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Information on home prices and the situation in the housing and commercial real estate market in Poland in 2019 Q4

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The analysis of the situation in the real estate market in Poland in 2019 Q4¹ leads to the following conclusions:

- **In 2019 Q4, the housing market continued to experience heightened activity and price growth.** The number of sold contracts for the construction of dwellings in the largest primary markets was high, yet below the levels recorded in the corresponding periods of the previous year. Both the primary and the secondary market saw a rise in home prices along with growing construction costs driven by strong construction demand in the entire economy.
- **According to NBP data, the analysed period saw continued growth in both average asking and transaction prices per square metre of developer housing² in the primary markets (PM) in the analysed cities and in average prices per square metre of housing in the secondary markets (SM).** Yet, prices determined with the use of the hedonic index³ in 6 cities (6M) increased which means a further increase in prices per square metre of comparable housing. In 6 cities (6M) they increased by approx. 4.5% q/q and by 13.9% y/y, in 10 cities (10M) by 2.9% q/q and 13.6 y/y and in Warsaw by 2.5% q/q and by 10.5 % y/y, respectively. Asking prices grew faster than transaction prices, which means that sellers expected faster price increases. The difference in average transaction and asking prices persisted, which may suggest that buyers do not accept high asking prices. Average (asking and transaction) rental rates per square metre of housing (excluding service charges and fees for utilities) saw an increase for another consecutive quarter. Also the supply of new housing in the local rental market has been on the rise.
- **The index of the estimated availability of housing in large cities** (based on average monthly wages in the enterprise sector) **slightly decreased against the level recorded in the previous quarter** and stood at 0.78 square metre in the analysed quarter; consequently, it was higher by 0.30 square metre (i.e. by approx. 63%) against the record low observed in 2007 Q3. The index of the estimated maximum availability of a residential mortgage loan⁴ slightly increased whereas the loan-financed availability of housing for an average household declined somewhat. Growth in home prices slightly exceeding wage growth was the main factor changing availability indicators.

¹ The analysis carried out in this issue of the Information is based on data available till 2019 Q4. Due to delays in access to certain data some charts contain information until 2019 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. Historical data are subject to revision. Price quotations (BaRN database) for 2019 Q4 include approx. 110 thousand records, including approx. 30.9% concerning transactions and 69.1% concerning offers. The total of 3.5 million records have been gathered in the database, of which 24.0% concerning transactions and 76.0% concerning offers.

² As regards transactions in the primary market in the period of the past three years saw an increase in the number of dwellings ready for occupation sold in the so-called turn-key standard, especially among housing purchased for investment purposes. This concerns in particular real estate developers quoted on the Warsaw Stock Exchange. This issue of the information analyses the features and prices of dwelling in a "core and shell" (developer's) standard.

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.

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.

- **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 six cities (6M), the profitability of housing investment continued to be high as compared to interest on bank deposits, slightly lower than yields on 10-year government bonds and remained close to the return likely to be achieved in the commercial property market. The residential mortgage loan servicing costs to rent ratio makes it possible to finance credit costs with income from rent.
- **In the analysed quarter the value of newly granted residential mortgage loans⁵ in PLN⁶** (excluding renegotiated agreements) **stood at approx. PLN 11.8 billion**, i.e. was by approx. PLN 2.5 billion (17.8%) lower as compared with the figures recorded in the previous quarter and by approx. PLN 0.8 billion (6.1%) lower as compared with the 2018 Q4 figures. In December 2019 the balance of residential mortgage loans stood at PLN 443.2 billion, i.e. was by PLN 27.5 billion higher than the December 2018 figure (an increase by 6.6% y/y against 7.0% in 2018). The results of the NBP credit market survey⁷ point to credit granting criteria tightening by a few banks and a considerable rise in credit margin amid absence of changes in other credit granting conditions. Banks recorded a slight decline in demand for housing loans in the analysed period. In 2020 Q1 banks anticipate a slight tightening of mortgage lending policy and a minor rise in demand.
- **Since 2012 the share of FX denominated loans⁸ in the currency structure of residential mortgage loans at banks has been on a steady decline, supporting financial and macroeconomic stability.** The decreasing share of FX loans is both due the fact that banks ceased to grant such loans to persons not being in receipt of a regular income in a given currency and due to regular amortisation, earlier repayments and the fact that those loans are refinanced with PLN denominated loans.
- **Despite the minor downward trend in the estimated ROE on investment observed since 2016, this indicator continues at a relatively high level as compared to other industries – in 2019 Q4 it stood at**

⁵ The 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 site: http://www.nbp.pl/home.aspx?f=statystyka/pieniezna_i_bankowa/oprocentowanie.html.

⁶ According to BIK data, the number of residential loans granted in 2019 by banks and SKOK was 4.0% higher than in 2018 and their value by 14.9%. Positive growth in the sale of residential loans both in terms of number and value concerns mainly loans in excess of PLN 250 thousand, and in particular those in excess of PLN 350 thousand. The quality index of the housing loan portfolio confirms the long-term low level of credit risk associated with granting housing loans. According to AMRON report, in 2019 Q4 the value of the average residential mortgage loan exceeded PLN 283 thousand, posting a 7.7% y/y increase. The share of loans with LtV between 30 and 50% and in excess of 80% has slightly dropped, while loans with LtV ratio up to 30% and between 50 and 80% have gained popularity. In the structure of new loan agreements, compared to 2019 Q3, the share of residential mortgage loans with a maturity of 25 to 35 years increased, while the share of loans with other maturities decreased. At the end of 2019 Q3, the number of active loan agreements exceeded 2.39 million i.e. increased in quarter-on-quarter terms by 3.7 thousand contracts and their value amounted to PLN 443.1 billion.

⁷ Situation in the credit market – results of the senior loan officer opinion surveys, 2020 Q1, NBP, January 2020 https://www.nbp.pl/home.aspx?f=aktualnosci/wiadomosci_2019/kredytowy2019_3.html. In the opinion of the surveyed entities, the lending policy tightening was driven by deteriorating forecasts in the residential real estate market and changing demand for residential loans as well as restrictions in granting residential loans and adjustments in lending within a banking group. The main driving forces behind changing demand for residential loans included the tightening of mortgage lending criteria and, among others, price increases in the real estate market.

⁸ According to NBP data, the share of foreign currency denominated loans in the currency structure of residential mortgage loans extended by banks as at the end of 2019 Q4 decreased to 27.1% as compared to 28.7% in the preceding quarter and the peak 71.3% share recorded in 2009 Q1. According to BIK data, the value of CHF residential mortgage loans portfolio as at 31/12/2019 stood at PLN 101.8 billion (a 5.0% decline in year-on-year terms) and the number of loans totalled 451.63 thousand (a 4.0% decline in year-on-year terms). Residential mortgage loans in CHF, similarly to those in PLN, perform well which is due, apart from the income aspect (rising household income), to negative interest rates in Switzerland.

approx. 20% (see Figure 38). Lower return on equity is the result of growing costs of homebuilders driven by growing prices of construction materials⁹, increasing wages and growing prices of developable land. This has a lesser impact on real estate development sector which operates on large margins, yet continues to pose risk in the construction sector¹⁰. According to Coface experts¹¹, in 2019 the number of bankruptcies and restructuring proceedings in the construction industry declined. At the same time, the share of the construction sector in the total number of bankruptcy and restructuring proceedings decreased by 2.3 percentage points in year-on-year terms, mainly as a result of the growing number of bankruptcies in transport, trade and agriculture.

- **December 2019 saw a record high number of both completed dwellings made ready for occupancy¹², as well as the number of home construction starts¹³.** The estimated high rates of return on housing development projects and strong demand urged real estate developers to apply for subsequent building permits¹⁴ for dwellings whose construction is supposed to start within 2 years.
- **The annual sale of dwellings and home construction contracts in Poland's six largest primary markets¹⁵ increased in relation to the level recorded in the previous quarter and reached approx. 65.4 thousand. The stock of unsold completed dwellings (and contracts for their construction) in those markets posted a slight increase as compared with the preceding quarter and reached approx. 50.3 thousand at the end of 2019. The number of completed dwellings ready for occupancy in the sale offer in 6 cities (6M) increased compared to the previous quarter (+0.5 thousand) and the home selling time in the primary market in the six largest markets remained at the 3.1 quarter level. This still means that new offers sell quickly and home buyers have fewer possibilities of choosing housing than in the previous quarters. The home selling time in the secondary market estimated by NBP decreased in 6 cities and remained unchanged in Warsaw and 10 analysed cities, which means that at least part of demand was shifted into those markets.**

⁹ Real estate developers claim that in the current situation, the fact of having their own labour force enables them to control costs more effectively and meet construction deadlines. Developers cope with the situation in different ways. Some of them have their own general contractors in their group. Others have gained new competencies and extended their area of operation. There are also some who focus on breaking down 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 In 2019 Q2 profitability of construction companies employing from 9 to 49 persons stood at approx. 8% (half the figure observed in 2018 Q4 (see Figure 103)). On the other hand in 2019 Q3 profitability of construction companies employing more than 49 persons increased to approx. 5% from approx. 2% noted in the previous quarter (see Figure 104).

¹¹ According to Coface experts (Bankruptcies and restructuring proceedings of companies in Poland in 2019), many companies in the construction industry recorded an improvement in profitability. This was due to the slowdown in the growth of prices of building materials and labour costs as well as the fact that unprofitable contracts signed in the years 2015-2017 were replaced with contracts on more favourable terms. There was also a high demand for residential and commercial construction.

¹² According to GUS data, in 2019 Q4 a total of approx. 61.7 thousand dwellings were completed and made ready for occupancy, i.e. approx. 6.6 thousand more than in 2018 Q4 and approx. 10.8 thousand more as compared to the previous quarter. In 2019 a total of approx. 207.2 thousand building permits were issued, i.e. 22.4 thousand more than in 2018 (a 12.1% y/y increase).

¹³ According to GUS data, in 2019 Q4 the construction of a total of approx. 58.8 thousand dwellings was launched i.e. approx. 10.9 thousand more than in 2018 Q4, yet, approx. 4.2 thousand fewer as compared to the previous quarter. In 2019 a total of approx. 237.3 thousand building permits were issued, i.e. 10.9 thousand more than in 2018 (a 6.9% y/y increase).

¹⁴ According to GUS data, in 2019 Q4 approx. 67.2 thousand home building permits were issued in Poland, i.e. approx. 3.4 thousand more than in 2018 Q4 but and approx. 5.3 thousand fewer than in the previous quarter. In 2019 a total of approx. 268.5 thousand building permits were issued, i.e. 11.4 thousand more than in 2018 (a 4.4% y/y increase).

¹⁵ Based on JLL/REAS data.

- **As a result of the supply and demand mismatch construction in progress¹⁶ in Poland is at a relatively low level.** The persisting difference between transaction prices in the primary market and the secondary market in six cities (6M) and in Warsaw means that home buyers do not accept higher developers' prices and shift their demand to the secondary market (see Figure 5). Also, the structure of dwellings on offer fails to meet buyers' preferences - not enough relatively small dwellings to meet the demand.
- **High demand for housing continued to be accompanied by a strong demand for building land for developer construction,** especially in districts with good access to transportation facilities and with developed urban infrastructure and retail premises, especially in Warsaw, Kraków and Poznań. Consequently, developable land prices continued to rise. Cheaper plots in poorer locations and with poorer infrastructure are also being purchased. The phenomenon of crowding out infrastructure and commercial (office) construction by residential construction has been observed.
- **As of 1 January 2019 the perpetual usufruct right to the land on which apartment buildings and single-family houses are built, changed, by operation of law, into ownership right¹⁷.** Yet, formalities and related payment procedures are at a fairly early stage¹⁸.

¹⁶ The indicator for Poland calculated on the basis of GUS data, as the sum of the last four quarters difference between the number of dwellings whose construction was started in the quarter and dwellings completed and made ready for occupancy in the quarter.

¹⁷ Journal of Laws of 2018, item 1716 (the Act of 20 July 2018, amended on 4 December 2018). A total of 2.5 million home owners will be granted this ownership right. Transfer of ownership fee may be repaid during a period of 20 years. The amount of the fee equals 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 a single-time payment); in the case of municipal real estate the amount of rebates is fixed by municipalities. In 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. Transactions involving dwellings constituting a separate real estate whose ownership grants share in land granted for long-term use under perpetual usufruct right cause problems some land and mortgage registry courts demand certificates attesting ownership transformation when making entries to the land and mortgage registers which is a time-consuming procedure, often hindering the possibility of concluding the home purchase contract.

¹⁸ By the end of 2019, large agglomerations had issued only some of certificates confirming the transformation of perpetual usufruct right into ownership. According to the information of the Municipal Office of the capital city of Warsaw published on its website, as of 6 February 2020, 88% of Warsaw's land had its ownership transformed. The residents retain the right to discounts applicable in 2019.

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 (NHS)					
1) Housing Plus Packet					
1.1) Scheme supporting the creation of dwellings for rent, protected housing, dormitories, shelters for the homeless, heating rooms and temporary dwellings.	Journal of Laws of 2018, item 2321	2007	PLN 6.2 billion in 2018-2025		Under the scheme 1660 development projects worth approx. PLN 4.3 billion were qualified for financing. The scheme assumes the creation of over 30 thousand dwellings/accommodation places.
1.2) Support scheme for the construction of social rental dwellings (government programme supporting housing construction in the form of debt financing, on preferential terms, of development and construction projects aimed to create dwellings for rental or dwellings to which occupiers will be given a cooperative housing tenancy right)	Journal of Laws of 2018, item 1020, as amended	2016	up to PLN 4.5 billion over a period of 10 years	up to 30 thousand dwellings over a period of 10 years	Under the scheme: - 259 applications have been submitted for the total amount of PLN 1.5 billion, for the construction of 11844 dwellings, - 111 loan agreements have been signed for the total amount of PLN 602 million intended to finance the construction of 5069 dwellings, - 3008 dwellings in 71 development projects were completed and made ready for occupancy.
1.3) Housing Plus - equity (PFR Nieruchomości)	Resolution of the Council of Ministers No. 115/2016 of 27 September 2016	2016			A total of 695 dwellings were completed and made ready for occupancy under the scheme, 663 dwellings are under construction and approx. 15.5 thousand dwellings are at the pre-construction stage.
2) "Housing for the start" scheme	Journal of Laws of 2018, item 1540 and Journal of Laws of 2019, item 1309	2019	Maximum limit of expenditure in 2019-2028 - PLN 16 billion		Under the scheme: - 8 municipalities submitted 30 applications for the conclusion of agreements for the construction of 1197 dwellings. - 6 municipalities signed 24 agreements for subsidies for 861 dwellings. Total subsidies forecast to be paid out under agreements signed in the next 15 years: PLN 44.4 million, of which almost PLN 2.6 million in 2020. Until 10 March 2020 r. BGK had paid out rental subsidies amounting to approx. PLN 518.8 thousand.
Other (besides NHS)					
Housing for the Young	Journal of Laws of 2019, item 1116	2014	PLN 3.45 billion in 2014-2018		In 2014-2018 subsidies were granted to 110.4 thousand home buyers in the amount of PLN 2.9 billion, of which approx. PLN 0.9 billion for secondary market housing. Financial support allocated for the partial repayment of the loan is still granted. Loans with co-financing of home buyers' down payment granted in 2014-2018 will continue to be monitored.
Borrowers' Support Fund	Journal of Laws of 2015, item 1925	19 February 2016	PLN 593.8 million		In total, 920 agreements granting support in the amount of PLN 20.1 million have been concluded. Subsidies in the amount of PLN 15.8 million have been disbursed.
Rental Housing Fund (BGK Nieruchomości)		2014			The offer comprises 1820 dwellings in 16 development projects in 6 cities.

- **Imbalances resulting from the previously observed excess supply of space for rent as compared to the demand for it have decreased in the office real estate markets.** The favourable economic situation, including the creation of new jobs, also by international companies, is a factor boosting demand. New trends related to the use of office space (e.g. coworking offices) can also contribute to the sustained strong demand for such space. The supply of new space and space under construction continues on a high level.

