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Information on home prices and the situation in the housing and commercial real estate market in Poland in 2020 Q4

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The analysis of the situation in the real estate market in Poland in 2020 Q4¹ leads to the following remarks:

- **In 2020 Q4, high activity in the housing market was observed, following a temporary slump in 2020 Q2 and a recovery in 2020 Q3, despite various degrees of restrictions resulting from the COVID-19 pandemic.** The number of housing contracts sold in the largest primary markets was slightly higher than in the previous quarter, but annual sales were lower than in 2019. Housing construction costs (materials and labour) continued to grow, although at a slower pace than in the previous quarters. Land prices continued to rise, which was related to the replenishment of “land banks” by real estate developers. Average transaction prices of housing in the primary and secondary markets of the analysed cities posted a year-on-year increase; however, in 2020 Q4, the pace of this growth, especially in the secondary market, slowed down. In 2020, a record number of dwellings were completed and put on the market, which was the result of developers' activity in the previous years.
- **The impact of the pandemic on the housing market, including prices, is fairly complex as different segments of local markets behave differently. In 2020 Q4 almost all groups of markets saw quarter-on-quarter price increases (see Table 1), although the growth rates slowed down. On the primary market (RPO), transaction prices (RPT) increased in all groups of cities due to a larger scale of sales of better-located and more expensive dwellings. Rising prices of housing on primary markets (mainly in the developer's standard, i.e. to be finished by buyers on their own and purchased with delayed delivery) result in greater interest of buyers in the cheaper secondary market, where dwellings are usually ready for occupancy. In the secondary market, an increase in offer prices (RWO) was observed in all groups of cities. However, transaction prices of housing (RWT) increased only slightly in the group of 6 and 10 cities. In Warsaw, transaction prices fell for another quarter. Hedonically adjusted prices grew in the group of 10 cities, which means that sale prices of similar dwellings were higher than in the previous quarter, while in the group of 6 cities and Warsaw, these prices fell.**

¹ The analysis carried out in this issue of the *Information* is based on data available as at the end of 2020 Q4. Data gathered in the NBP database during listings include data as at 1 December 2020 and transactions concluded from September to November 2020. Due to delays in access to certain data some charts contain information until 2020 Q2 (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 2020 Q4 include approx. 114.3 thousand records, including approx. 28.5% concerning transactions and 71.5% concerning offers. A total of 3.9 million records have been gathered in the database, of which 24.3% concern transactions and 75.7% concern offers.

Table 1 Q/Q price growth of a square metre of housing in the analysed cities in 2020 Q4.

	RPO	RPT	RWO	RWT
Gdańsk	0.5%	4.2%	2.5%	-0.1%
Gdynia	1.9%	-1.3%	10.1%	-1.1%
Kraków	1.6%	-1.7%	2.9%	0.2%
Łódź	0.4%	3.4%	4.7%	-1.6%
Poznań	0.7%	2.2%	-0.5%	-0.9%
Wrocław	-0.5%	1.5%	3.5%	9.2%
Warsaw	0.1%	0.8%	1.5%	-2.2%
6 cities:	1.2%	1.1%	3.5%	0.3%
10 cities:	2.2%	3.1%	1.2%	1.3%

Source: NBP

- **Average transaction rental rates per square metre of housing** (excluding service charges and fees for utilities) **slightly increased in quarter-on-quarter terms in all groups of cities (see Figure 15); yet it fell in year-on-year terms.** In the large cities studied, there is still a high supply of internet-based housing offers on long-term rental markets, including those purchased for investment purposes. This may put downward pressure on rental rates in the future.
- **Quarterly sales of dwellings and home construction contracts in Poland's six largest primary markets exceeded 13.9 thousand dwellings² at the end of 2020 Q4 (see Figure 55). Despite the effects of restrictions related to the COVID-19 pandemic, sales of dwellings increased compared to the previous quarter, which was also influenced by a one-off bundle sale³. Approx. 12 thousand contracts for the construction of apartments, i.e. approx. 0.9 thousand q/q less, were concluded.** The stock of unsold completed dwellings put on the market decreased from the previous quarter by approx. 1.3 thousand and amounted to approx. 48.0 thousand at the end of the analysed period. The number of completed dwellings put on sale in 6 cities dropped in comparison with the previous quarter by 1.5 thousand to 3.9 thousand and the home selling time in the primary market in the six largest markets rose slightly to 3.6 quarters from 3.5 quarters in 2020 Q3.
- **The index of the estimated availability of housing in large cities** (based on average wages in the enterprise sector) **stood at 0.76 square metres in the analysed quarter.** Consequently, it exceeded the previous quarter's figure and was 0.28 square metres higher (i.e. approx. 59%) than the record low observed in 2007 Q3. The index of the estimated maximum availability of residential mortgage loans⁴ increased slightly. The estimated affordability of loan-financed housing⁵ for an average household also

² Based on JLL (former REAS) data.

³ A foreign investment fund concluded a contract with one of real estate developers for the construction of approx. 700 rental dwellings in three buildings in Warsaw, for the amount of approx. PLN 381 million. Construction is to be completed in 2022.

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 subsistence level understood as the minimum income after the repayment of loan instalments). The estimate does not take into consideration changes in banks' lending policy, including lending terms and criteria.

⁵ Affordability of loan-financed housing – a measure specifying how many square metres of housing may be purchased with a residential mortgage loan obtained with the average monthly wage in the enterprise sector in a particular market (Statistics Poland), in view of a given bank's lending requirements and loan parameters (interest rate, amortisation period, minimum subsistence level 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.

posted a slight increase. Falling interest rates of residential mortgage loans were the main driving force behind the slight increase in the last two indices.

- **The current level of rental rates in long-term rental (average in the 7 largest cities – Warsaw and 6 cities) did not change the level of the profitability of housing rental.** Still, housing investment (excluding transaction costs) was competitive compared with interest rates on bank deposits, investments in 10-year Treasury bonds or investment in commercial real estate.
- **In 2020 Q4, the value of disbursements of new housing loans, after the collapse in 2020 Q2 driven by the COVID-19 pandemic, was higher than the disbursements of loans in the same period of 2019.** In 2020 Q4 the value of newly granted residential mortgage loans in PLN^{6, 7} (excluding renegotiated agreements), based on NBP data⁸, stood at approx. PLN 16.2 billion, i.e. PLN 2.3 billion (16.8%) higher than the figures recorded in the previous quarter and approx. PLN 3.4 billion (26.7%) higher than the 2019 Q4 figures. The results of the NBP survey on the situation in the credit market in 2020 Q4⁹ indicate that banks slightly eased the standards of granting housing loans and tightened some of the lending conditions. The way banks felt the changes in demand for housing loans varied (43% recorded a fall in demand, 35% recorded a rise, with 11% recording a rise in demand on a significant scale). It should be added that temporary difficulties with housing loan repayment, resulting from an exceptionally large shock at the beginning of the pandemic, did not translate into an increase in loan defaults. This was facilitated by credit moratoria¹⁰ and interest rate cuts, as well as fiscal measures taken to curb the rise in unemployment.

