 177	1 033	1 302	799	692	595	534
(8 001; 10 000] PLN/sq.m	1 183	973	1 118	815	1 136	1 025	1 020	544	858	410
>10 001 PLN/sq.m	1 014	466	985	417	1 023	545	1 033	259	1 234	186
dwellings space range	3 499	3 222	3 312	2 785	3 338	3 183	2 996	1 637	2 756	1 227
<= 40 sq.m	565	1 047	449	982	474	973	363	518	403	376
(40,1; 60] sq.m	1 253	1 398	1 187	1 176	1 268	1 394	1 050	705	929	553
(60,1; 80] sq.m	808	505	801	428	821	527	740	284	660	224
> 80,1 sq.m	873	272	875	199	775	289	843	130	764	74
average price of 1 sq.m. of dwelling	9 235	8 054	9 346	8 057	9 347	8 320	9 612	8 243	10 276	8 259
<=4 000 sq.m	9 818	8 445	9 923	8 611	10 139	8 917	10 435	8 906	11 447	9 071
(40,1; 60] sq.m	8 901	7 769	9 098	7 725	9 111	8 017	9 437	7 895	10 077	7 985
(60,1; 80] sq.m	8 692	7 658	8 930	7 444	8 780	7 682	9 072	7 719	9 672	7 422
> 80,1 sq.m	9 841	8 748	9 768	8 603	9 849	8 931	9 950	8 630	10 422	8 715
average offer price deviation	14,7%	x	16,0%	x	12,3%	x	16,6%	x	24,4%	x
<= 40 sq.m	16,3%	x	15,2%	x	13,7%	x	17,2%	x	26,2%	x
(40,1; 60] sq.m	14,6%	x	17,8%	x	13,6%	x	19,5%	x	26,2%	x
(60,1; 80] sq.m	13,5%	x	20,0%	x	14,3%	x	17,5%	x	30,3%	x
> 80,1 sq.m	12,5%	x	13,5%	x	10,3%	x	15,3%	x	19,6%	x

Source: NBP

Table 15 Average prices of housing sq. m in the PM in Wrocław

specification	IV Q 2017		I Q 2018		II Q 2018		III Q 2018		IV Q 2018	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	6 526	6 389	6 745	6 508	7 020	6 651	7 145	6 750	7 230	6 905
growth (q-o-q)	102,1	99,3	103,4	101,9	104,1	102,2	101,8	101,5	101,2	102,3
growth (y-o-y)	101,3	103,7	104,4	106,1	108,7	105,3	111,8	104,9	110,8	108,1
dwelling price range	5 853	2 156	5 538	1 633	5 777	1 676	5 510	1 614	5 662	1 272
<=4 000 PLN/sq.m	7	2		1	7	1		7		
(4 001; 6 000] PLN/sq.m	2 451	875	2 125	583	1 955	653	1 568	498	1 384	342
(6 001; 8 000] PLN/sq.m	2 719	1 077	2 482	901	2 469	787	2 503	874	2 775	716
(8 001; 10 000] PLN/sq.m	509	179	731	131	1 018	172	1 124	212	1 112	172
>10 001 PLN/sq.m	167	23	200	17	328	63	315	23	391	42
dwelling space range	5 853	2 156	5 538	1 633	5 777	1 676	5 510	1 614	5 662	1 272
<= 40 sq.m	752	374	752	289	949	292	921	302	906	217
(40,1; 60] sq.m	2900	1171	2752	824	2739	821	2621	828	2636	657
(60,1; 80] sq.m	1805	511	1694	442	1753	474	1643	400	1700	325
> 80,1 sq.m	396	100	340	78	336	89	325	84	420	73
average price of 1 sq.m. of dwelling	6 526	6 389	6 745	6 508	7 020	6 651	7 145	6 750	7 230	6 905
<=4 000 sq.m	7010	6986	7469	6945	8279	7152	8397	7419	8416	7547
(40,1; 60] sq.m	6508	6369	6713	6420	6861	6573	7008	6579	7125	6781
(60,1; 80] sq.m	6335	5969	6469	6377	6566	6474	6613	6626	6729	6659
> 80,1 sq.m	6614	6547	6774	6564	7136	6674	7396	6626	7359	7207
average offer price deviation	2,1%	x	3,6%	x	5,5%	x	5,9%	x	4,7%	x
<= 40 sq.m	0,3%	x	7,5%	x	15,7%	x	13,2%	x	11,5%	x
(40,1; 60] sq.m	2,2%	x	4,6%	x	4,4%	x	6,5%	x	5,1%	x
(60,1; 80] sq.m	6,1%	x	1,4%	x	1,4%	x	-0,2%	x	1,1%	x
> 80,1 sq.m	1,0%	x	3,2%	x	6,9%	x	11,6%	x	2,1%	x

Source: NBP

Table 16 Average prices of housing sq. m in the SM in Wrocław

specification	IV Q 2017		I Q 2018		II Q 2018		III Q 2018		IV Q 2018	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	6 365	5 906	6 423	5 841	6 485	6 077	6 491	6 159	6 571	6 191
growth (q-o-q)	101,2	102,5	100,9	98,9	101,0	104,0	100,1	101,3	101,2	100,5
growth (y-o-y)	103,3	107,8	102,7	108,4	103,5	111,6	103,1	106,9	103,2	104,8
dwelling price range	1 512	294	1 406	289	1 544	272	1 554	248	1 290	242
<=4 000 PLN/sq.m	25	13	20	12	18	7	19	4	18	8
(4 001; 6 000] PLN/sq.m	715	148	648	159	686	141	676	113	539	109
(6 001; 8 000] PLN/sq.m	609	115	580	105	649	103	667	113	558	100
(8 001; 10 000] PLN/sq.m	108	17	99	12	125	19	131	14	118	22
>10 001 PLN/sq.m	55	1	59	1	66	2	61	4	57	3
dwelling space range	1 512	294	1 406	289	1 544	272	1 554	248	1 290	242
<= 40 sq.m	227	65	206	48	231	41	233	37	213	50
(40,1; 60] sq.m	599	128	561	123	592	122	606	111	505	107
(60,1; 80] sq.m	441	73	418	80	477	83	482	78	384	58
> 80,1 sq.m	245	28	221	38	244	26	233	22	188	27
average price of 1 sq.m. of dwelling	6 365	5 906	6 423	5 841	6 485	6 077	6 491	6 159	6 571	6 191
<=4 000 sq.m	7 175	6 819	7 236	6 607	7 330	7 079	7 338	7 023	7 344	6 782
(40,1; 60] sq.m	6 396	5 888	6 464	5 985	6 498	6 248	6 502	6 325	6 574	6 364
(60,1; 80] sq.m	6 113	5 385	6 143	5 366	6 220	5 611	6 256	5 638	6 313	5 811
> 80,1 sq.m	5 994	5 226	6 090	5 410	6 170	5 184	6 101	5 724	6 215	5 229
average offer price deviation	7,8%	x	10,0%	x	6,7%	x	5,4%	x	6,1%	x
<= 40 sq.m	5,2%	x	9,5%	x	3,5%	x	4,5%	x	8,3%	x
(40,1; 60] sq.m	8,6%	x	8,0%	x	4,0%	x	2,8%	x	3,3%	x
(60,1; 80] sq.m	13,5%	x	14,5%	x	10,9%	x	11,0%	x	8,6%	x
> 80,1 sq.m	14,7%	x	12,6%	x	19,0%	x	6,6%	x	18,9%	x

Source: NBP

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