According to market information, at the end of 2019 Q4 the stock of office space in the nine largest office markets¹⁹ reached approx. 11.2 million square metres; approx. 1.6 million square metres of office space was under construction. The vacancy rate in these markets slightly increased to 8.7% against 8.6%²⁰ at the end of 2019 Q3. In Warsaw at the end of 2019 Q4 it stood at 7.8%²¹ (compared to 8.2% in 2019 Q3). The vacancy rate of office space depends on the age²² and mainly on the location of the office building²³.

- **The retail space market continues to see a slight oversupply of space** (the vacancy rate all over Poland at the end of 2019 Q4 remained at a level of 3.6%²⁴. At the end of 2019 Q4 the total stock of modern commercial space exceeded 12 million square metres²⁵. A minor increase in new retail space may indicate that investors consider the market to be saturated, which is confirmed by the launch of projects transforming commercial centres into commercial and entertainment centres.
- **High availability of foreign financing has contributed and will continue to favour further growth in office space** and, to a lesser extent, retail real estate. This phenomenon may be largely attributed to the low level of interest rates in developed countries, and thus a low opportunity cost.
- **The market of modern warehouse space in Poland continues in the expansion phase.** Demand for warehouse space continues to be high. Demand for warehouse space comes from the logistic, courier and retail sector which is a natural consequence of the development of e-commerce. Demand also comes from the manufacturing sector. At the end of 2019 Q4, the total stock of the warehouse space exceeded 18.7 million square metres and over 1.9 million square metres of modern warehouse space is under construction. The vacancy rate all over Poland posted a slight increase to the level of 7%²⁶ compared to 6.2% in 2019 Q3.
- **The estimated value of investment transactions^{27, 28} in the commercial real estate market at the end of 2019 Q4** amounted to EUR 7.7 billion, which points to the persisting upward trend in investment continuing since 2015. Office space accounted for 50% of the value of transactions, retail space for 25% and warehouse space for 20%. It should be noted that the market of investment in multi-purpose real estate, hotels and student dormitories is on the rise. The value of this market segment stood at EUR 0.4 billion, posting a considerable increase compared to EUR 0.13 billion a year before.
- **The value of loans granted by domestic banks to enterprises for real estate development at the end of 2019 Q4 amounted to approx. PLN 62.9 billion**, which comprised loans granted to real estate developers for residential real estate, office space, retail space, warehouse space and industrial space and other real

¹⁹ The nine office real estate markets include: Warsaw, Kraków, Wrocław, Tri-City Agglomeration of Gdańsk, Sopot and Gdynia, Katowice, Łódź, Poznań, Szczecin, Lublin.

²⁰ See: Colliers International Report: Market Insights, Annual Report, 2020, Poland.

²¹ See: Colliers International Report: Market Insights, Annual Report, 2020, Poland.

²² Cushman & Wakefield, Marketing as one of the key factors supporting the modernisation process of older office buildings, 2018.

²³ See: Knight Frank, Report: Poland, Commercial Market, 1st half of 2018.

²⁴ See: Colliers International Report: Market Insights, Annual Report, 2020, Poland.

²⁵ See: Colliers International Report: Market Insights, Annual Report, 2020, Poland.

²⁶ See: Colliers International Report: Market Insights, Annual Report 2020, Poland.

²⁷ 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.

²⁸ See: Colliers International Report: Market Insights, Annual Report, 2020, Poland.

estate²⁹. Corporate debt resulting from residential real estate at the end of 2019 Q4 slightly decreased to PLN 5.1. The value of loans granted for office real estate also slightly decreased to PLN 16 billion as against PLN 16.2 billion in 2019 Q3. The value of loans granted for retail real estate dropped to PLN 17.2 as against PLN 18.1 billion in 2019 Q3. The value of loans granted for warehouse and industrial real estate remained stable at PLN 8.8 billion. The value of loans granted for other real estate³⁰ dropped to PLN 16 billion as against PLN 16.7 billion in 2019 Q3.

- **The ratio of impaired loans in the total corporate debt for real estate was close to that recorded in the previous quarter.** The share of impaired loans in the total loans for office real estate at the end of 2019 Q4 stood at 6.8% against 6.7% in 2019 Q3 and the share of loans granted for retail space remained stable at 11.3%. The same indicator for loans for warehouse and industrial space slightly increased to the level of 7.7% compared to 7.3% recorded in 2019 Q3 and remained stable at 8.8% for the loans for other real estate. The ratio of non-performing loans among loans granted for residential real estate declined slightly to the level of 21% compared to 21.8% in 2019 Q3. The relatively high value of this indicator is mainly due to banks holding in their portfolio loans from previous years³¹.
- **Transaction rents for A class office space in Warsaw, quoted in EUR per square metre per month, slightly declined, remaining stable in the other eight large cities and in other seven smaller voivodeship cities³².** In Warsaw transaction rents for A class office space stood at approx. EUR 19/sq. M./month and in the other analysed voivodeship cities ranged from EUR 11 to 14/sq. m./month. **Rents in B class office buildings in the largest markets also remain stable.** In 2019 Q2 the hedonic index of rents³³, which is resistant to the change in the analysed sample, remained stable for Warsaw. However, for Poznań and Tri-City Agglomeration, this index showed a slight increase which means that rents for space of similar quality were higher than half a year ago.
- **Transaction rents for retail space in shopping centres in Warsaw increased slightly and remained stable or followed a slight downward trend in other cities³⁴.** In 2019 Q2 the hedonic rent index for Warsaw, Poznań and the Tri-City Agglomeration decreased slightly compared to 2018 Q4. In the sales market of small retail premises and office real estate the median of asking prices increased all over Poland.

²⁹ As of 2018 the category of loans granted for other real estate was divided into three categories, namely loans for warehouse and industrial space, loans for retail premises and loans for other real estate.

³⁰ See the 2018 FINREP definition: Loans for other real estate - loans for real estate other than residential, office, retail, industrial and warehouse premises (sub-category of loans for other real estate)".

³¹ See: Financial Stability Report, NBP, December 2018.

³² In the case of commercial real estate, the breakdown of the analysed cities is different than in the case of residential real estate. Eight cities include: Katowice, Kraków, Łódź, Poznań, Tri-City Agglomeration, Wrocław. Seven cities include: Białystok, Bydgoszcz, Kielce, Olsztyn, Opole, Rzeszów, Zielona Góra.

³³ The 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 particular periods. The hedonic index is calculated with the imputed method.

³⁴ 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 2019 Q4. The 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 24-33),
- 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 34-49),
- 5) housing construction and the residential market in selected cities in Poland (Figures 50-63),
- 6) rents and transaction prices of commercial real estate (Figures 64-70),

The analysis of home prices (asking, transaction and hedonic prices) 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, asking 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 Statistics Poland (GUS) and many studies containing sectoral 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, Warszawa, Wrocław
10M	10 large cities: 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 development company
GD	Households
GUS	Statistics Poland
EURIBOR	Euro Interbank Offered Rate
KNF	Polish Financial Supervision Authority
LIBOR	London Interbank Offered Rate
LTV	Loan-to-Value
MDM	Government-subsidized housing scheme Mieszkanie dla Młodych [Housing for the Young]
NBP	Narodowy Bank Polski
PONT	PONT Info Nieruchomości
RNS	Government-subsidized housing scheme Rodzina na Swoim [Family on their own]
RP	Primary housing market
RW	Secondary housing market
ROE	Return on equity
WIBOR	Warsaw Interbank Offered Rate
WIG20	Index including top 20 companies listed on the Warszawa Stock Exchange with the highest value of publicly traded shares
ZBP	Polish Bank Association
ZKPK	Accumulated index of changes in banks' credit policy criteria

1. Transaction, hedonic and asking 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 in 6M- PM

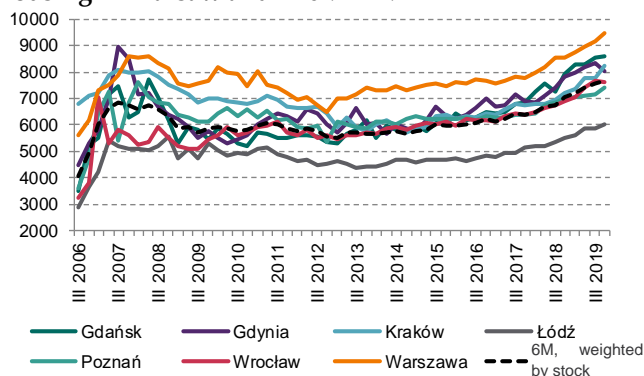
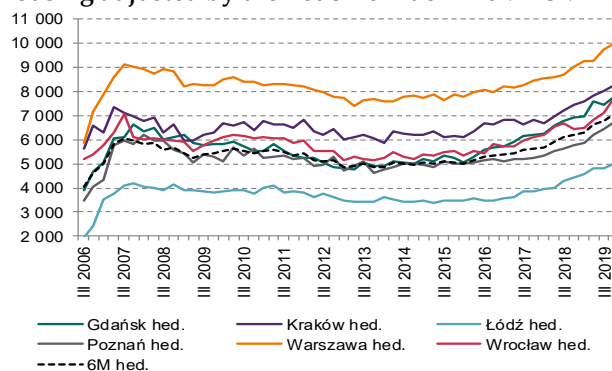


Figure 2 Transaction prices per square metre of housing adjusted by the hedonic index in 6M- SM



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 2018” 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

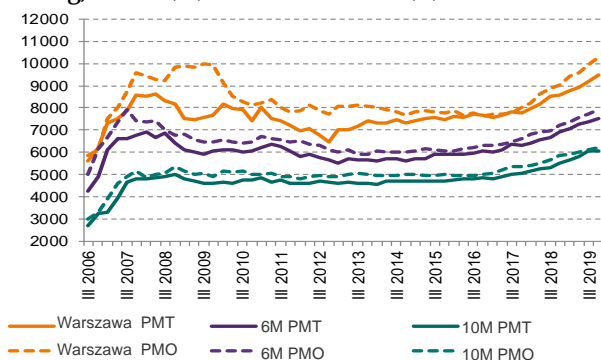
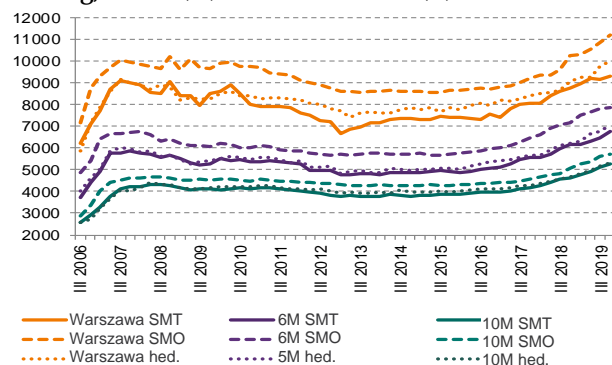


Figure 4 Weighted average price per square metre of housing, offers (O) and transactions (T)- SM



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

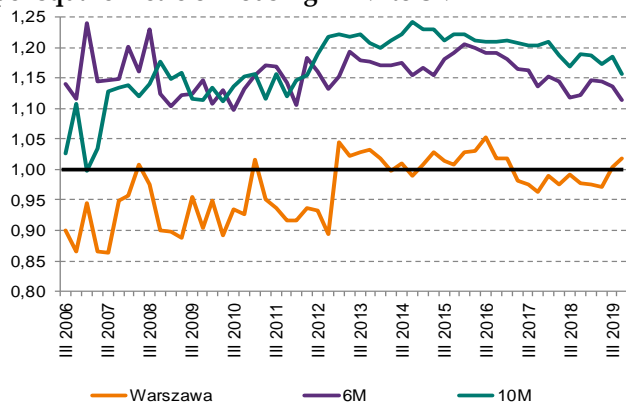
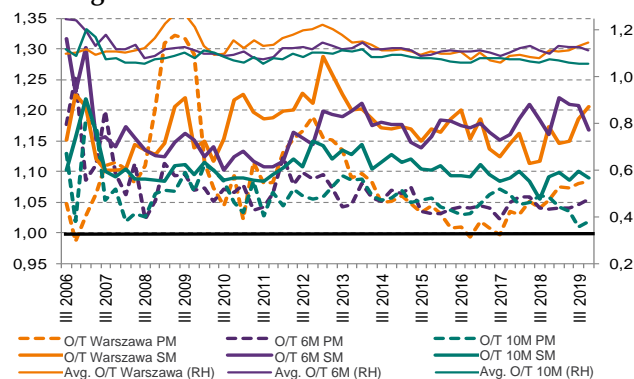


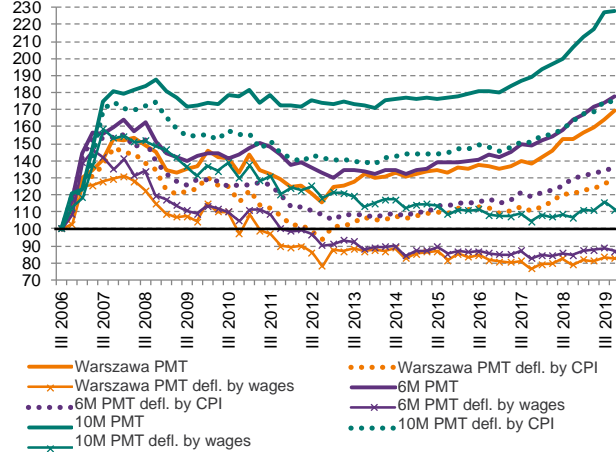
Figure 6 Ratio of the average weighted asking price (O) to transaction price (T) per square metre of housing – PM and SM



Source NBP

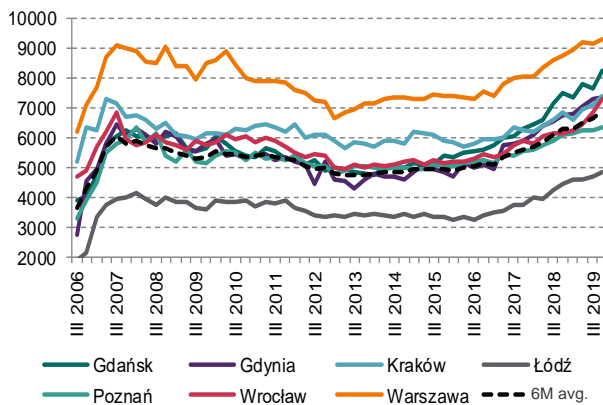
Source NBP

Figure 7 Index of the average weighted transaction price per square metre of housing in PM and deflated by CPI and wage gr. in the enterprise sector (2006 Q3 = 100)



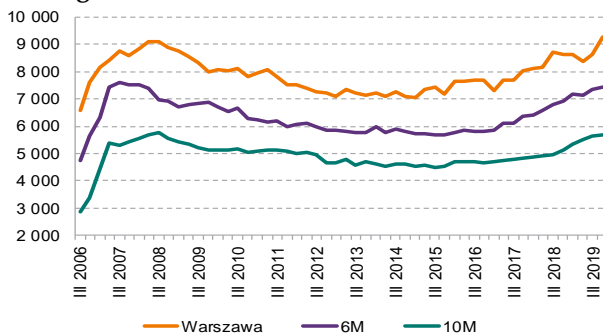
Source NBP, ZBP (AMRON), Statistics Poland (GUS)

Figure 9 Transaction price per square meter of housing in SM in Warsaw and in 6M



Source NBP

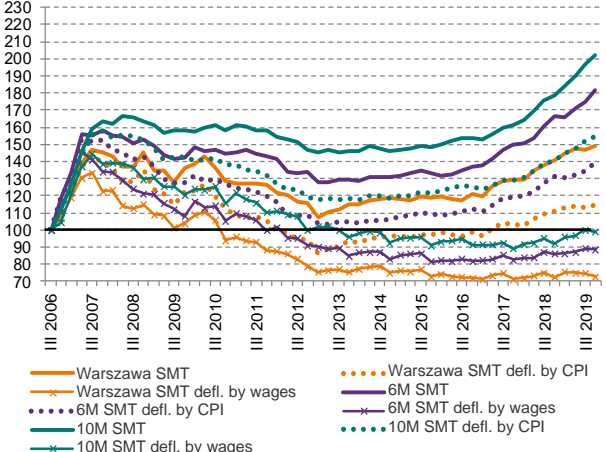
Figure 11 Average asking prices per square metre of housing in PM, selected markets