⁶ According to BIK data, in 2020 Q4 banks and credit unions granted approx. 56.5 thousand housing loans in the amount of approx. PLN 17.0 billion to individual clients (compared to 52.3 thousand loans in the amount of PLN 14.8 billion granted in 2020 Q3). The negative y/y growth in sales of housing loans recorded in 2020 concerned almost all groups of loans, both in terms of number and value. Only the share of loans above PLN 350,000 is constantly increasing, from 43% in 2019 to 48% in 2020 (in terms of value) and from 24% to 28% (in terms of the number of loans), respectively. As of 4 January 2021 approx. 3.5 thousand deferrals of repayment (bank moratoria) of housing loan instalments were reported to the BIK database for housing loan accounts in PLN in the amount of PLN 783 million and approx. 1.7 thousand deferrals for foreign currency loans in the amount of PLN 546 million.

⁷ According to the AMRON report, in 2020 Q4, the number of granted housing loans amounted to 53.8 thousand. (compared to 48.8 thousand in the previous quarter), the value of newly granted mortgage loans amounted to PLN 16.4 billion (compared to 14.1 thousand in the previous quarter), and the average amount of a housing loan granted was approx. PLN 305.1 thousand (compared to 287.2 thousand in the previous quarter). The share of loans with LtV ranging from 50% to 80% and below 30% increased (respectively to approx. 44.8% and 14.1%), while the share of loans with LtV ranging from 30% to 50% and above 80% decreased (respectively to approx. 6.5% and approx. 34.6%). In the structure of new loan agreements, compared to 2019, the share of residential mortgage loans with a maturity of 25 to 35 years increased (to 64.9%), while the share of loans with other maturities decreased. At the end of 2020, the number of active loan agreements (in repayment) exceeded 2.47 million (a change of 204.2 against 225.1 in 2019), while their value at the end of that period amounted to PLN 476.3 bln (a change of 60.7 against 62.6 in 2019).

⁸ Data concerning the interest rate and the value of new residential mortgage loans based on the NBP data available in the "4 OPN2PLN" tab, on the NBP site: https://www.nbp.pl/home.aspx?f=/statystyka/pieniezna_i_bankowa/oprocentowanie.html. According to NBP data, at the end of December 2020 the value of residential mortgage loans stood at PLN 476.6 billion, i.e. PLN 8.3 billion higher than in the previous quarter and PLN 33.4 billion higher than the end of December 2019 figure (a 7.5% y/y increase, in 2019 the increase stood at 6.6%).

⁹ "Situation in the credit market – results of the senior loan officer opinion surveys, 2021 Q1", NBP, January 2021 https://www.nbp.pl/systemfinansowy/rynek_kredytowy_2021_1.pdf. In the opinion of the surveyed entities, banks were encouraged to ease their lending policy, among other things, because of a decline in the risk of deterioration in the economic situation and housing market conditions, and an increase in competitive pressure from other universal banks and mortgage banks.

¹⁰ In accordance with the "Financial Stability Report. Assessment of the consequences of the COVID-19 pandemic, December 2020," the share of mortgage loans subject to moratoria (mainly deferred payments) began to decline quite rapidly from June 2020, despite the extension of the maximum moratoria period to 6 months. (https://www.nbp.pl/home.aspx?f=/aktualnosci/wiadomosci_2020/20201203_stabilnosc.html)

- **The estimated rate of return on equity from investment projects for housing developers amounted to approx. 21% and remained at the level from the previous quarter.** Compared to other industries it remains high. This was the result of an increase in transaction prices, which more than covered the increase in the costs of housing producers. Despite high equity (and, consequently, solvency) housing developers may face liquidity problems. This is due to projects being largely financed with debt to contractors rather than banking credit. However, so far this risk has not materialized and is not reflected in the statistics. According to the Coface report¹¹, in 2020 the number of bankruptcies in construction and real estate activities increased by approx. 12% y/y, but the share of construction in the total number of bankruptcies and restructuring decreased by 1 p.p. y/y to 11%. However, when interpreting the information from the Coface report, one should take into account the impact of state aid programmes, legal regulations contained in anti-crisis shields, the lack of data from small companies (with annual turnover of up to PLN 5 million) and the limited work of courts, which stopped the increase in the number of bankruptcies and restructuring proceedings ending up in court.
- **In the fourth quarter of 2020, a historically high number of dwellings completed**¹² (see Figure 51) was recorded in Poland, including mainly developers (9.4% more y/y) and individual apartments (7.1% more y/y), with a decrease in the production of cooperative housing (30.9% less y/y) and other forms, i.e. municipal, social and rental as well as company housing (44.1% less y/y). The number of dwellings in which construction has begun¹³ was 5.7% lower than in the previous year (see Figure 52).
- The estimated high rates of return on housing development projects and persistent consumer demand urged real estate developers to apply for new home building permits.¹⁴ The share of building permits for apartments in the so-called rest of Poland increased to approx. 70% (compared to approx. 65% in 2019), which may indicate a change in builders' preferences. **The historically high number of permits in the last quarter of 2020** may also be a temporary effect of the change in regulations regarding the energy efficiency requirements of buildings¹⁵, and especially concerns developer apartments in the so-called rest of Poland.

¹¹ According to the opinion of Coface experts (Annual Bankruptcy Report COFACE – insolvency of enterprises in Poland in 2020), in 2020 the number of bankruptcies increased, which is also due to the simplified proceedings for approval of the arrangement, which were introduced in June 2020 by the “COVID Act”. The high increase in proceedings, which would be adequate to the significant deterioration of economic activity recorded in Poland this year, is kept in check by various forms of support for enterprises and a moratorium on submitting bankruptcy petitions. Entrepreneurs threatened with insolvency try to save enterprises by concluding an arrangement with creditors as part of restructuring proceedings. Despite the upturn that started in July 2020, it takes time to recover from the losses caused by the pandemic.

¹² According to the Statistics Poland data, in 2020 Q4 a record high number of dwellings (since 2005) was completed and made ready for occupancy – approx. 65.5 thousand, i.e. approx. 3.6 thousand more than in 2019 Q4 and approx. 5.9 thousand more than the previous quarter. A total of 222.0 thousand dwellings were completed and made ready for occupancy over the last 4 quarters, i.e. 14.6 thousand more than in the corresponding period of 2019 (a rise of 7.0% y/y).

¹³ According to the Statistics Poland data, in 2020 Q4 the construction of approx. 56.5 thousand dwellings was started, i.e. approx. 2.3 thousand more than in 2019 Q4 and approx. 10.8 thousand less than in the previous quarter. Altogether the last 4 quarters saw the construction of approx. 223.8 thousand dwellings, i.e. approx. 13.4 thousand less than in the same period of 2019 (a decrease of 5.7% y/y).

¹⁴ According to the Statistics Poland data in 2020 Q4 approx. 84.2 thousand home building permits were issued in Poland, i.e. 16.9 thousand more than in 2019 Q4 and approx. 14.7 thousand more than in the previous quarter. In the last four quarters a total of approx. 275.9 thousand permits were issued, i.e. 7.5 thousand more than in the previous four quarters (a 2.8% y/y increase).

¹⁵ Regulation of the Minister of Infrastructure of April 12, 2020 on technical conditions to be met by buildings and their location, in par. 329 indicates that from 1 January 2021, a new energy standard applies and the value of primary energy (the so-called EP index) is reduced.

- **The market of commercial real estate has been affected by the Covid-19 pandemic, and the resulting limited activity of enterprises will affect rents and real estate sale transactions, particularly in a longer perspective¹⁶.** It should be remembered that rents in commercial properties are signed for several years, and the termination of contracts involves costs, but when the tenant becomes insolvent, he is unable to pay the rent. Some tenants, especially high-profile tenants, use the situation to negotiate rent levels. On the other hand, real estate purchase and sale transactions are the result of a long negotiation process (including due diligence), therefore, on the investment market, the possible impact of the pandemic will be visible in the longer term.
- **The pandemic has accelerated the changes taking place in the office market. We are seeing an increase in the vacancy rate and a decrease in demand for office space.** In order to reduce the costs associated with renting office space, companies often decide on remote or hybrid work.
- **In 2020 Q4 imbalances resulting from the previously observed excess supply of space for rent in relation to demand increased in the office space markets.** The supply of new space and space under construction is still high, which is related to the start of construction works before the pandemic, which investors want to complete. According to advisory company data, at the end of 2020 Q4, the stock of office space in the nine largest office markets¹⁷ stood at approx. 11.7 million square metres; approx. 1.25 million square metres (i.e. approx. 11.6% of the existing stock) of office space was under construction. The vacancy rate in these markets increased to 11.3% against 10.7%¹⁸ at the end of 2020 Q3. In Warsaw the vacancy rate stood at 9.9%¹⁹ at the end of 2020 Q4 compared to 9.6% recorded in 2020 Q3. The vacancy rate of office space depends on the age²⁰ and mainly on the location of the office building²¹. Construction of more than 10% of additional space does not mean an automatic increase in vacancy rates, but it will generate significant competition for tenants, especially for older buildings or those in poorer locations.
- **In 2020 Q4 the retail space sector was considerably affected by the consequences of the COVID-19 pandemic.** A large number of retail chains are renegotiating lease agreements in shopping centres. Many large and well-known chains are still resigning from premises in shopping malls, moving their stores to the Internet or shops located on high streets, or completely leaving the Polish market. The stock of modern retail space at the end of 2020 Q4 amounted to over 12.2 million sq m, which translates into a saturation of 318 sq m/1000 inhabitants²². On the other hand, there were approximately 330,000 sqm²³ of modern retail space, i.e. less than 3% of the existing stock. **This low growth of new space may mean that investors consider the market to be saturated. This is also confirmed by the emergence of projects transforming existing shopping centres into shopping, service and entertainment centres.** The problem of this sector is, therefore, to retain existing customers, and to a lesser extent to compete with new projects.

¹⁶ In the commercial market, data on rents is for 2020 Q2.

¹⁷ The nine office space markets include: Warsaw, Kraków, Wrocław, Tri-City Agglomeration of Gdańsk, Sopot and Gdynia, Katowice, Łódź, Poznań, Szczecin, Lublin.

¹⁸ See: See Report Colliers International: Market Insights, 1st half of 2021, Poland.

¹⁹ See: See Report Colliers International: Market Insights, 2021 Annual Report, Poland.

²⁰ Cushman & Wakefield, Marketing as one of the key factors supporting the modernisation process of older office buildings, 2018.

²¹ See: Knight Frank, Report: Poland, Commercial Market, 1st half of 2018.

²² It is estimated that this value is 15% lower than the average for the entire European Union..

²³ See: Report Colliers International Market Insights 2021 Annual Report, Poland.

- **The modern warehouse space market in Poland was still in the expansion phase. Supply and demand remained high.** New warehouse premises are mainly built in the neighbourhood of large cities. At the end of 2020 Q4, the total stock of the warehouse space grew to 20.6 million square metres and modern space under construction stood at 2 million square metres. The vacancy rate in the whole of Poland recorded a slight drop to 6.6%²⁴ against 7.0% at the end of 2019 Q4. The modern warehouse space market in 2020 Q4 did not experience any negative consequences of the pandemic. The segment of warehouses located in urban areas is also developing, including quite close locations, in order to shorten the delivery time of products to the customer.
- **The estimated value of commercial real estate transactions purchased for investment purposes²⁵, i.e. for rent, in 2020 amounted to approx. EUR 6 billion.** The decrease by approx. 10% compared to the previous year may be considered insignificant, especially in comparison with the collapse of the volume of transactions, which took place in 2009 after the outbreak of the global financial crisis. Office space accounted for approx. 37% of the value of the transactions, commercial space for 32%, and warehouse space for 8%.
- **The exposure of the financial sector to commercial real estate (office, retail, warehouse and other) comes in two main forms. The first is related to the financing of a given property by a loan granted for it.** Usually, in this case, the loan is secured on the property, but alternative forms of security are also possible. The value of these loans (excluding loans for housing developers) granted by banks in Poland amounted to PLN 60.4 billion at the end of 2020²⁶. **The second form are loans taken for various purposes, but secured on real estate.** The value of corporate loans secured by mortgage on commercial real estate at the end of 2020 Q4 amounted to PLN 134 billion²⁷.
- **The value of corporate property loans²⁸ granted by domestic banks to enterprises at the end of 2020 Q4 amounted to PLN 65.6 billion,** with 57% of loans denominated in EUR. Corporate property loans comprised loans granted to real estate developers for residential real estate, office space, retail space, warehouse space and industrial space and other real estate. Corporate debt resulting from residential real estate at the end of 2020 Q4 amounted to PLN 4.6 billion against PLN 4.7 billion in 2020 Q3. The value of loans for office real estate dropped to PLN 17.1 billion as compared to PLN 17.2 billion in 2020 Q3.