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

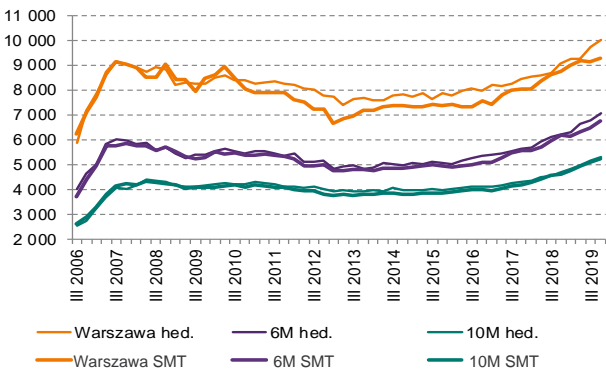
Source PONT Info Nieruchomości

Figure 8 Index of the average weighted transaction price per square metre of housing in SM, deflated by CPI and wage gr. in the enterprise sector (2006 Q3 = 100)



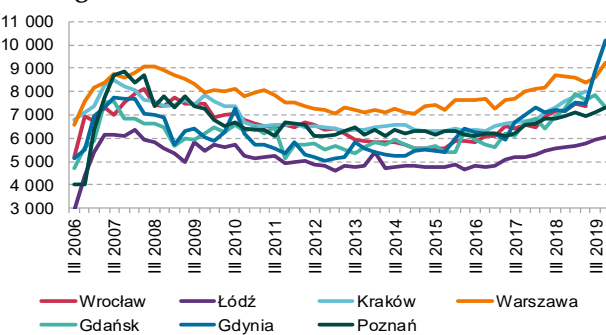
Source NBP, ZBP (AMRON), Statistics Poland (GUS)

Figure 10 Weighted average transaction price per square metre of housing in SM and average price adjusted by the hedonic price index, in selected markets



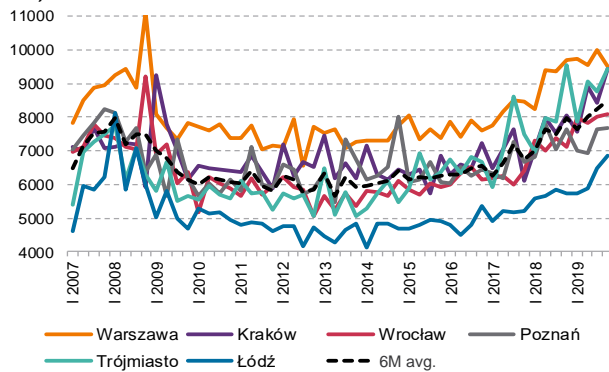
Source NBP

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



Source PONT Info Nieruchomości

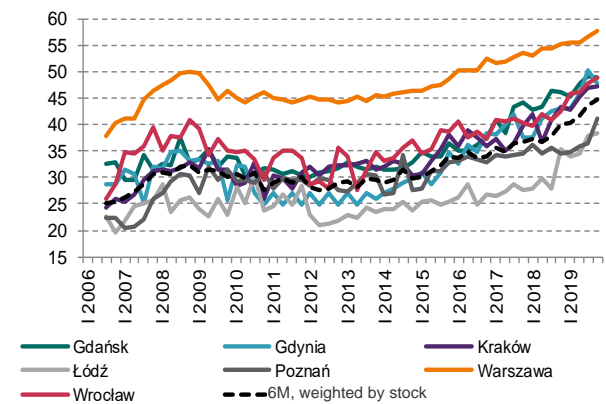
Figure 13 Average asking prices per square metre of housing, new home construction contracts launched—PM, selected markets



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

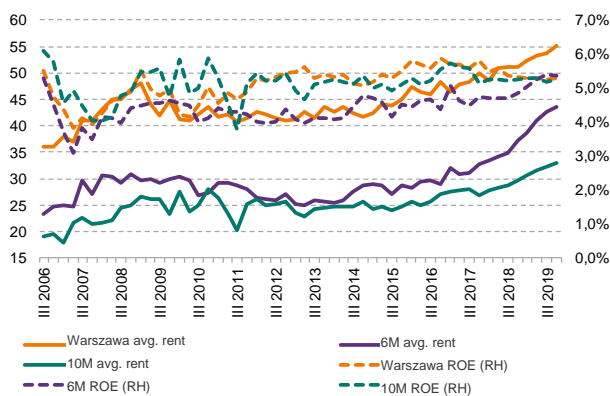
Source JLL/REAS

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



Source NBP

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

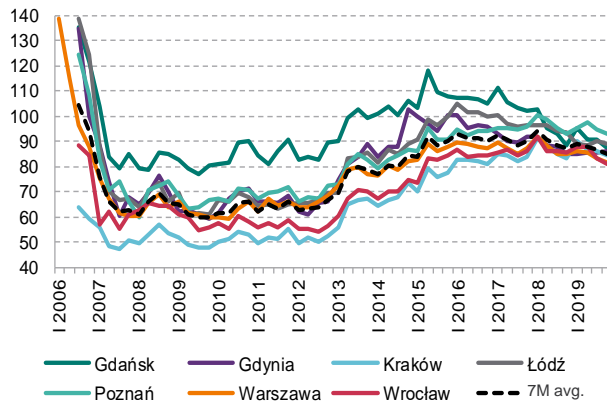


Note to Figure 15: price per square metre of housing 50% SM and 50% SM; the price per square metre of housing in the PM was increased to include the average costs of home finishing; the analysis does not take into account the high transaction costs in the housing market and the potentially long payback period.

Source NBP

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

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



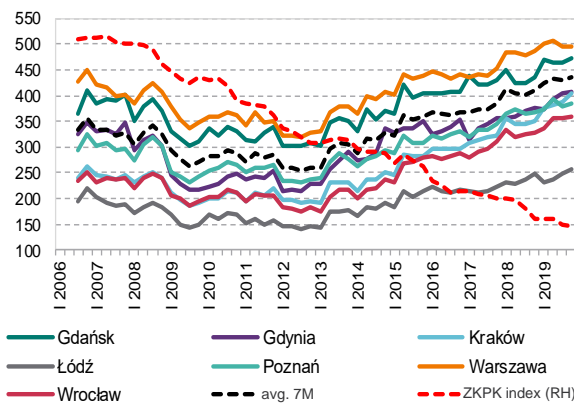
Source NBP, GUS

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.

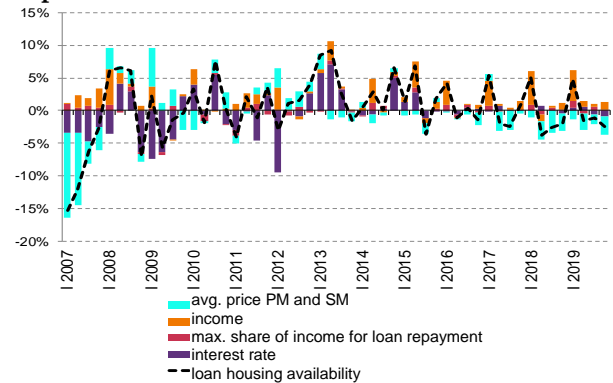
Figure 18 Estimated availability of residential mortgage loan and accumulated index of banks’ mortgage lending policy (ZKPK, right-hand scale)



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

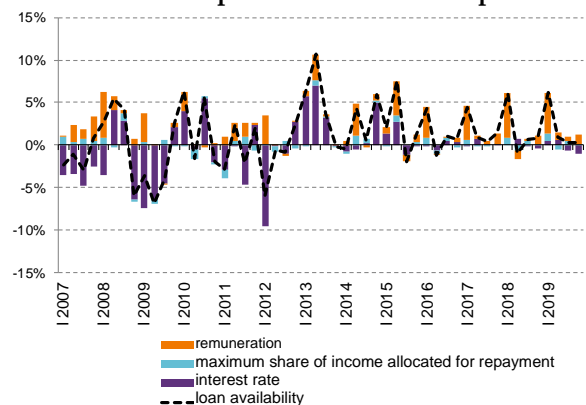
Source NBP, GUS

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



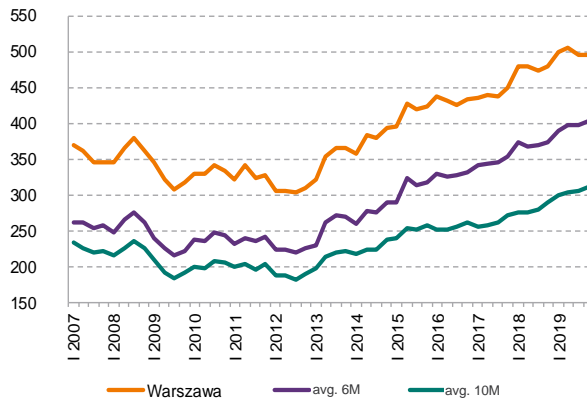
Source NBP, GUS

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



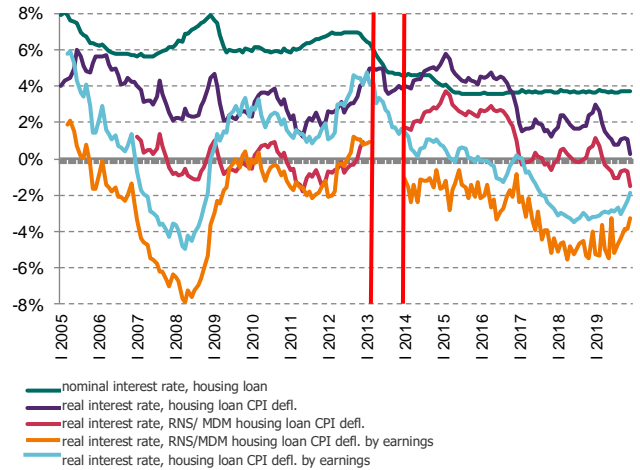
Source NBP, GUS

Figure 20 Estimated available mortgage loan for average gross wage in the enterprise sector in selected cities



Source NBP, GUS, BGK

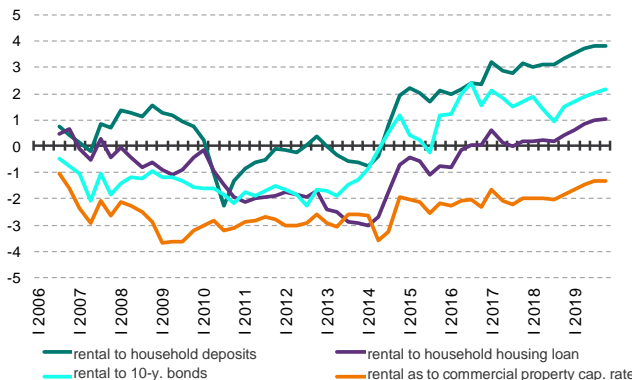
Figure 21 Residential mortgage loan burden for consumer deflated with CPI or wage growth in the enterprise sector



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 scheme (operating in the years 2007- 2012) and MDM scheme (operating in years 2014-2018) and Mieszkanie na Start (MS, First Housing) operating since 2019.

Source NBP, GUS, BGK

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

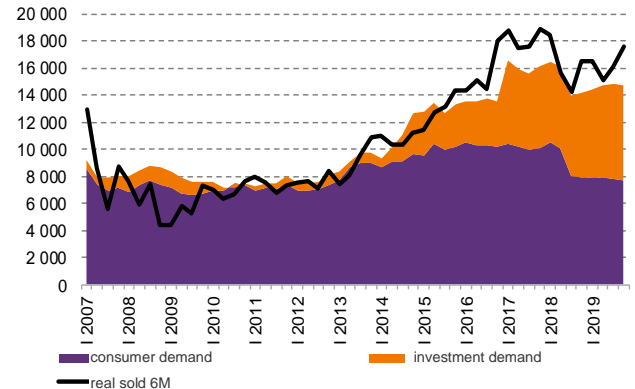


Note to Figure 22: values exceeding 0 denote higher profitability of purchasing property for rental than other household investment. Depreciation of 1.5 p.p. was deducted. This analysis does not take into account high transaction costs in the housing market and potentially long payback periods.

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 (the 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

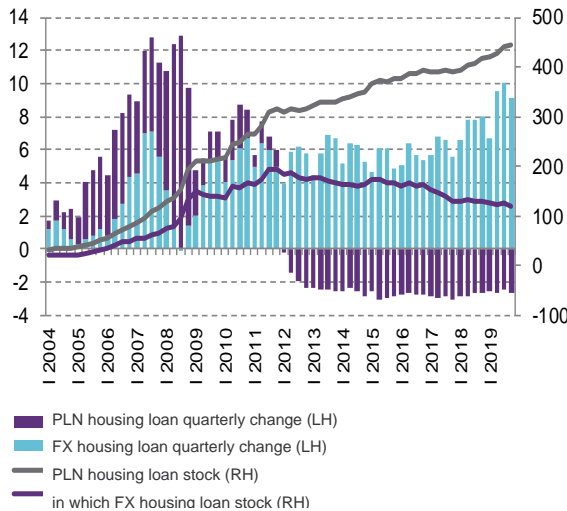
Figure 23 Estimated housing demand in PM (average in Warsaw and 6M) and its components



Source: NBP, JLL/REAS, GUS

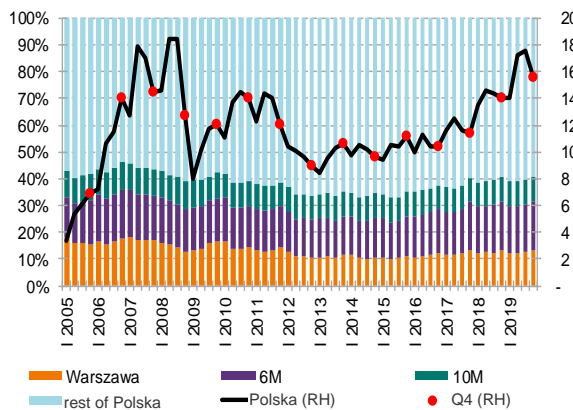
3. Disbursement of residential mortgage loans, interest rates

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)



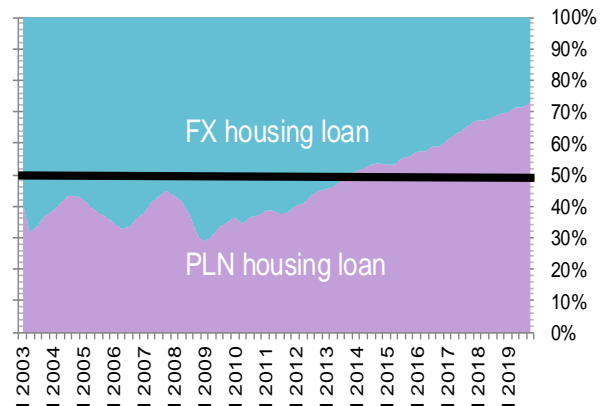
Source NBP

Figure 26 Geographical structure of the value of new residential mortgage loan contracts in Poland's selected cities



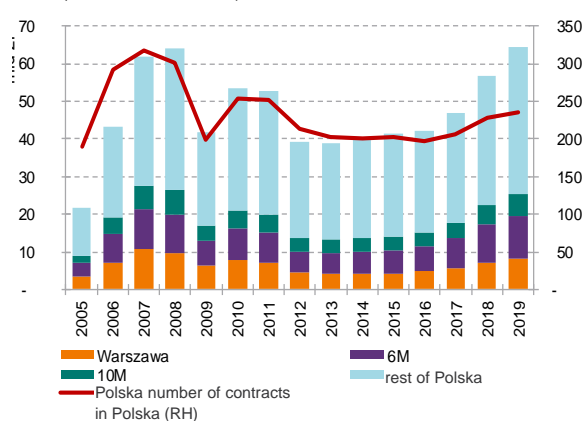
Note to Figures 26 and 27: the data inform about the residential mortgage loan contracts signed and not the actual disbursement of residential mortgage loans. PP means "the rest of Poland". Only first quarters are marked by red points in Figure 26.
Source BIK

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



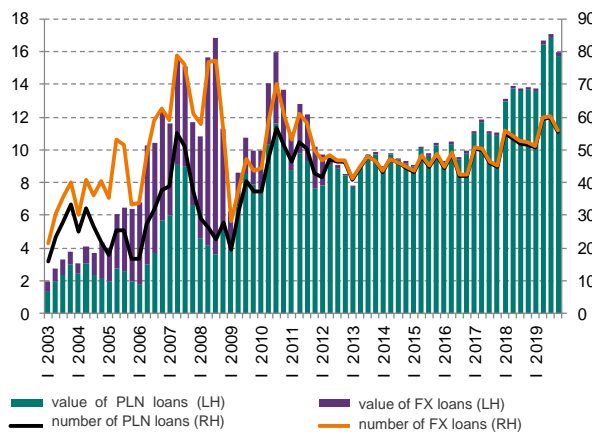
Source NBP

Figure 27 Value and number of new residential mortgage loans in first quarters in Poland's selected cities (in PLN billion)



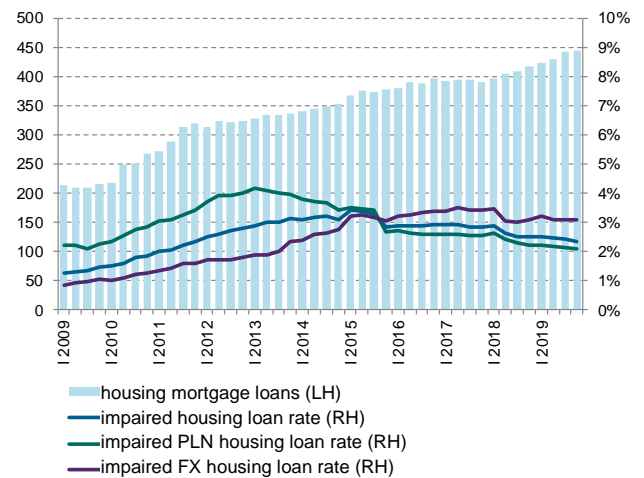
Source BIK

Figure 28 New residential mortgage loans: value and number



Source ZBP (AMRON)

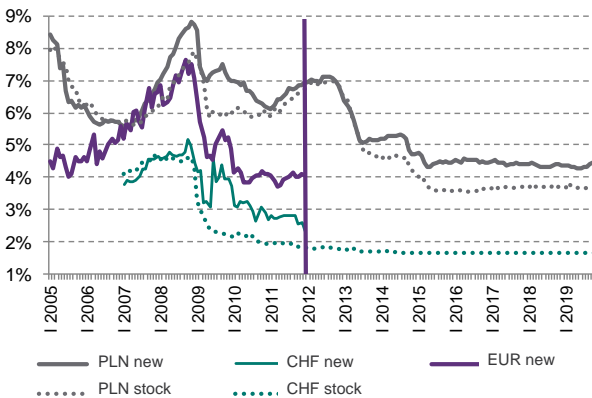
Figure 29 Household loans for housing real estate and loans recognised as impaired



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

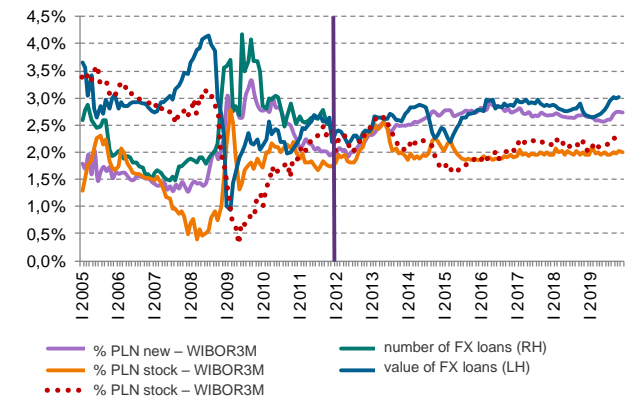
Figure 30 Interest rates on residential mortgage loans for households in Poland



Note to Figure 30 and 31: the violet vertical line separates a period with no FX loans which have not been practically granted since 2012. Note to Figure 31: bank margin is the difference between housing loan rate (NBP data) and the WIBOR3M rate or the LIBORCHF3M rate.

Source NBP

Figure 31 Bank margins (for WIBOR, LIBOR, EURIBOR 3M) in the case of residential mortgage loans



Source NBP

Table 2 Estimated disbursements of residential mortgage loans to households in Poland and estimated purchases of developer dwellings in 7 M (PLN billion) with clients' own funds and loans*/

Date	Estimated value of disbursed mortgage loans in Poland	Estimated value of housing transaction in the PM in 7M	Demand for loan-financed housing with client's down payment in PM in 7M	Client's down payment to loans in PLN in 7M	Demand for cash (without down payment) in PM in 7M.	Estimated share of cash-financed home purchases with buyer's down payment in PM in 7M
2015 Q1	8,996	3,980	2,051	513	1,929	61%
2015 Q2	10,640	4,435	2,426	606	2,010	59%
2015 Q3	10,341	4,709	2,358	589	2,351	62%
2015 Q4	11,237	5,113	2,562	641	2,551	62%
2016 Q1	9,742	5,158	2,221	555	2,937	68%
2016 Q2	11,661	5,425	2,659	665	2,767	63%
2016 Q3	9,632	5,234	2,196	549	3,038	69%
2016 Q4	9,933	6,635	2,265	566	4,370	74%
2017 Q1	10,945	6,851	2,495	624	4,356	73%
2017 Q2	12,139	6,479	2,768	692	3,712	68%
2017 Q3	11,794	6,676	2,689	672	3,987	70%
2017 Q4	10,652	7,152	2,429	607	4,724	75%
2018 Q1	11,914	7,015	2,716	679	4,299	71%
2018 Q2	12,807	6,072	2,920	730	3,152	64%
2018 Q3	13,024	5,697	2,969	742	2,727	61%
2018 Q4	12,584	6,759	2,869	717	3,890	68%
2019 Q1	11,865	7,155	2,705	676	4,450	72%
2019 Q2	14,653	6,713	3,341	835	3,372	63%
2019 Q3	14,374	7,283	3,277	819	4,006	66%
2019 Q4	11,818	8,155	2,695	674	5,460	75%

Note to Table 2: the estimates are based on the following assumptions:

The value of loan disbursements is based on the 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 amounts to approx. 57%. The estimated value of cash transactions constitutes the difference between the value of transactions in the market of 7 cities and loan disbursements, including own contribution. Data concerning prices for all the periods have been updated.

**/ Own funds may also originate from sold/exchanged property.

Source NBP, JLL/REAS, ZBP, GUS

Figure 32 Estimated RORAC on residential mortgage loans denominated in PLN for banks in Poland, taking into account interest income and non-interest profit and operating costs and bank tax

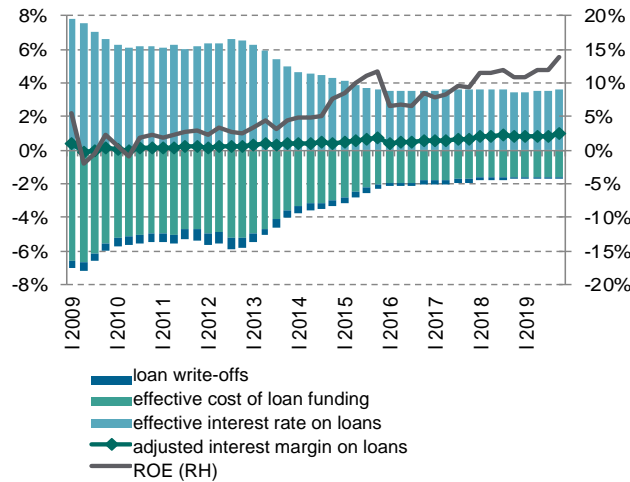
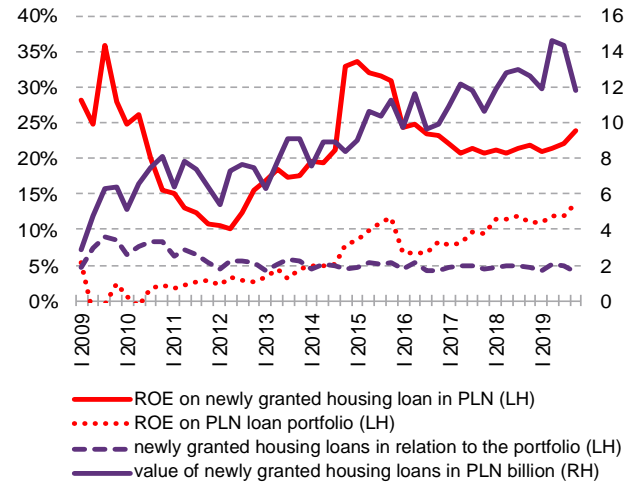


Figure 33 Estimated RORAC on residential mortgage loans denominated in PLN for banks in Poland, taking into account interest income and non-interest profit and operating costs and bank tax



Note to Figures 32 and 33: for calculation, interest income, non-interest income and operating costs were taken into account. The estimated RORAC (Return On Risk-Adjusted Capital) is calculated as the adjusted interest less operating cost plus non-interest income with residential mortgage loans less bank tax in relation to the required own contribution. Operating costs less non-interest income was estimated at 0.5% of the value of the credit portfolio. 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

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

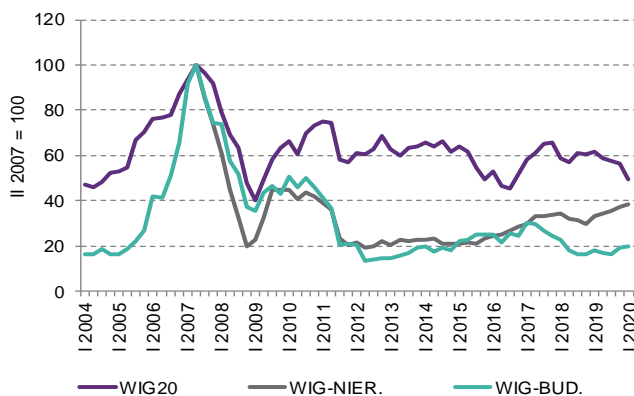
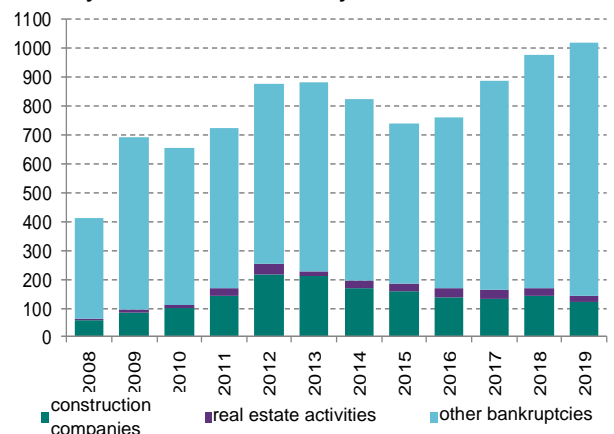


Figure 35 Number of bankruptcies in construction industry (as at the end of the year)



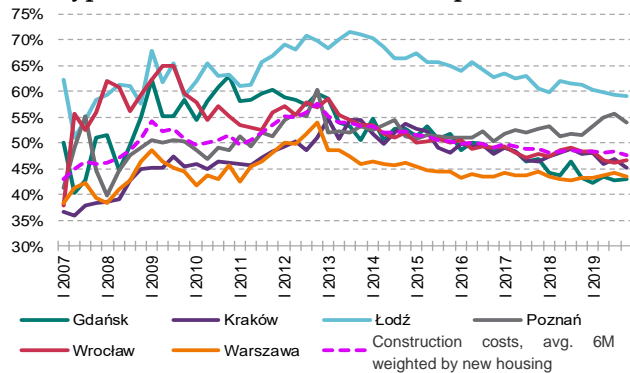
Note: harmonized data, 2007 Q2 = 100. The WIG index for real estate developers has been recorded since 2007 Q2; 2019 Q4 as at 4 March 2020.

Source Warsaw Stock Exchange

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

Source Coface Poland

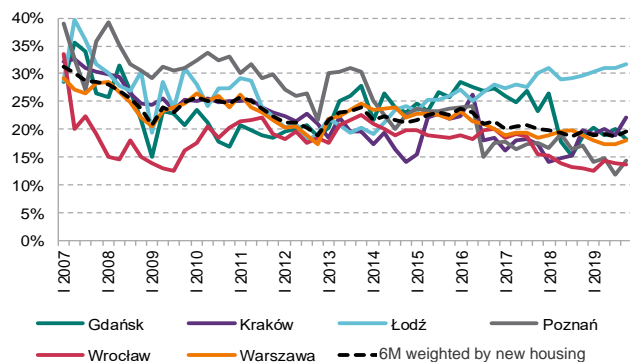
Figure 36 Estimated share of direct construction costs per square meter of the residential building's usable area (type 1122-302³⁵) in net transaction price in PM 6 M



Note to Figure 36: Since 2014 NBP has used its own appraisal of land for residential multifamily construction.

Source NBP based on Sekocenbud

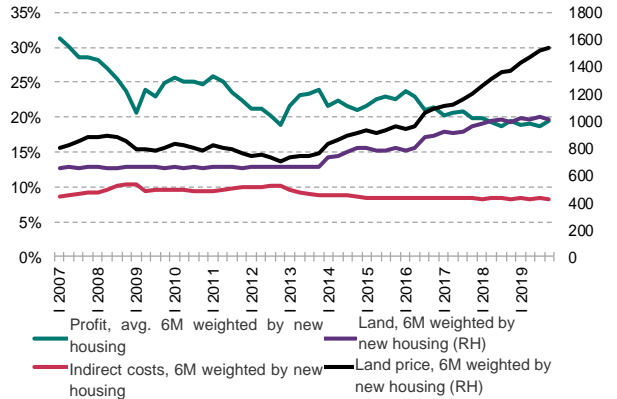
Figure 38 Estimated rate of return on investment projects (type 1122-302³⁵) in the largest cities



^{*}/ROE modified = net financial result/ (income from sale – net result from sale); ^{**}/ DFD – average large real estate development company (according to GUS employment =>50 persons), MFD – average small real estate development company (employment 9-49 persons); ^{***}/ no data available for 2019 Q4.

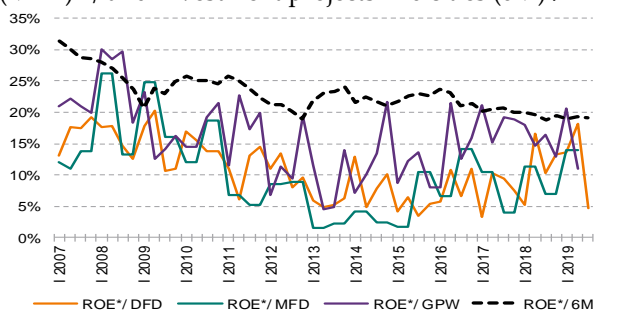
Source NBP based on Sekocenbud, GUS (F01)

Figure 37 Estimated share of various construction costs per square meter of the residential building's usable area (type 1122-302) in net transaction price in PM 6M



Source NBP based on Sekocenbud

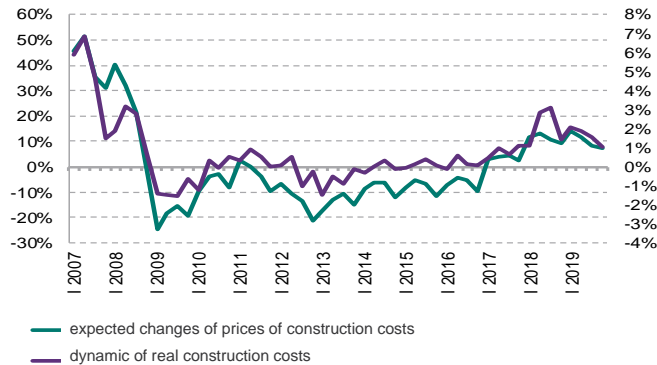
Figure 39 Estimated profitability indicators of development projects ROE* of real estate developers listed on the Stock Exchange, of large real estate developers (DFD) and small real estate developers (MFD)**/ and investment projects in 6 cities (6M) /***



Source NBP based on Sekocenbud, Financial Statements, GUS (F01)

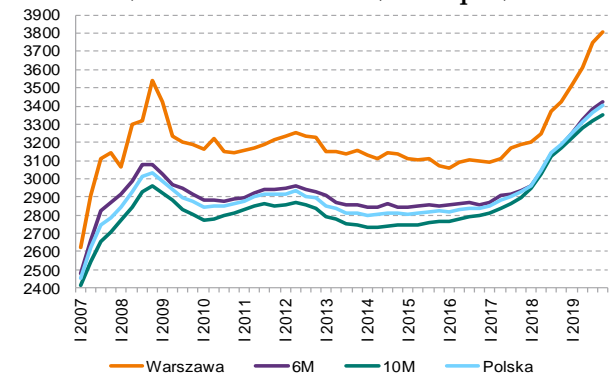
³⁵ Half of the building (type 1122-302) monitored by NBP since 2016 Q2 based on Sekocenbud data : An average residential multifamily building, with an underground garage constructed in the technology: foundation footings, construction walls and ceilings - monolithic reinforced concrete, curtain walling - 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 40 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 35/)



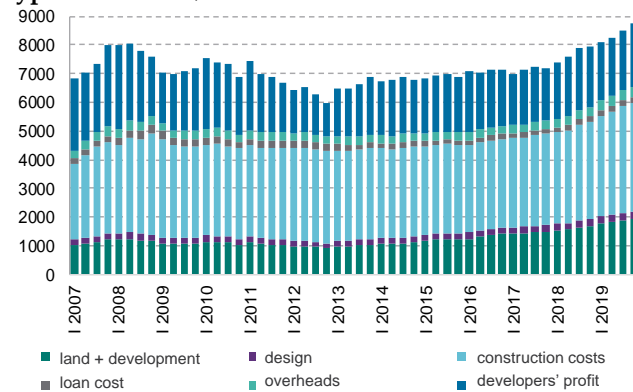
Source NBP based on GUS (business conditions survey), Sekocenbud

Figure 41 Average cost of construction of square metre of the residential building's usable area (type 1122-302 35) in selected markets (PLN/sq.m.)