²⁴ See: See Report Colliers International: Market Insights, 2021 Annual Report, Poland.

²⁵ On the basis of Comparables. pl data. 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.

²⁶ The total amount of loans intended for commercial real estate construction extended by foreign banks as at the end of 2020 is estimated by experts to have stood at PLN 97 billion. The estimate has been arrived at as follows: The value of the stock of commercial real estate in Poland (office, retail and warehouse) as at the end of 2020 has been estimated at PLN 314bn. This estimate was calculated by multiplying the area of housing stock in Poland in square metres (provided by consulting companies) by the hedonic appraisal of asquare metre of respective real estate as estimated by NBP. In line with international experience, it can be assumed that the LTV in the total stock is 50%, thus the total value of loans for real estate is PLN 157 bn. By deducting loans granted by banks operating in Poland, (PLN 60.4 bn), we obtain the estimated amount of loans granted by banks operating abroad (PLN 97bn). These loans comprise loans granted by the financial sector and the non-financial sector (which in turn usually incurs debt in the financial sector).

In line with S Recommendation of the Office of the Polish Financial Supervision Authority of June 2013, the maximum LTV for commercial real estate in Poland is 75% or 80% if the part of the exposure exceeding 75% LTV is adequately hedged, or if the borrower has submitted additional collateral in the form of a blockade of funds in a bank account or in the form of a pledge on debt securities of the State Treasury or of NBP, denominated in PLN.

²⁷ The fall in debt by PLN 4.6bn in comparison with 2020 Q3 was mainly due to the repayment of loans denominated in PLN.

²⁸ FINREP data.

The value of loans granted for retail real estate totalled PLN 18.2 billion as against PLN 17.7 billion in 2020 Q3. The value of loans granted for warehouse and industrial real estate rose to PLN 9.7 billion. The value of loans granted for other real estate²⁹ stood at PLN 15.4 billion.

- **The quality of loans for real estate granted to enterprises slightly deteriorated in comparison with the previous quarter.** The share of non-performing loans in the total loans for office space at the end of 2020 Q4 stood at 6.4% against 6.1% in 2020 Q3, while the same share in the case of loans granted for retail space rose to 13.5% as compared to 12.9% in 2020 Q3. This ratio in the case of warehouse and industrial space stood at 7.7% and for other real estate it dropped from 8.6% to 8.2%. The non-performing loan ratio among loans granted for residential real estate decreased slightly to 17.5% from 19.4% in 2020 Q3. The relatively high value of this ratio is mainly due to banks holding loans from previous years in their loan portfolio³⁰.
- **The estimated value of stock of office, retail and warehouse real estate at the end of 2020 was PLN 314 billion.** The rise against the PLN 281 billion estimated at the end of 2019 is due to the changes in stock, appraisal methods (see Figures 68 and 69) and changes to the exchange rate³¹.
- **In the market of small office real estate, the median of the asking prices all over Poland and the majority of the largest cities displayed a slight increase.** Only Łódź and Kielce posted minor decreases. Also in the case of small retail and service premises, in the majority of the large cities there was a slight increase in the median of offer prices. Łódź, Poznań and Wrocław, on the other hand, posted a slight decrease in comparison with 2020 Q3. It can be concluded that owners of small commercial properties are testing the possibility of selling them for a higher price.

The figures below describe the key developments in the housing market in Poland's major cities in 2020 Q4. The figures present:

- 1) home prices (Figures 1–15),
- 2) affordability 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),

²⁹ 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)".

³⁰ See Business Stability Report, NBP, December 2018.

³¹ On the professional market of commercial real estate prices, appraisals and rents are usually denominated in EUR. Changes in the exchange rate therefore bring changes in prices, appraisals and rents denominated in PLN. In this way the investor is transferring the currency risk to the tenant. In the case of the depreciation of currency, tenants pay higher rent, and in the case of appreciation, a lower one.

6) rents and transaction prices of commercial real estate (Figures 64–69),

7) conclusions from the NBP survey (November 2020) “Developer and construction sector in Poland” (Figures 70–83).

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

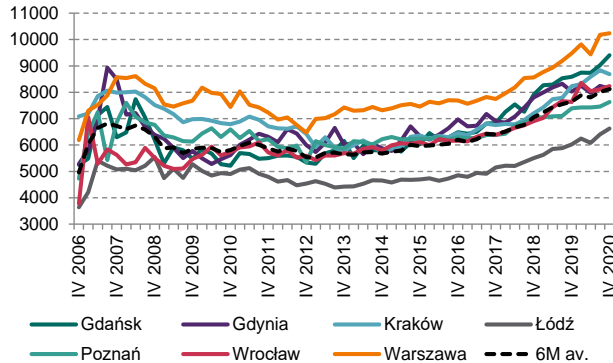
In addition, data from PONT Info Nieruchomości, AMRON and SARFIN Polish Banks’ Association and Comparables.pl were used in the analyses. The analyses and reports of JLL (former REAS), the Polish Financial Supervision Authority and the aggregate credit data from the Credit Information Bureau were also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

List of abbreviations:

5M	5 largest cities: Gdańsk, Kraków, Łódź, Poznań, Wrocław
6M	6 largest cities: Gdańsk, Gdynia, Kraków, Łódź, Poznań, Wrocław
7M	7 largest cities: Gdańsk, Gdynia, Kraków, Łódź, Poznań, Warsaw, Wrocław
10M	10 large 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 developer
GD	Households
GUS	Statistics Poland
EURIBOR	Euro Interbank Offer Rate
KNF	Polish Financial Supervision Authority
LIBOR	London Interbank Offered Rate
LTV	The relation of loan value to home value, i.e. 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 Warsaw 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 offer prices of housing in the primary market (RP) and in the secondary market (RW)

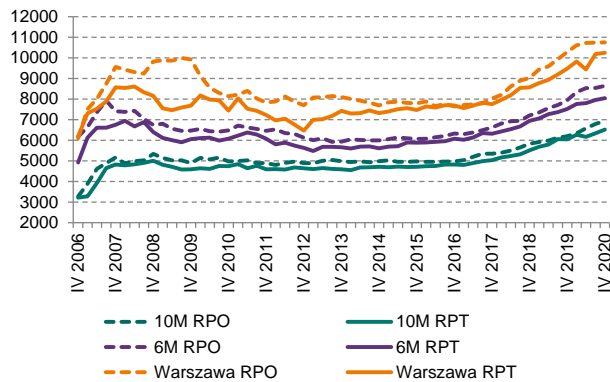
Figure 1 Transaction prices per square metre of housing in Warsaw and in 6M- primary market, in PLN



Note: the home price database of NBP (BaRN) has existed since 2006 Q3; description of the database may be found in the “Situation in local housing real estate markets in Poland in 2019” available on the bank’s website.