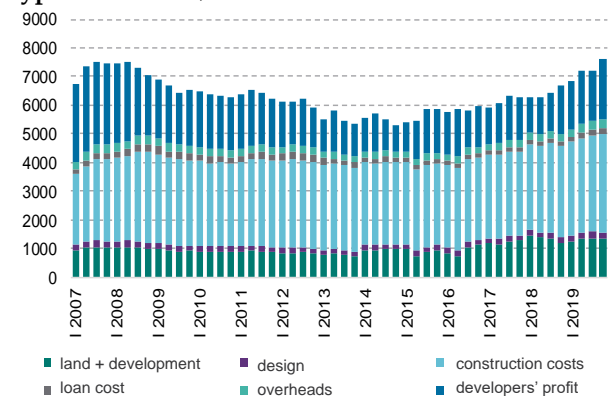
Source NBP based on Sekocenbud

Figure 42 Warsaw – estimated structure of price per square meter of housing usable area in PM (building type 1122-30235/) for consumer



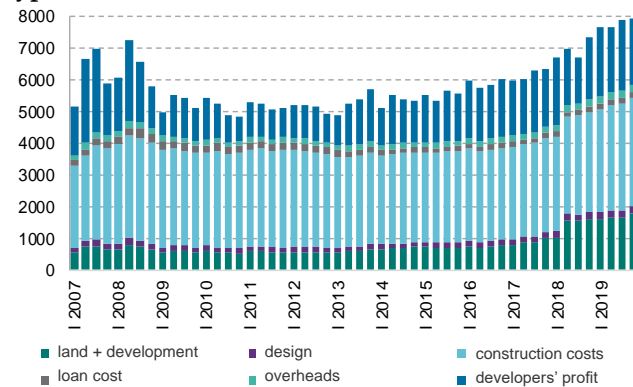
Source NBP based on Sekocenbud, JLL/REAS

Figure 43 Kraków - estimated structure of price per square meter of housing usable area in PM (building type 1122-30234/) for consumer



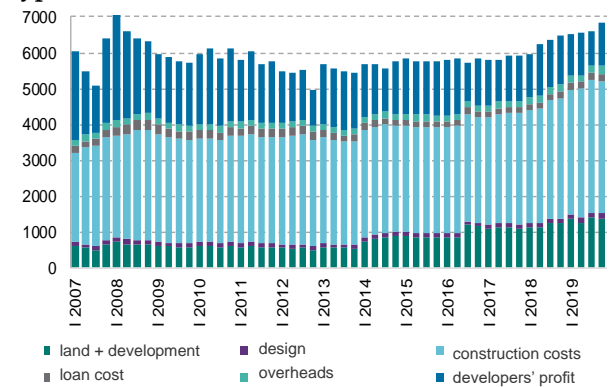
Source NBP based on Sekocenbud, JLL/REAS

Figure 44 Gdańsk – estimated structure of price per square meter of housing usable area in PM (building type 1122-30235/) for consumer



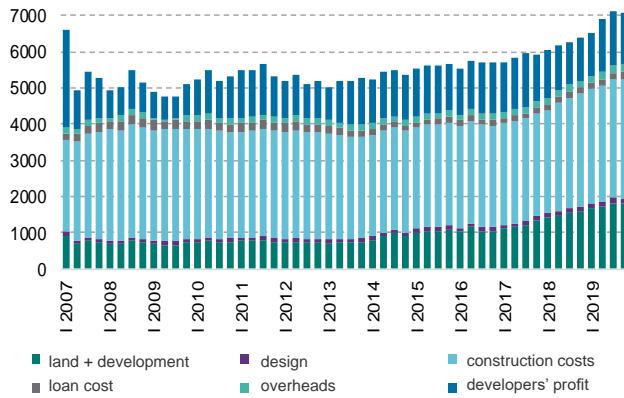
Source NBP based on Sekocenbud, JLL/REAS

Figure 45 Gdańsk – estimated structure of price per square meter of housing usable area in PM (building type 1122-30235/) for consumer



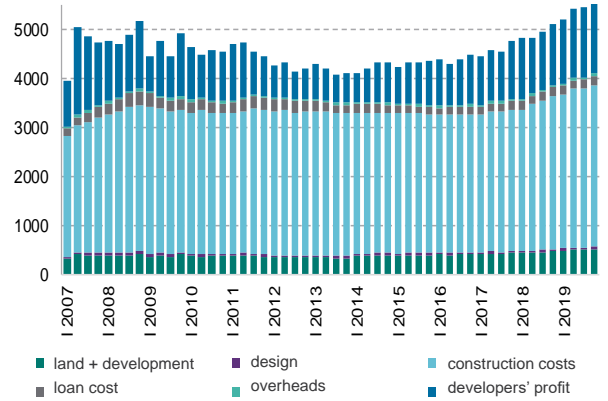
Source NBP based on Sekocenbud, JLL/REAS

Figure 46 Wrocław – estimated structure of price per square meter of housing usable area in PM (building type 1122-30235/) for consumer



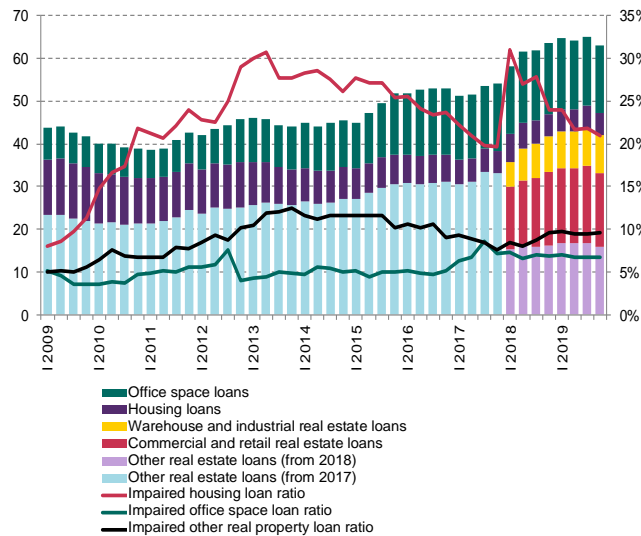
Source NBP based on Sekocenbud, JLL/REAS

Figure 47 Łódź – estimated structure of price per square meter of housing usable area in PM (building type 1122-30235/) for consumer



Source NBP based on Sekocenbud, JLL/REAS

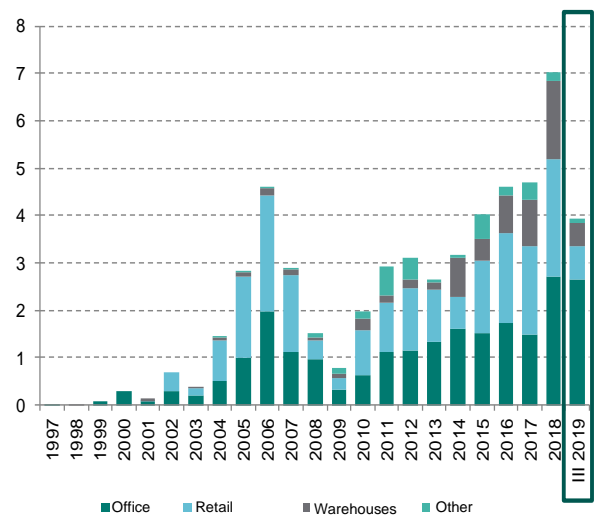
Figure 48 Loans to corporations for real estate purchases (in PLN billion, left-hand scale) and the share of loans recognised as impaired loans (in % right-hand scale)



Data exclusive of BGK. Since the beginning of 2018, new accounting standards have been in place .

Source NBP

Figure 49 Value of investment transactions in the commercial real estate market (EUR billion) */



*/ no data available for 2019 Q4

Source Comparables.pl

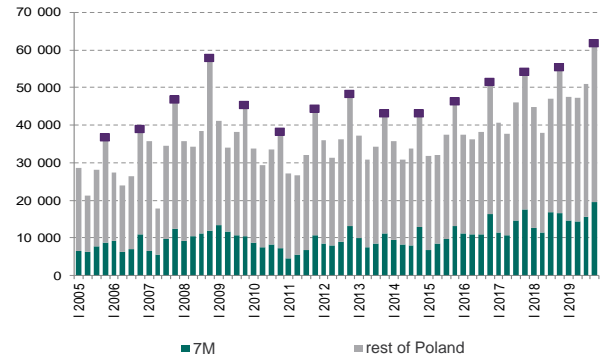
5. Residential construction and the housing market in Poland's selected cities

Figure 50 Structure of investors in residential construction in Poland in the years 2015-2019 (in thousands of dwellings)



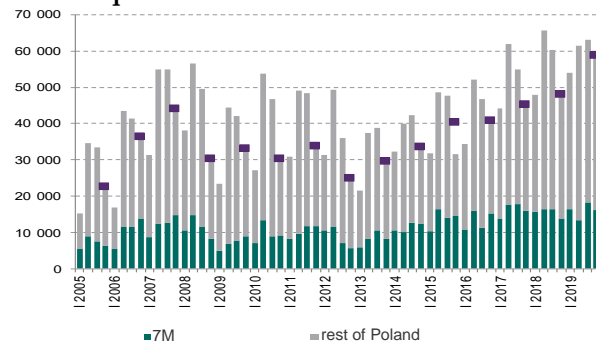
Source GUS

Figure 51 Dwellings completed and made ready for occupancy in Poland, in quarter-on-quarter terms



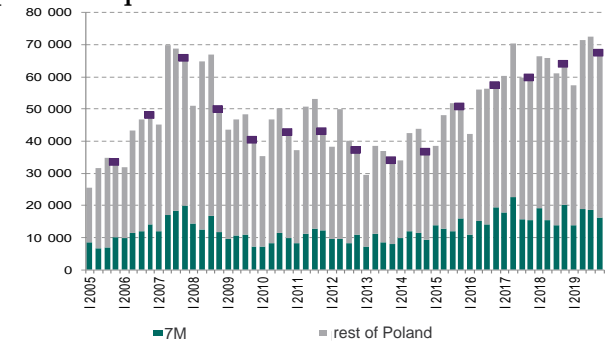
Note to Figures 51–53: in violet colour only second quarters have been market. Source GUS

Figure 52 Dwellings under construction in Poland, in quarter-on-quarter terms



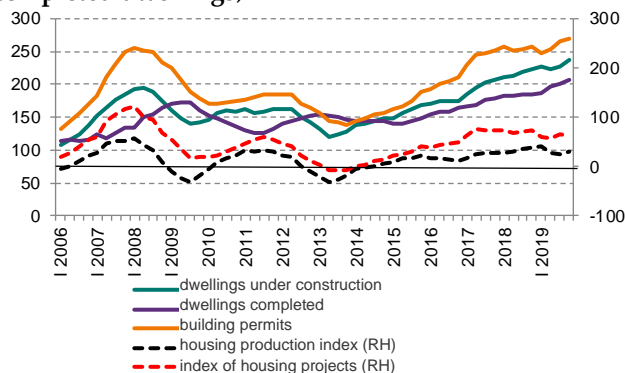
Source GUS

Figure 53 Issued home building permits in Poland, in quarter-on-quarter terms



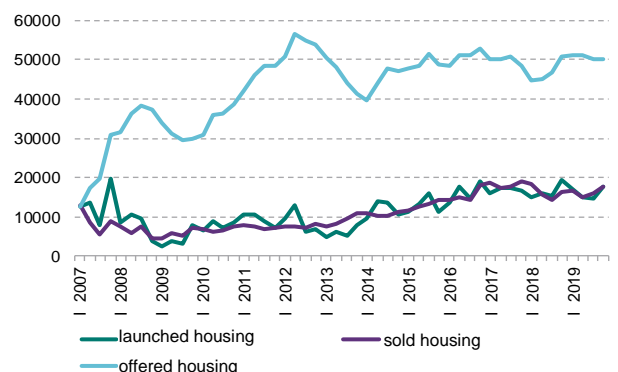
Source GUS

Figure 54 Housing construction in Poland (in thousands of dwellings) and home construction indicator (dwellings under construction minus completed dwelling) and development projects indicator (home construction permits minus completed dwellings)



Note: rolling averages for four subsequent years
Source NBP based on PABB and GUS

Figure 55 Number of dwellings put on the market, both sold and offered for sale in Poland's 6 largest markets.* /



*/Warsaw, Kraków, Tri-City Agglomeration, Wrocław, Poznań, Łódź. Source JLL/REAS

Figure 56 Housing supply and the estimated rate of return on housing development projects in PM in 7M

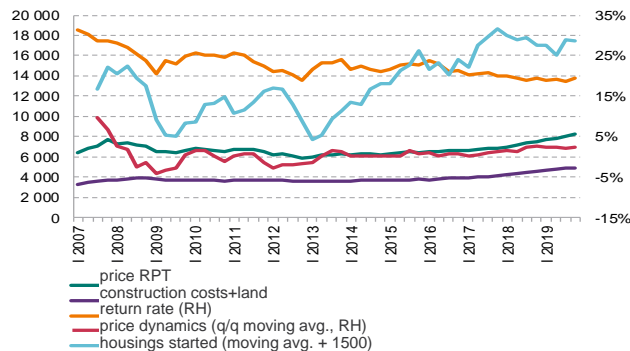
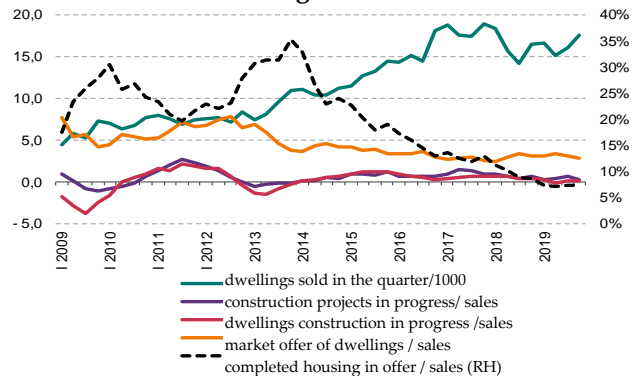


Figure 57 Housing projects and dwellings under construction and dwellings offered for sale in 7M



Note to Figure 57: Housing projects under construction = building permits for dwellings minus completed dwellings; dwellings under construction = dwellings whose construction has begun minus completed dwellings; cumulative values of the last 4 quarters, divided by sales in the given period.

Source NBP, GUS, JLL/REAS, Sekocenbud

Source NBP based on GUS

Figure 58 Measure of adjustment of housing units on offer to demand in terms of area ≤ 50 sq. m., PM in selected cities in Poland

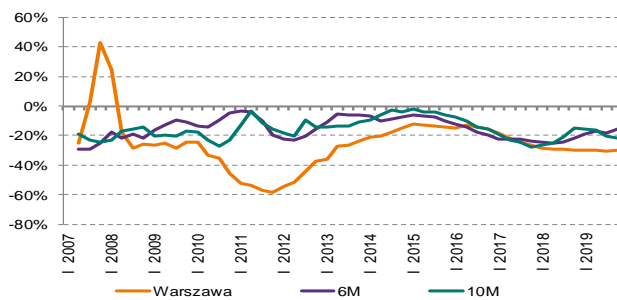
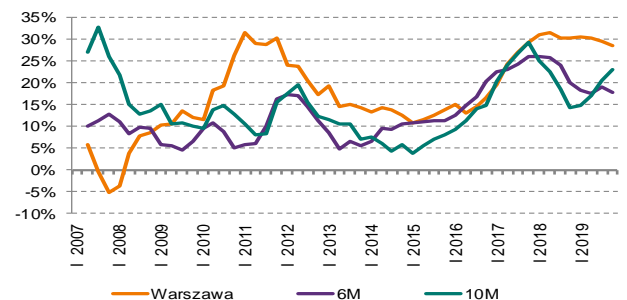


Figure 59 Measure of adjustment of housing units on offer to demand in terms of area > 50 sq. m., PM in selected cities in Poland



Note: figure 58 presents, in percentage terms, a short-term mismatch in the primary market between supply (developers' housing offer) and the estimated demand (housing transactions) in terms of the dwelling's size, according to the data from the BaRN database. The mismatch is calculated as the ratio of the share of housing units with usable area of up to 50 square meters offered for sale to the number of transactions involving housing units with a total area of up to 50 square meters (the average figure for the last four quarters). A positive result (above the black line) indicates the surplus of dwellings of a particular size, a negative result – their deficit. Figure 59 is parallel for the space above 50 sq.m. Figures 60-61 are parallel, but they concern the secondary market only.

Source NBP

Source NBP

Figure 60 Measure of adjustment of housing units on offer to demand* in terms of area ≤ 50 sq. m, SM in selected cities of Poland

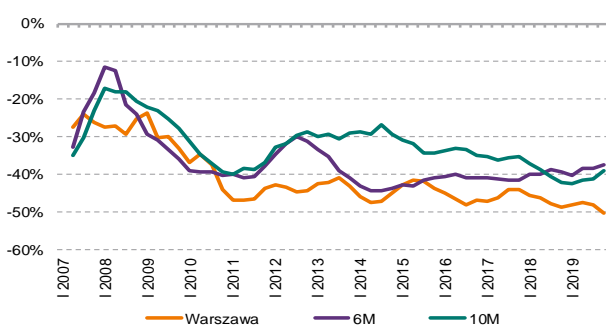
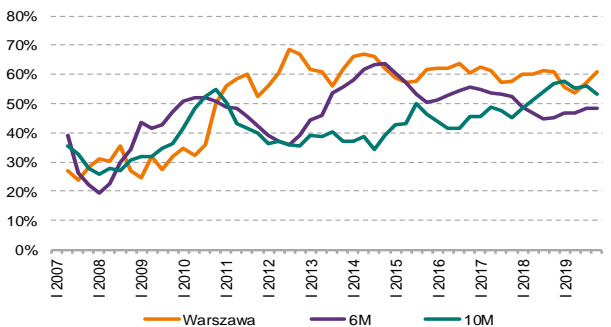


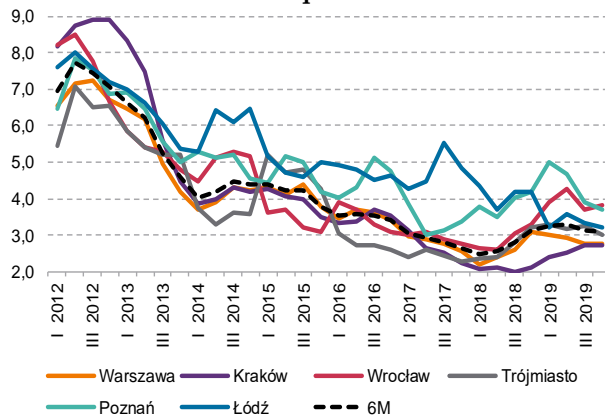
Figure 61 Measure of adjustment of housing units on offer to demand* in terms of area > 50 sq. m, SM in selected cities of Poland



Source NBP

Source NBP

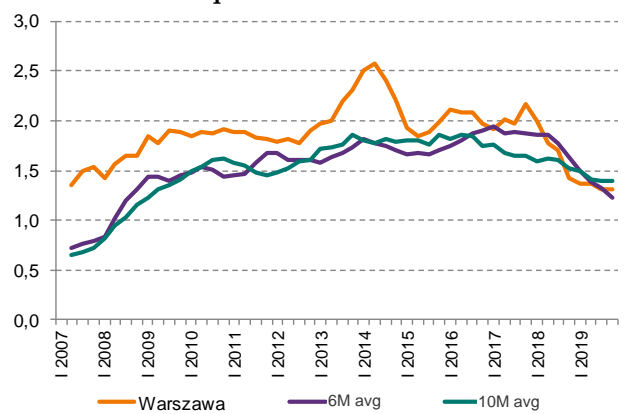
Figure 62 Selling time of dwellings on offer in PM selected cities (number of quarters)



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 based on JLL/REAS

Figure 63 Selling time of dwellings in SM in selected cities (number of quarters)

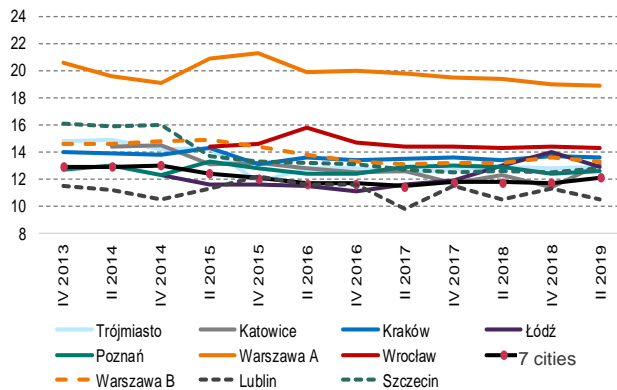


Note: the actual selling time, average of the last four quarters; data are not comparable with Figure 62. Selling time of housing in the secondary real estate market takes into account only transactions closed with a sales deal. The data are underestimated since they do not contain offers entered but not sold yet.

Source NBP

6. Rents and transaction prices of commercial real estate

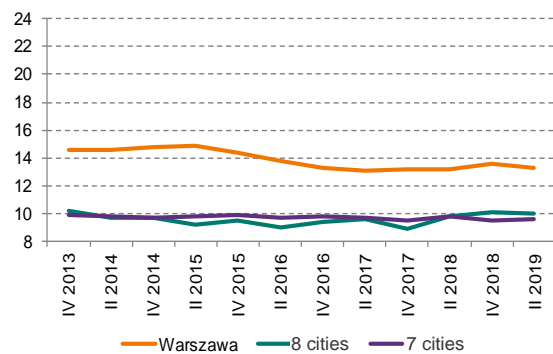
Figure 64 Transaction rents for A class office space (average prices in EUR/sq.m./month)



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

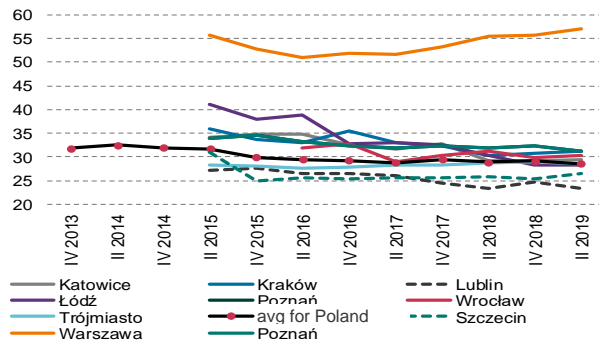
Figure 65 Transaction rents for B class office space (average prices in EUR/sq.m./month)



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

Source NBP

Figure 66 Transaction rents for retail space in shopping centres (shopping malls) with an area of 100-500 sq. m (EUR/ sq.m./month)



Note to Figure 66: 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 premises located in economically significant parts of the city are analysed.

Source NBP

Figure 67 Median of asking sales price of small office premises in SM (PLN/sq.m.)

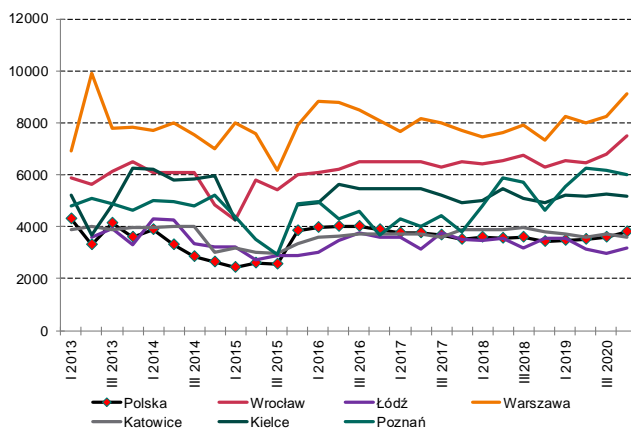
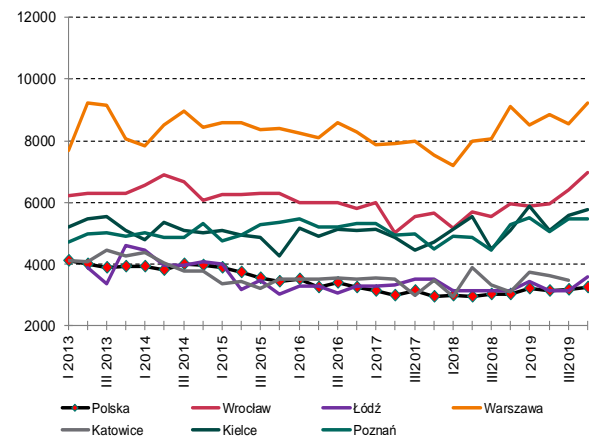


Figure 68 Median of asking sales price of small retail premises in SM (PLN/sq.m.)



Source PONT, NBP

Source PONT, NBP

Figure 69 Index of rents for offices, average and hedonic price index (2017 Q4 = 100)

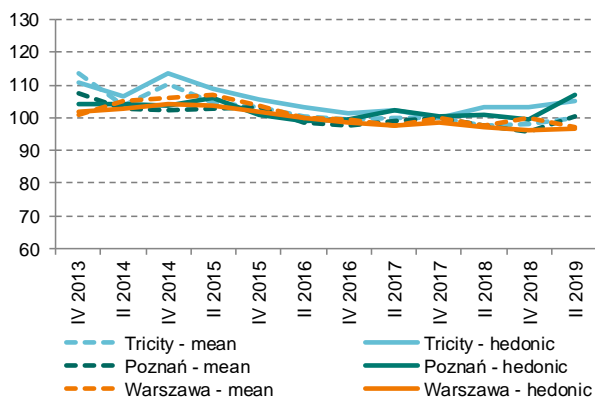
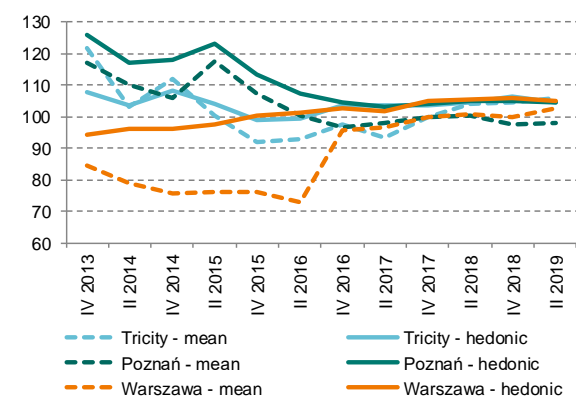


Figure 70 Index of rents for shopping centres, average and hedonic price index (2017 Q4 = 100)100)



Source NBP

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 with LTC = 0%	ROE with LTC = 50%	ROE with LTC = 80%	Average market rates of return on 10-year Treasury bonds	ROE with LTC = 0% for the EZ
IV 2013	14,6	2318	7,5%	7,0%	3,7%	5,4%	10,5%	4,4%	2,7%
II 2014	15,0	2172	8,3%	7,0%	4,2%	6,5%	13,2%	3,4%	3,2%
IV 2014	15,0	2172	8,3%	7,0%	4,2%	6,5%	13,2%	2,6%	3,2%
II 2015	15,2	2531	7,2%	7,0%	3,5%	5,0%	9,4%	2,8%	2,5%
IV 2015	15,0	2531	7,1%	7,0%	3,4%	4,8%	8,9%	2,8%	2,4%
II 2016	14,8	2499	7,1%	6,5%	3,4%	4,8%	8,9%	3,0%	2,4%
IV 2016	14,9	2499	7,1%	6,5%	3,4%	4,9%	9,1%	3,3%	2,4%
II 2017	14,7	2700	6,5%	6,0%	3,0%	4,0%	6,9%	3,3%	2,0%
IV 2017	15,0	2700	6,6%	6,0%	3,1%	4,1%	7,4%	3,4%	2,1%
II 2018	14,8	2600	6,8%	6,0%	3,2%	4,4%	8,0%	3,2%	2,2%
IV 2018	15,3	2600	7,0%	6,0%	3,4%	4,7%	8,8%	3,1%	2,4%
II 2019	14,7	2700	6,5%	6,0%	3,0%	4,0%	7,0%	2,7%	2,0%
IV 2019	14,8	2700	6,6%	6,0%	3,0%	4,0%	7,1%	2,1%	2,0%

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 rate (PLN/sq.m.)	Average transaction price (50% PM, 50% SM) (PLN/sq.m.)	Calculated capitalisation rate (yield)	ROE with LTV = 0%	ROE with LTV = 50%	ROE with LTV = 80%	Average market rates of return on 10-year Treasury bonds
2013 Q4	43.5	7,558	6.9%	4.3%	3.4%	0.9%	4.4%
2014 Q2	43.4	7,574	6.9%	4.3%	2.9%	0.2%	3.4%
2014 Q4	43.6	7,601	6.9%	4.3%	2.9%	0.3%	2.6%
2015 Q2	43.8	7,659	6.9%	4.2%	3.8%	3.8%	2.8%
2015 Q4	45.0	7,682	7.0%	4.4%	3.9%	4.0%	2.8%
2016 Q2	46.4	7,719	7.2%	4.5%	4.2%	4.4%	3.0%
2016 Q4	48.4	7,871	7.4%	4.7%	4.5%	5.5%	3.3%
2017 Q2	47.9	8,002	7.2%	4.5%	4.2%	4.8%	3.3%
2017 Q4	49.7	8,202	7.3%	4.6%	4.4%	5.3%	3.4%
2018 Q2	51.2	8,638	7.1%	4.5%	4.2%	4.9%	3.2%
2018 Q4	52.2	9,013	7.0%	4.3%	3.9%	4.1%	3.1%
2019 Q2	53.3	9,414	6.8%	4.2%	3.8%	3.8%	2.7%
2019 Q4	55.1	9,738	6.8%	4.2%	3.6%	3.2%	2.0%

Assumptions: Transaction price per square meter of housing (50% from the primary market, increased by finishing costs) (since 2008 +P PLN 700/sq.m.) and 50% from the secondary market). Average transaction rent. Loan in PLN granted for 25 years, equal instalments payable four times a year. Occupancy 95%. The calculated capitalization rate includes amortization costs (1.5% two complete renovations in the period of 100 years). Taxable with lump-sum tax of 8.5%. ROE – net income/equity. The calculations have been verified with relation to the previously presented calculations.