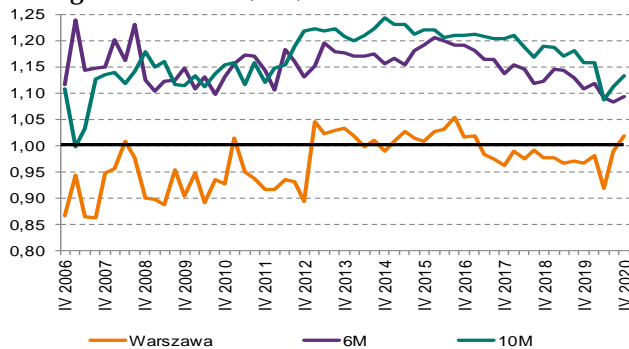
Source: NBP

Figure 3 Weighted average price per square metre of housing, offers (O) and transactions (T) – primary market (RP)



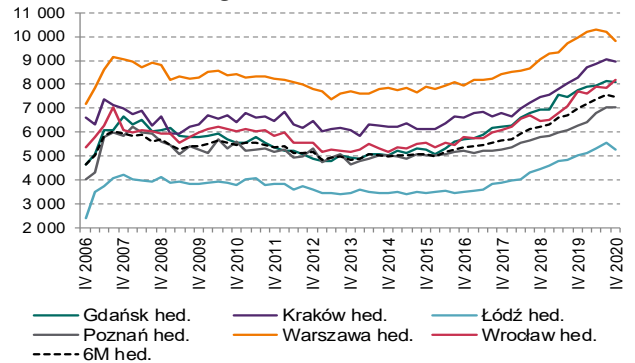
Source: NBP

Figure 5 Ratio of the average weighted transaction price per square metre of housing – primary market (RP) to existing stock market (RW)



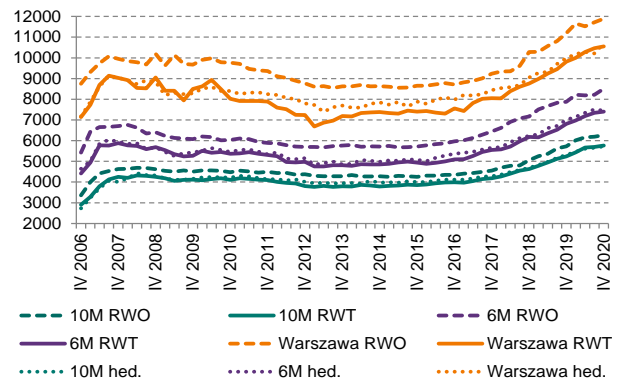
Source: NBP

Figure 2 Transaction prices per square metre of housing adjusted by the hedonic index in Warsaw and in 6M - existing stock market



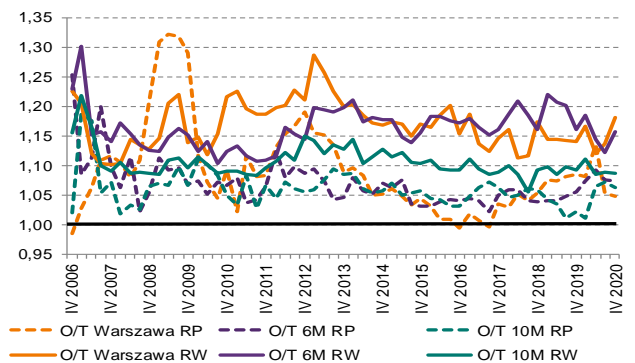
Source: NBP

Figure 4 Weighted average price per square metre of housing, offers (O) and transactions (T) – existing stock market (RW)



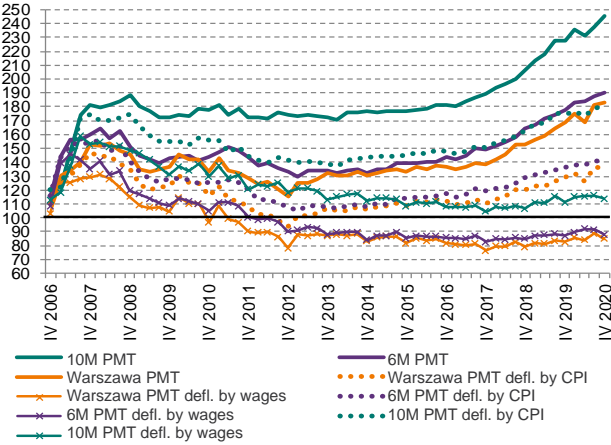
Source: NBP

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



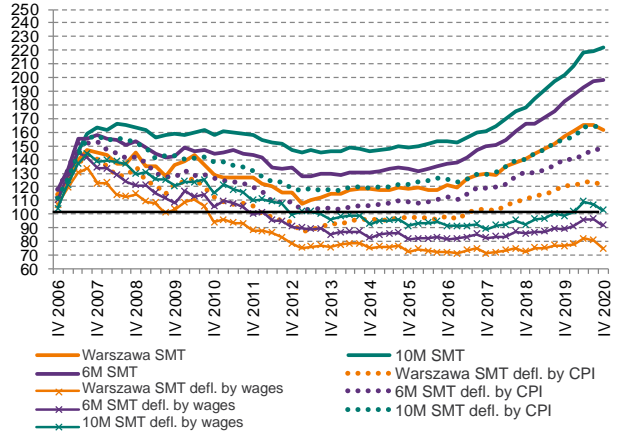
Source: NBP

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



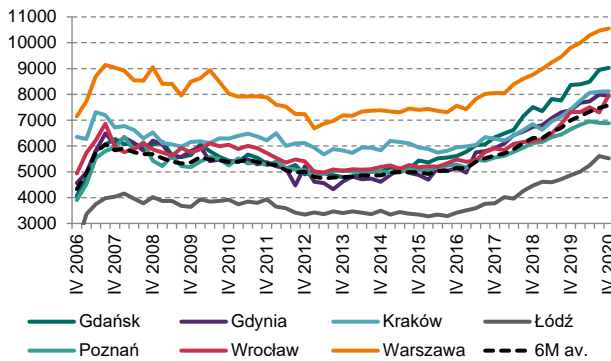
Source: NBP, ZBP (AMRON), Statistics Poland (GUS)

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



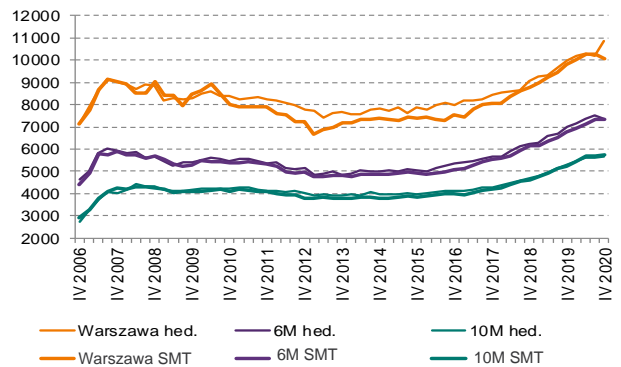
Source NBP, ZBP (AMRON), Statistics Poland (GUS)

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



Source: NBP

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

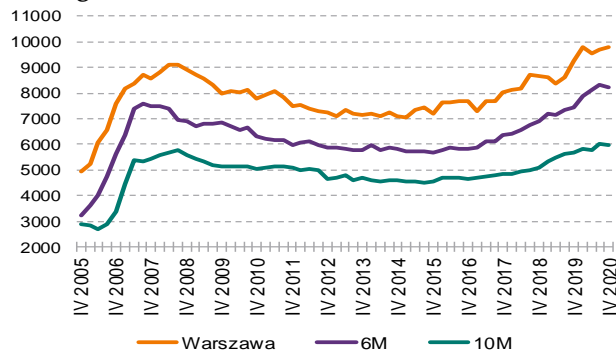
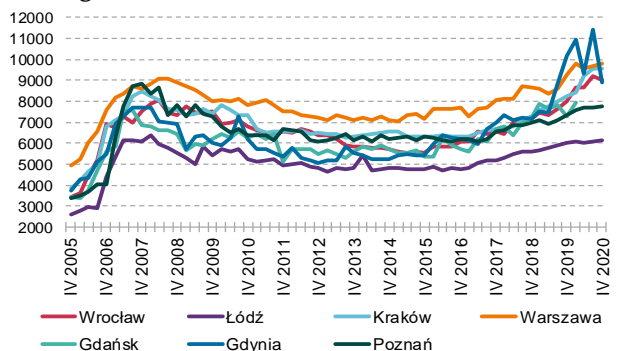


Figure 12 Average offer prices per square metre of housing in PM (Warsaw and 6M)

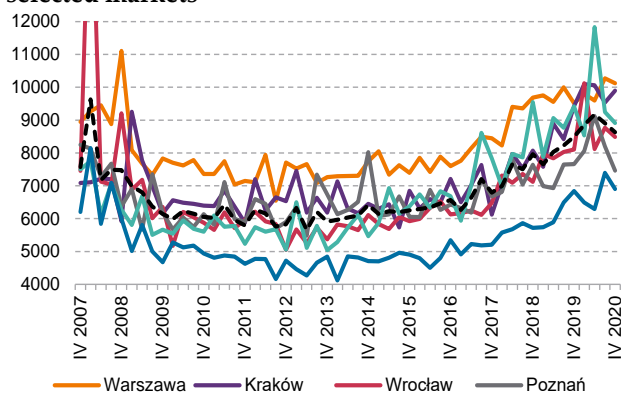


Note to Figures 11-12: prices are collected from all available sources.

Source: PONT Info Nieruchomości

Source: PONT Info Nieruchomości

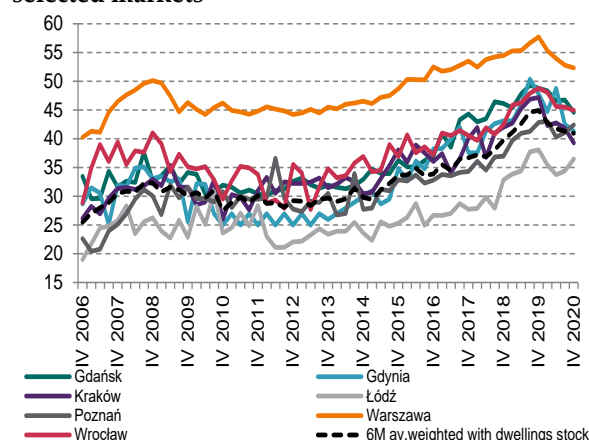
Figure 13 Average offer prices per square metre of housing, new home construction contracts – PM, selected markets



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

Source: JLL/REAS

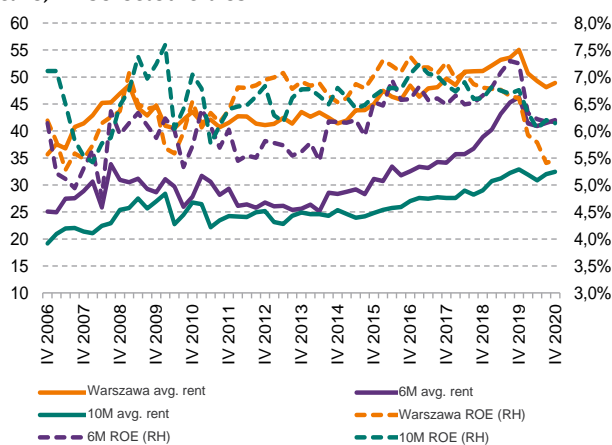
Figure 14 Average rent rates (offers and transactions) per square metre of housing – SM, selected markets



Note: In 2020 Q1 the sample was changed.

Source: NBP, OLX Group

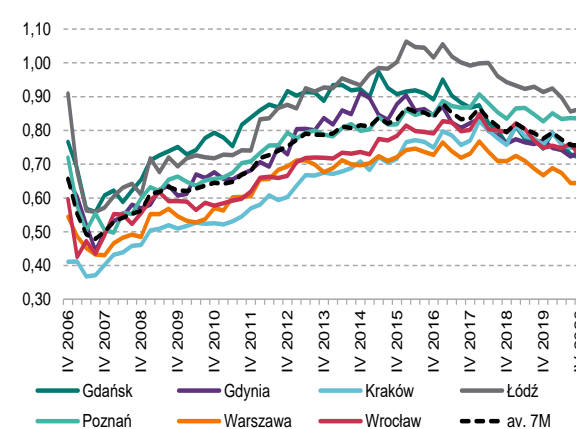
Figure 15 Average rent rates (transactions) per square metre of housing in the SM (left-hand scale) and the estimated profitability of housing rental (right-hand scale) in selected cities



Note to Figure 15: price per square metre of housing 50% PM and 50% SM; the price per square metre of housing in the PM was increased to include the average costs of home finishing and 1.5% amortisation; the analysis does not take into account the high transaction costs in the housing market and the potentially long period of disinvestment.