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

Table 5 Average prices of a square meter of housing in the primary market in Gdańsk

specification	IV Q 2018		I Q 2019		II Q 2019		III Q 2019		IV Q 2019	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	8 602	7 916	8 259	8 262	9 033	8 288	9 474	8 534	9 806	8 585
growth (q-o-q)	104,0	109,8	96,0	104,4	109,4	100,3	104,9	103,0	103,5	100,6
growth (y-o-y)	116,7	115,9	102,9	114,0	107,3	111,2	114,6	118,4	114,0	108,4
dwelling price range	4 168	1 350	3 967	1 309	3 780	1 424	4 118	1 331	3 625	1 478
<=4 000 PLN/sq.m	1	8	27	0	10	4	9	2	14	1
(4 001; 6 000] PLN/sq.m	1 062	294	994	327	594	262	412	168	172	204
(6 001; 8 000] PLN/sq.m	1 068	535	1 056	447	940	494	1 209	441	957	540
(8 001; 10 000] PLN/sq.m	1 037	351	1 057	287	1 137	392	945	410	1 004	331
>10 001 PLN/sq.m	1 000	162	833	248	1 099	272	1 543	310	1 478	402
dwelling space range	4 168	1 350	3 967	1 309	3 780	1 424	4 118	1 331	3 625	1 478
<= 40 sq.m	626	280	553	349	512	388	607	341	600	361
(40,1; 60] sq.m	1830	630	1755	550	1710	596	1838	588	1605	707
(60,1; 80] sq.m	1336	367	1289	318	1160	356	1225	334	998	323
> 80,1 sq.m	376	73	370	92	398	84	448	68	422	87
average price of 1 sq.m. of dwelling	8 602	7 916	8 259	8 262	9 033	8 288	9 474	8 534	9 806	8 585
<=4 000 sq.m	9 872	9 506	9 181	9 527	9 794	8 772	10112	9303	10941	8744
(40,1; 60] sq.m	8 309	7 405	8 084	7 661	8 936	8 010	9398	8141	9681	8404
(60,1; 80] sq.m	8 020	7 460	7 714	7 630	8 382	8 067	8754	8320	8932	8306
> 80,1 sq.m	9 979	8 524	9 604	9 246	10 364	8 964	10890	9128	10736	10438
average offer price deviation	8,7%	x	0,0%	x	9,0%	x	11,0%	x	14,2%	x
<= 40 sq.m	3,8%	x	-3,6%	x	11,7%	x	8,7%	x	25,1%	x
(40,1; 60] sq.m	12,2%	x	5,5%	x	11,6%	x	15,4%	x	15,2%	x
(60,1; 80] sq.m	7,5%	x	1,1%	x	3,9%	x	5,2%	x	7,5%	x
> 80,1 sq.m	17,1%	x	3,9%	x	15,6%	x	19,3%	x	2,9%	x

Source NBP

Table 6 Average prices of a square meter of housing in the secondary market in Gdańsk

specification	IV Q 2018		I Q 2019		II Q 2019		III Q 2019		IV Q 2019	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	8 856	7 508	9 415	7 351	9 345	7 823	9 958	7 687	9 889	8 268
growth (q-o-q)	101,3	105,0	106,3	97,9	99,3	106,4	106,6	98,3	99,3	107,6
growth (y-o-y)	120,6	118,5	121,8	113,4	109,1	118,1	113,9	107,5	111,7	110,1
dwelling price range	1 769	1 035	1 467	863	1 314	1 008	1 080	904	1 247	988
<=4 000 PLN/sq.m	4	20	4	16	1	2	1	9	0	3
(4 001; 6 000] PLN/sq.m	240	253	129	187	86	156	47	139	40	104
(6 001; 8 000] PLN/sq.m	621	434	450	413	491	458	295	431	351	423
(8 001; 10 000] PLN/sq.m	431	196	394	166	319	252	306	231	393	289
>10 001 PLN/sq.m	473	132	490	81	417	140	431	94	463	169
dwelling space range	1 769	1 035	1 467	863	1 314	1 008	1 080	904	1 247	988
<= 40 sq.m	268	238	238	211	289	260	204	224	242	242
(40,1; 60] sq.m	624	463	534	376	471	443	409	406	453	496
(60,1; 80] sq.m	558	209	418	181	335	206	279	191	343	179
> 80,1 sq.m	319	125	277	95	219	99	188	83	209	71
average price of 1 sq.m. of dwelling	8 856	7 508	9 415	7 351	9 345	7 823	9 958	7 687	9 889	8 268
<=4 000 sq.m	9 808	7 986	10 469	8 134	9 658	8 607	10691	8618	10385	9094
(40,1; 60] sq.m	9 034	7 506	9 652	7 323	9 421	7 723	10198	7705	10023	8215
(60,1; 80] sq.m	8 242	7 144	8 641	6 875	9 010	7 396	9224	7043	9487	7473
> 80,1 sq.m	8 784	7 219	9 222	6 628	9 280	7 100	9728	6571	9681	7829
average offer price deviation	18,0%	x	28,1%	x	19,5%	x	29,5%	x	19,6%	x
<= 40 sq.m	22,8%	x	28,7%	x	12,2%	x	24,1%	x	14,2%	x
(40,1; 60] sq.m	20,4%	x	31,8%	x	22,0%	x	32,4%	x	22,0%	x
(60,1; 80] sq.m	15,4%	x	25,7%	x	21,8%	x	31,0%	x	27,0%	x
> 80,1 sq.m	21,7%	x	39,1%	x	30,7%	x	48,0%	x	23,7%	x

Source NBP

Table 7 Average prices of a square meter of housing in the primary market in Kraków

specification	IV Q 2018		I Q 2019		II Q 2019		III Q 2019		IV Q 2019	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	7 356	7 199	7 630	7 370	7 968	7 775	8 021	7 787	8 514	8 244
growth (q-o-q)	104,5	103,7	103,7	102,4	104,4	105,5	100,7	100,2	106,2	105,9
growth (y-o-y)	106,2	106,6	110,3	108,5	115,4	114,7	113,9	112,1	115,8	114,5
dwelling price range	3 973	1 749	4 860	1 586	5 247	1 720	5 459	1 572	6 381	2 002
<=4 000 PLN/sq.m	0	0	0	0	0	0	0	0	0	0
(4 001; 6 000] PLN/sq.m	574	270	445	254	496	176	506	186	359	151
(6 001; 8 000] PLN/sq.m	2 324	1 048	2 891	860	2 419	864	2 485	772	2 350	785
(8 001; 10 000] PLN/sq.m	921	386	1 174	351	1 819	557	1 988	480	2 729	847
>10 001 PLN/sq.m	154	45	350	121	513	123	480	134	943	219
dwelling space range	3 973	1 749	4 860	1 586	5 247	1 720	5 459	1 572	6 381	2 002
<= 40 sq.m	594	472	1 017	449	937	494	980	420	1 161	552
(40,1; 60] sq.m	2 109	862	2 440	794	2 768	812	2 803	807	3 211	1 006
(60,1; 80] sq.m	1 001	338	1 095	297	1 196	315	1 319	264	1 593	344
> 80,1 sq.m	269	77	308	46	346	99	357	81	416	100
average price of 1 sq.m. of dwelling	7 356	7 199	7 630	7 370	7 968	7 775	8 021	7 787	8 514	8 244
<=4 000 sq.m	7 961	7 697	8 074	7 998	8 389	8 302	8 528	8 237	8 866	8 703
(40,1; 60] sq.m	7 278	6 962	7 539	7 134	7 901	7 605	8 020	7 672	8 529	8 140
(60,1; 80] sq.m	7 167	7 090	7 458	7 059	7 777	7 420	7 694	7 499	8 233	7 832
> 80,1 sq.m	7 326	7 268	7 493	7 336	8 031	7 673	7 840	7 536	8 497	8 168
average offer price deviation	2,2%	x	3,5%	x	2,5%	x	3,0%	x	3,3%	x
<= 40 sq.m	3,4%	x	0,9%	x	1,0%	x	3,5%	x	1,9%	x
(40,1; 60] sq.m	4,5%	x	5,7%	x	3,9%	x	4,5%	x	4,8%	x
(60,1; 80] sq.m	1,1%	x	5,7%	x	4,8%	x	2,6%	x	5,1%	x
> 80,1 sq.m	0,8%	x	2,1%	x	4,7%	x	4,0%	x	4,0%	x

Source NBP

Table 8 Average PLN prices of a square meter of housing in the primary market in Kraków

specification	IV Q 2018		I Q 2019		II Q 2019		III Q 2019		IV Q 2019	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	8 466	6 849	8 697	6 626	8 899	6 956	8 913	7 135	9 109	7 414
growth (q-o-q)	105,0	103,4	102,7	96,8	102,3	105,0	100,2	102,6	102,2	103,9
growth (y-o-y)	111,5	109,1	112,0	106,6	111,2	108,7	110,6	107,8	107,6	108,3
dwelling price range	722	340	597	303	656	316	493	344	493	330
<=4 000 PLN/sq.m	0	0	0	3	0	2	0	0	0	0
(4 001; 6 000] PLN/sq.m	79	123	49	107	35	86	19	66	15	47
(6 001; 8 000] PLN/sq.m	284	158	217	154	231	161	175	200	139	176
(8 001; 10 000] PLN/sq.m	218	41	204	33	229	62	181	65	211	94
>10 001 PLN/sq.m	141	18	127	6	161	5	118	13	128	13
dwelling space range	722	340	597	303	656	316	493	344	493	330
<= 40 sq.m	146	137	124	120	160	135	113	154	123	155
(40,1; 60] sq.m	280	148	240	141	252	135	199	147	208	132
(60,1; 80] sq.m	177	45	136	35	142	38	122	38	111	40
> 80,1 sq.m	119	10	97	7	102	8	59	5	51	3
average price of 1 sq.m. of dwelling	8 466	6 849	8 697	6 626	8 899	6 956	8 913	7 135	9 109	7 414
<=4 000 sq.m	9 366	7 284	9 520	7 084	9 591	7 403	9 894	7 674	10 079	7 821
(40,1; 60] sq.m	8 108	6 652	8 476	6 415	8 600	6 671	8 579	6 888	8 782	7 228
(60,1; 80] sq.m	8 094	6 321	8 232	5 975	8 407	6 297	8 426	6 052	8 602	6 401
> 80,1 sq.m	8 757	6 157	8 844	6 300	9 238	7 366	9 168	6 009	9 205	8 036
average offer price deviation	23,6%	x	31,2%	x	27,9%	x	24,9%	x	22,9%	x
<= 40 sq.m	28,6%	x	34,4%	x	29,6%	x	28,9%	x	28,9%	x
(40,1; 60] sq.m	21,9%	x	32,1%	x	28,9%	x	24,6%	x	21,5%	x
(60,1; 80] sq.m	28,1%	x	37,8%	x	33,5%	x	39,2%	x	34,4%	x
> 80,1 sq.m	42,2%	x	40,4%	x	25,4%	x	52,6%	x	14,5%	x

Source NBP

Table 9 Average prices of a square meter of housing in the primary market in Łódź

specification	IV Q 2018		I Q 2019		II Q 2019		III Q 2019		IV Q 2019	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	5 663	5 507	5 796	5 631	6 010	5 853	6 027	5 881	6 274	6 026
growth (q-o-q)	102,4	102,8	102,3	102,3	103,7	103,9	100,3	100,5	104,1	102,5
growth (y-o-y)	106,2	107,0	104,9	108,1	109,8	112,4	109,0	109,8	110,8	109,4
dwelling price range	1 618	397	1 253	254	1 442	408	1 465	467	1 869	420
<=4 000 PLN/sq.m	1	1	2	0	0	0	2	0	4	0
(4 001; 5000] PLN/sq.m	124	75	43	26	41	26	34	1	26	4
(5 001; 6 000] PLN/sq.m	1 116	238	859	170	779	235	800	326	759	260
(6 001; 7 000] PLN/sq.m	345	75	322	54	533	129	559	127	792	129
> 7000 PLN/sq.m	32	8	27	4	89	18	70	13	288	27
dwelling space range	1 662	397	1 253	254	1 442	408	1 465	467	1 869	420
<= 40 sq.m	200	79	138	49	207	87	167	91	362	75
(40,1; 60] sq.m	836	182	564	148	663	204	701	240	921	216
(60,1; 80] sq.m	525	104	476	35	486	94	472	79	480	111
> 80,1 sq.m	101	32	75	22	86	23	125	57	106	18
average price of 1 sq.m. of dwelling	5 663	5 507	5 796	5 631	6 010	5 853	6 027	5 881	6 274	6 026
<=4 000 sq.m	6 033	5 794	6 252	6 028	6 538	6 254	6 610	6 215	6 952	6 504
(40,1; 60] sq.m	5 625	5 540	5 805	5 592	6 044	5 886	6 084	5 875	6 177	6 007
(60,1; 80] sq.m	5 588	5 300	5 656	5 507	5 779	5 481	5 812	5 679	5 931	5 722
> 80,1 sq.m	5 628	5 284	5 772	5 198	5 782	5 571	5 742	5 656	6 354	6 143
average offer price deviation	2,8%	x	2,9%	x	2,7%	x	2,5%	x	4,1%	x
<= 40 sq.m	4,1%	x	3,7%	x	4,5%	x	6,4%	x	6,9%	x
(40,1; 60] sq.m	1,5%	x	3,8%	x	2,7%	x	3,6%	x	2,8%	x
(60,1; 80] sq.m	5,4%	x	2,7%	x	5,4%	x	2,3%	x	3,6%	x
> 80,1 sq.m	6,5%	x	11,0%	x	3,8%	x	1,5%	x	3,4%	x

Source NBP

Table 10 Average prices of a square meter of housing in the secondary market in Łódź

specification	IV Q 2018		I Q 2019		II Q 2019		III Q 2019		IV Q 2019	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	4 811	4 465	5 053	4 616	5 116	4 596	5 203	4 708	5 392	4 870
growth (q-o-q)	102,1	104,9	105,0	103,4	101,2	99,6	101,7	102,4	103,6	103,4
growth (y-o-y)	111,5	118,0	114,0	114,8	110,2	116,1	110,4	110,6	112,1	109,1
dwelling price range	422	76	610	88	503	98	425	179	304	83
<= 3 000 PLN/sq.m	9	1	9	1	15	4	3	10	4	0
(3 001; 4000] PLN/sq.m	73	21	89	4	68	18	53	24	25	11
(4 001; 5 000] PLN/sq.m	194	42	234	10	178	56	145	85	87	44
(5 001; 6 000] PLN/sq.m	98	8	185	29	159	16	146	41	122	18
(6 001; 7 000] PLN/sq.m.	29	4	59	21	51	4	52	16	38	10
>7 001 PLN/sq.m	19	0	34	23	32	0	26	3	28	0
dwelling space range	422	76	610	88	503	98	425	179	425	179
<= 40 sq.m	51	22	77	27	93	30	68	67	68	67
(40,1; 60] sq.m	161	39	226	37	171	42	148	76	148	76
(60,1; 80] sq.m	76	11	140	13	112	11	91	25	91	25
> 80,1 sq.m	134	4	167	11	127	15	118	11	118	11
average price of 1 sq.m. of dwelling	4 811	4 465	5 053	4 616	5 116	4 596	5 203	4 708	5 203	4 708
<=4 000 sq.m	5 002	4 791	5 436	4 809	5 604	4 835	5 692	4 804	5 692	4 804
(40,1; 60] sq.m	4 923	4 398	5 188	4 527	5 180	4 644	5 295	4 653	5 295	4 653
(60,1; 80] sq.m	4 962	4 518	5 200	4 582	5 294	4 722	5 187	4 739	5 187	4 739
> 80,1 sq.m	4 516	3 193	4 570	4 478	4 514	3 892	4 817	4 436	4 817	4 436
average offer price deviation	7,7%	x	9,5%	x	11,3%	x	10,5%	x	10,7%	x
<= 40 sq.m	4,4%	x	13,0%	x	15,9%	x	18,5%	x	18,5%	x
(40,1; 60] sq.m	12,0%	x	14,6%	x	11,5%	x	13,8%	x	13,8%	x
(60,1; 80] sq.m	9,8%	x	13,5%	x	12,1%	x	9,5%	x	9,5%	x
> 80,1 sq.m	41,5%	x	2,0%	x	16,0%	x	8,6%	x	8,6%	x

Source NBP

Table 11 Average prices of a square meter of housing in the primary market in Poznań

specification	IV Q 2018		I Q 2019		II Q 2019		III Q 2019		IV Q 2019	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	7 033	7 017	7 349	7 056	7 228	7 083	7 380	7 135	7 384	7 402
growth (q-o-q)	101,5	102,5	104,5	100,6	98,3	100,4	102,1	100,7	100,1	103,7
growth (y-o-y)	107,4	109,9	110,1	109,7	105,3	105,2	106,5	104,2	105,0	105,5
dwelling price range	5 362	1 295	6 123	1 067	6 816	1 429	6 652	1 325	6 056	1 546
<=4 000 PLN/sq.m	2	4	1	1	1	0	0	0	0	0
(4 001; 6 000] PLN/sq.m	1 004	245	807	151	732	313	564	235	493	164
(6 001; 8 000] PLN/sq.m	3 595	845	3 938	740	4 801	836	4 585	855	4 251	1 004
(8 001; 10 000] PLN/sq.m	676	166	1 212	148	1 150	244	1 344	215	1 163	348
>10 001 PLN/sq.m	85	35	165	27	132	36	159	20	149	30
dwelling space range	5 362	1 295	6 123	1 067	6 816	1 429	6 652	1 325	6 056	1 546
<= 40 sq.m	943	386	1243	303	1334	370	1328	328	1054	389
(40,1; 60] sq.m	2866	661	3128	517	3367	756	3098	745	2874	845
(60,1; 80] sq.m	1197	183	1394	188	1760	218	1823	201	1757	233
> 80,1 sq.m	356	65	358	59	355	85	403	51	371	79
average price of 1 sq.m. of dwelling	7 033	7 017	7 349	7 056	7 228	7 083	7 380	7 135	7 384	7 402
<=4 000 sq.m	7 246	7 412	7 698	7 419	7 719	7 169	7 873	7 485	7 958	7 660
(40,1; 60] sq.m	7 010	6 855	7 277	6 905	7 169	6 991	7 350	7 025	7 367	7 320
(60,1; 80] sq.m	6 862	6 804	7 142	6 726	6 953	7 079	7 089	7 048	7 055	7 297
> 80,1 sq.m	7 227	6 923	7 573	7 568	7 302	7 532	7 309	6 832	7 450	7 319
average offer price deviation	0,2%	x	4,2%	x	2,0%	x	3,4%	x	-0,2%	x
<= 40 sq.m	-2,2%	x	3,8%	x	7,7%	x	5,2%	x	3,9%	x
(40,1; 60] sq.m	2,3%	x	5,4%	x	2,5%	x	4,6%	x	0,6%	x
(60,1; 80] sq.m	0,9%	x	6,2%	x	-1,8%	x	0,6%	x	-3,3%	x
> 80,1 sq.m	4,4%	x	0,1%	x	-3,1%	x	7,0%	x	1,8%	x

Source NBP

Table 12 Average prices of a square meter of housing in the secondary market in Poznań

specification	IV Q 2018		I Q 2019		II Q 2019		III Q 2019		IV Q 2019	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	6 939	6 116	6 959	6 152	7 073	6 269	7 188	6 277	7 639	6 386
growth (q-o-q)	102,6	103,2	100,3	100,6	101,6	101,9	101,6	100,1	106,3	101,7
growth (y-o-y)	109,3	110,2	106,7	109,5	106,3	108,4	106,3	105,9	110,1	104,4
dwelling price range	208	1108	1453	900	1127	670	1 530	538	740	451
<=4 000 PLN/sq.m	7	44	32	43	22	15	21	8	5	9
(4 001; 6 000] PLN/sq.m	61	537	374	400	279	284	325	213	115	149
(6 001; 8 000] PLN/sq.m	96	438	772	370	575	311	815	280	367	263
(8 001; 10 000] PLN/sq.m	27	74	205	80	197	52	288	34	175	26
>10 001 PLN/sq.m	17	15	70	7	54	8	81	3	78	4
dwelling space range	208	1108	1453	900	1127	670	1 530	538	740	451
<= 40 sq.m	20	339	259	265	202	201	267	173	127	139
(40,1; 60] sq.m	71	476	600	394	453	299	652	241	307	219
(60,1; 80] sq.m	58	201	331	175	276	128	357	96	193	78
> 80,1 sq.m	59	92	263	66	196	42	254	28	113	15
average price of 1 sq.m. of dwelling	6 939	6 116	6 959	6 152	7 073	6 269	7 188	6 277	7 639	6 386
<=4 000 sq.m	8297	6653	7753	6739	7957	6923	8 169	6 997	8 832	7 131
(40,1; 60] sq.m	6966	6115	7005	6224	7302	6138	7 295	6 118	7 816	6 214
(60,1; 80] sq.m	6962	5583	6672	5379	6576	5762	6 742	5 630	6 902	5 782
> 80,1 sq.m	6425	5303	6431	5422	6334	5612	6 509	5 425	7 074	5 133
average offer price deviation	13,5%	x	13,1%	x	12,8%	x	14,5%	x	19,6%	x
<= 40 sq.m	24,7%	x	15,1%	x	14,9%	x	16,8%	x	23,9%	x
(40,1; 60] sq.m	13,9%	x	12,6%	x	19,0%	x	19,2%	x	25,8%	x
(60,1; 80] sq.m	24,7%	x	24,0%	x	14,1%	x	19,8%	x	19,4%	x
> 80,1 sq.m	21,2%	x	18,6%	x	12,9%	x	20,0%	x	37,8%	x

Source NBP

Table 13 Average prices of a square meter of housing in the primary market in Warsaw

specification	IV Q 2018		I Q 2019		II Q 2019		III Q 2019		IV Q 2019	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	9 020	8 565	9 427	8 771	9 591	8 932	9 935	9 188	10 280	9 476
growth (q-o-q)	101,5	100,3	104,5	102,4	101,7	101,8	103,6	102,9	103,5	103,1
growth (y-o-y)	112,5	110,5	118,4	101,9	117,2	100,5	116,4	101,9	120,0	100,5
dwelling price range	13 381	4 296	12 709	4 296	14 945	4 348	13 824	4 128	12 204	4 622
<=4 000 PLN/sq.m	0	0	0	0	0	0	0	0	0	0
(4 001; 6 000] PLN/sq.m	318	152	142	172	108	121	61	28	35	31
(6 001; 8 000] PLN/sq.m	4 951	1 688	3 797	1 422	4 109	1 535	3 574	1 285	2 381	1 190
(8 001; 10 000] PLN/sq.m	5 272	1 767	5 320	1 886	6 139	1 804	5 278	1 790	4 679	2 092
>10 001 PLN/sq.m	2 840	689	3 450	816	4 589	888	4 911	1 025	5 109	1 309
dwelling space range	13 381	4 296	12 709	4 296	14 945	4 348	13 824	4 128	12 204	4 622
<= 40 sq.m	1 508	866	1 393	989	1 835	911	1 657	799	1 543	911
(40,1; 60] sq.m	5 855	2 020	5 443	1 964	6 532	2 004	5 898	1 997	4 972	2 193
(60,1; 80] sq.m	4 375	1 060	4 189	1 023	4 710	1 053	4 554	986	4 101	1 116
> 80,1 sq.m	1 643	350	1 684	320	1 868	380	1 715	346	1 588	402
average price of 1 sq.m. of dwelling	9 020	8 565	9 427	8 771	9 591	8 932	9 935	9 188	10 280	9 476
<=4 000 sq.m	10 641	9 149	11 646	9 358	11 400	9 675	12 060	9 829	12 425	10 474
(40,1; 60] sq.m	8 756	8 382	9 104	8 538	9 332	8 694	9 706	9 022	10 088	9 238
(60,1; 80] sq.m	8 519	8 313	8 782	8 527	8 920	8 542	9 136	8 804	9 389	8 991
> 80,1 sq.m	9 807	8 935	10 242	9 166	10 407	9 487	10 790	9 769	11 098	9 856
average offer price deviation	5,3%	x	7,5%	x	7,4%	x	8,1%	x	8,5%	x
<= 40 sq.m	16,3%	x	24,4%	x	17,8%	x	22,7%	x	18,6%	x
(40,1; 60] sq.m	4,5%	x	6,6%	x	7,3%	x	7,6%	x	9,2%	x
(60,1; 80] sq.m	2,5%	x	3,0%	x	4,4%	x	3,8%	x	4,4%	x
> 80,1 sq.m	9,8%	x	11,7%	x	9,7%	x	10,5%	x	12,6%	x

Source NBP

Table 14 Average prices of a square meter of housing in the secondary market in Warsaw

specification	IV Q 2018		I Q 2019		II Q 2019		III Q 2019		IV Q 2019	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	10 277	8 762	10 291	8 986	10 564	9 195	10 841	9 149	11 212	9 301
growth (q-o-q)	106,9	101,8	100,1	102,6	102,7	102,3	102,6	99,5	103,4	101,7
growth (y-o-y)	111,3	108,8	110,1	111,7	113,0	109,5	112,8	106,3	109,1	106,2
dwelling price range	2 755	3 714	2 347	3 244	2 575	3 765	2 161	1 795	1 933	1 292
<=4 000 PLN/sq.m	0	0	0	0	0	0	0	0	0	0
(4 001; 6 000] PLN/sq.m	69	228	51	161	37	129	32	45	20	22
(6 001; 8 000] PLN/sq.m	594	1 295	461	1 059	468	1 085	333	537	248	348
(8 001; 10 000] PLN/sq.m	858	1 355	800	1 126	818	1 414	659	705	550	523
>10 001 PLN/sq.m	1 234	836	1 035	898	1 252	1 137	1 137	508	1 115	399
dwelling space range	2 755	3 714	2 347	3 244	2 575	3 765	2 161	1 795	1 933	1 292
<= 40 sq.m	403	1 104	306	921	347	1 078	286	572	234	423
(40,1; 60] sq.m	929	1 597	794	1 401	881	1 653	719	804	621	549
(60,1; 80] sq.m	660	657	607	565	641	653	528	294	454	213
> 80,1 sq.m	763	356	640	357	706	381	628	125	624	107
average price of 1 sq.m. of dwelling	10 277	8 762	10 291	8 986	10 564	9 195	10 841	9 149	11 212	9 301
<=4 000 sq.m	11 447	9 278	11 300	9 531	11 728	9 793	11 925	10 059	12 568	10 262
(40,1; 60] sq.m	10 077	8 411	10 168	8 772	10 249	8 868	10 784	8 764	11 176	8 868
(60,1; 80] sq.m	9 672	8 361	9 690	8 471	10 019	8 766	10 247	8 683	10 668	8 675
> 80,1 sq.m	10 426	9 477	10 530	9 237	10 879	9 662	10 913	8 551	11 135	8 967
average offer price deviation	17,3%	x	14,5%	x	14,9%	x	18,5%	x	20,5%	x
<= 40 sq.m	23,4%	x	18,6%	x	19,8%	x	18,5%	x	22,5%	x
(40,1; 60] sq.m	19,8%	x	15,9%	x	15,6%	x	23,0%	x	26,0%	x
(60,1; 80] sq.m	15,7%	x	14,4%	x	14,3%	x	18,0%	x	23,0%	x
> 80,1 sq.m	10,0%	x	14,0%	x	12,6%	x	27,6%	x	24,2%	x

Source NBP

Table 15 Average prices of a square meter of housing in the primary market in Wrocław

specification	IV Q 2018		I Q 2019		II Q 2019		III Q 2019		IV Q 2019	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	7 230	6 905	7 457	7 032	7 636	7 435	7 909	7 661	7 976	7 634
growth (q-o-q)	101,2	102,3	103,1	101,8	102,4	105,7	103,6	103,0	100,8	99,6
growth (y-o-y)	110,8	108,1	110,6	108,0	108,8	111,8	110,7	113,5	110,3	110,6
dwelling price range	5 662	1 272	5 939	1 695	6 360	1 464	6 747	1 563	6 456	1 724
<=4 000 PLN/sq.m	0	0	0	0	0	0	0	0	0	2
(4 001; 6 000] PLN/sq.m	1 384	342	906	391	807	222	498	160	609	259
(6 001; 8 000] PLN/sq.m	2 775	716	3 319	905	3 477	833	3 595	838	3 060	874
(8 001; 10 000] PLN/sq.m	1 112	172	1 285	348	1 552	316	1 981	467	2 073	457
>10 001 PLN/sq.m	391	42	429	51	524	93	673	98	714	132
dwelling space range	5 662	1 272	5 939	1 695	6 360	1 464	6 747	1 563	6 456	1 724
<= 40 sq.m	906	217	961	362	1 235	289	1 213	383	1 240	345
(40,1; 60] sq.m	2 636	657	2 837	829	2 946	695	3 241	672	3 072	856
(60,1; 80] sq.m	1 700	325	1 709	418	1 685	394	1 820	426	1 644	446
> 80,1 sq.m	420	73	432	86	494	86	473	82	500	77
average price of 1 sq.m. of dwelling	7 230	6 905	7 457	7 032	7 636	7 435	7 909	7 661	7 976	7 634
<=4 000 sq.m	8 416	7 547	8 613	7 971	8 683	8 513	8 948	8 604	8 913	8 411
(40,1; 60] sq.m	7 125	6 781	7 289	6 825	7 498	7 192	7 771	7 339	7 840	7 527
(60,1; 80] sq.m	6 729	6 659	7 055	6 509	7 076	7 077	7 389	7 262	7 489	7 253
> 80,1 sq.m	7 359	7 207	7 586	7 624	7 749	7 415	8 192	7 964	8 091	7 545
average offer price deviation	4,7%	x	6,0%	x	2,7%	x	3,2%	x	4,5%	x
<= 40 sq.m	11,5%	x	8,0%	x	2,0%	x	4,0%	x	6,0%	x
(40,1; 60] sq.m	5,1%	x	6,8%	x	4,3%	x	5,9%	x	4,2%	x
(60,1; 80] sq.m	1,1%	x	8,4%	x	0,0%	x	1,7%	x	3,3%	x
> 80,1 sq.m	2,1%	x	-0,5%	x	4,5%	x	2,9%	x	7,2%	x

Source NBP

Table 16 Average prices of a square meter of housing in the secondary market in Wrocław

specification	IV Q 2018		I Q 2019		II Q 2019		III Q 2019		IV Q 2019	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	6 571	6 191	7 339	6 267	7 441	6 482	7 572	6 858	7 720	7 316
growth (q-o-q)	101,2	100,5	111,7	101,2	101,4	103,4	101,8	105,8	102,0	106,7
growth (y-o-y)	103,2	104,8	114,3	107,3	114,7	106,7	116,7	111,3	117,5	118,2
dwelling price range	1 290	242	321	236	1 703	201	1 154	233	1 719	263
<=4 000 PLN/sq.m	18	8	2	10	5	3	0	3	1	5
(4 001; 6 000] PLN/sq.m	539	109	73	94	301	75	144	61	180	53
(6 001; 8 000] PLN/sq.m	558	100	147	106	926	103	666	124	957	123
(8 001; 10 000] PLN/sq.m	118	22	75	22	324	13	266	39	430	65
>10 001 PLN/sq.m	57	3	24	4	147	7	78	6	151	17
dwelling space range	1 290	242	321	236	1 703	201	1 154	233	1 719	263
<= 40 sq.m	213	50	45	53	221	38	117	41	214	60
(40,1; 60] sq.m	505	107	127	98	656	95	441	114	660	122
(60,1; 80] sq.m	384	58	94	54	529	51	387	57	548	52
> 80,1 sq.m	188	27	55	31	297	17	209	21	297	29
average price of 1 sq.m. of dwelling	6 571	6 191	7 339	6 267	7 441	6 482	7 572	6 858	7 720	7 316
<=4 000 sq.m	7 344	6 782	8 152	7 150	8 796	7 592	8 840	8 021	9 099	8 172
(40,1; 60] sq.m	6 574	6 364	7 345	6 182	7 502	6 447	7 666	6 736	7 767	7 128
(60,1; 80] sq.m	6 313	5 811	7 099	5 821	7 066	5 947	7 165	6 393	7 244	6 905
> 80,1 sq.m	6 215	5 229	7 071	5 801	6 967	5 807	7 415	6 510	7 498	7 076
average offer price deviation	6,1%	x	17,1%	x	14,8%	x	10,4%	x	5,5%	x
<= 40 sq.m	8,3%	x	14,0%	x	15,9%	x	10,2%	x	11,3%	x
(40,1; 60] sq.m	3,3%	x	18,8%	x	16,4%	x	13,8%	x	9,0%	x
(60,1; 80] sq.m	8,6%	x	21,9%	x	18,8%	x	12,1%	x	4,9%	x
> 80,1 sq.m	18,9%	x	21,9%	x	20,0%	x	13,9%	x	6,0%	x

Source NBP

www.nbp.pl