Source: NBP, OLX Group

Figure 16 Estimated availability of housing in 7M based on average wages in the enterprise sector (sq. m)

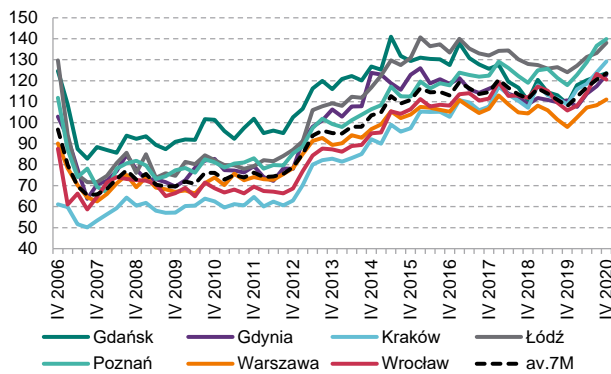


Housing availability – a measure of potential availability to purchase housing at the transaction price for an average wage in the enterprise sector in a particular city. It expresses the number of square meters of housing that can be purchased for an average wage in the enterprise sector in a particular city (Statistics Poland (GUS)), at an average transaction price in a particular market (40% from the primary market and 60% from the secondary markets according to the NBP database).

Source: NBP, Statistics Poland (GUS)

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

Figure 17 Estimated availability of loan-financed housing (average for 7M)



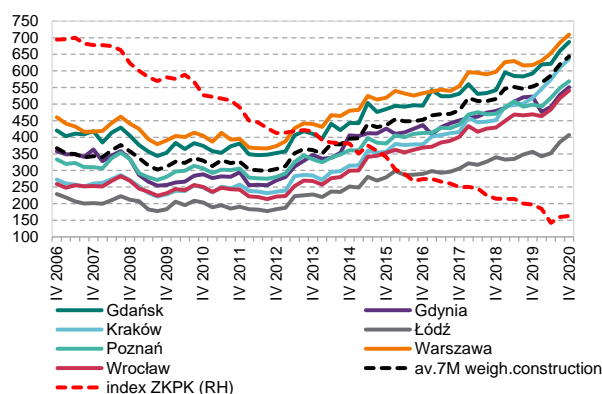
Source: NBP, Statistics Poland (GUS)

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, amortisation period, minimum subsistence 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 based on the average monthly wage in the enterprise sector in a particular market (Statistics Poland (GUS)), in view of banks’ lending requirements and loan parameters (interest rate, amortisation period, minimum subsistence 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.

ZPK Index – accumulated index of changes in banks’ lending policy criteria; increasing values mean easing, and decreasing 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.

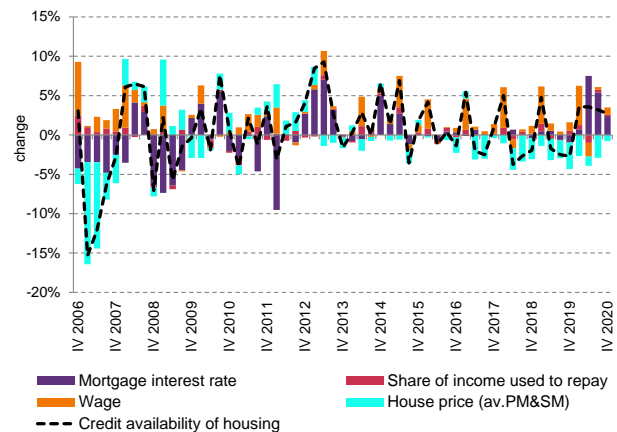
Figure 19 Estimated availability of residential mortgage loan and accumulated index of banks’ mortgage lending policy (ZPKK, right-hand scale)



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

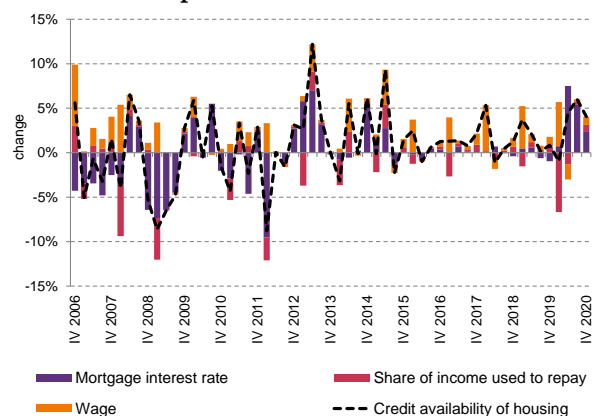
Source: NBP, Statistics Poland (GUS)

Figure 18 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, Statistics Poland (GUS)

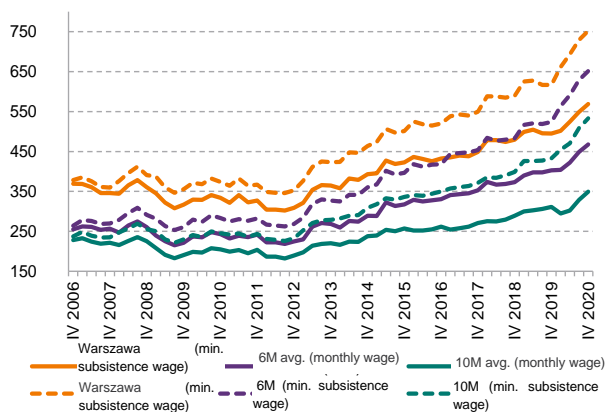
Figure 20 Quarterly changes in the estimated available average residential mortgage loan in 7M and the force and directions of the impact of individual components



Note: the interest on mortgage loan weighted with the share of PLN-denominated and EUR-denominated loan.

Source: NBP, Statistics Poland (GUS)

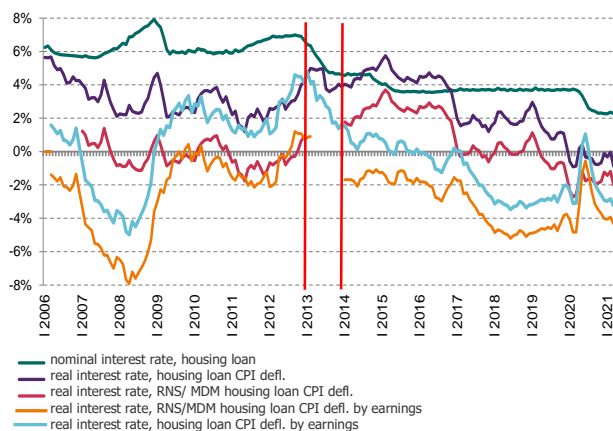
Figure 21 Estimated available mortgage loan for average gross wage in the enterprise sector in selected cities



Note: values estimated with the criterion of minimum subsistence wage left (MS) or average monthly wage in the enterprise sector (MW)

Source: NBP, Statistics Poland (GUS), BGK

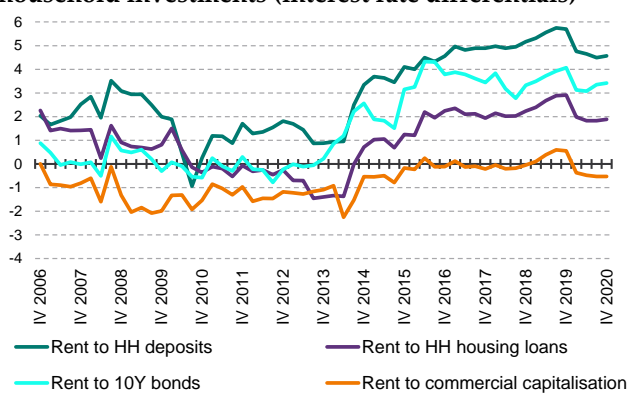
Figure 22 Residential mortgage loan burden for consumer deflated with CPI or wage growth in the enterprise sector



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)

Source: NBP, Statistics Poland (GUS), BGK

Figure 23 Profitability of home rental (average in Warsaw and 6M) as compared with alternative household investments (interest rate differentials)

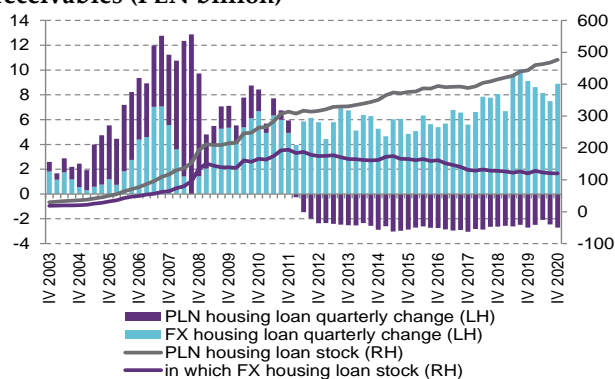


Note to Figure 23: values exceeding 0 denote higher profitability of purchasing property for rental than other household investment. This analysis does not take into account high transaction costs in the housing market and potentially long payback periods.

Source: NBP, Statistics Poland (GUS)

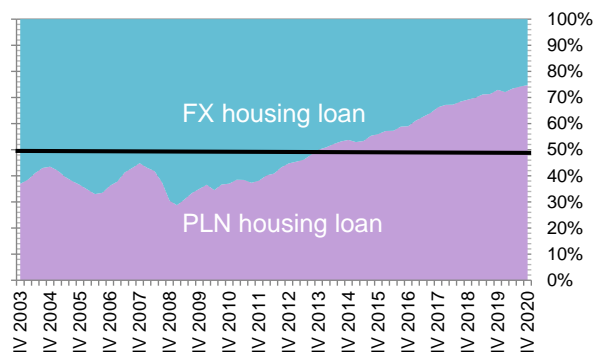
3. Disbursement of residential mortgage loans, interest rates

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 25 Currency structure of housing loan receivables from households (%)



Source: NBP

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

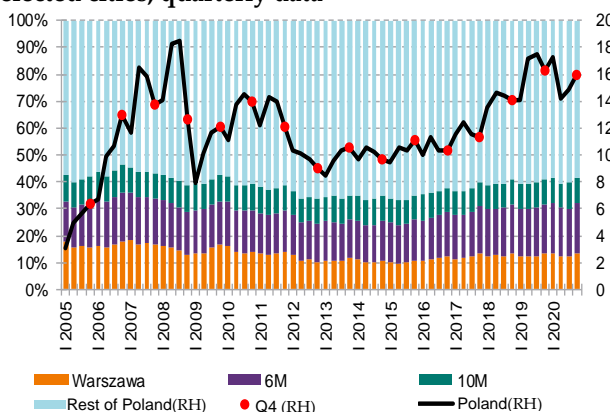
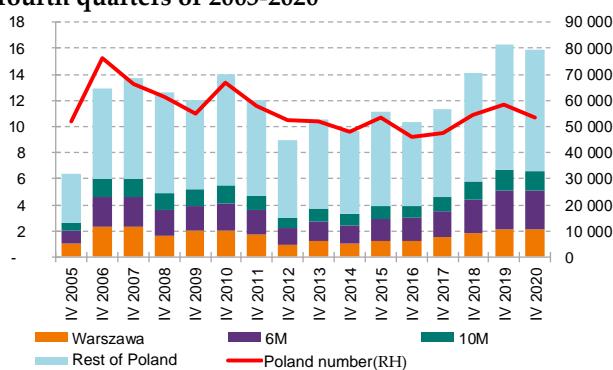


Figure 27 Value in PLN bn (left-hand axis) and number (right-hand axis) of new residential mortgage loans in Poland's selected cities in the fourth quarters of 2005-2020

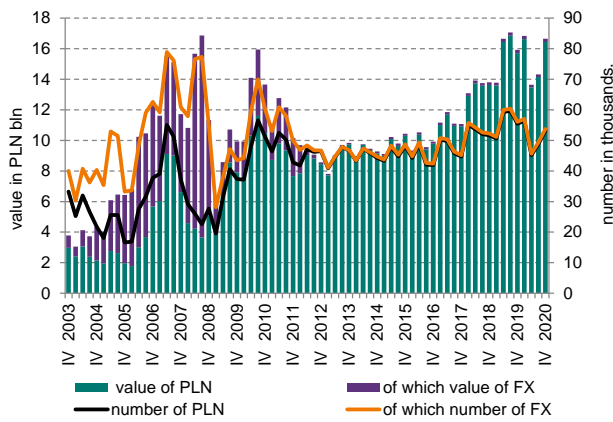


Note to Figures 26 and 27: the data provide information about the residential mortgage loan contracts signed and not the actual disbursement of loans. PP means "the rest of Poland". Only fourth quarters are marked by red points in Figure 26.

Source: BIK

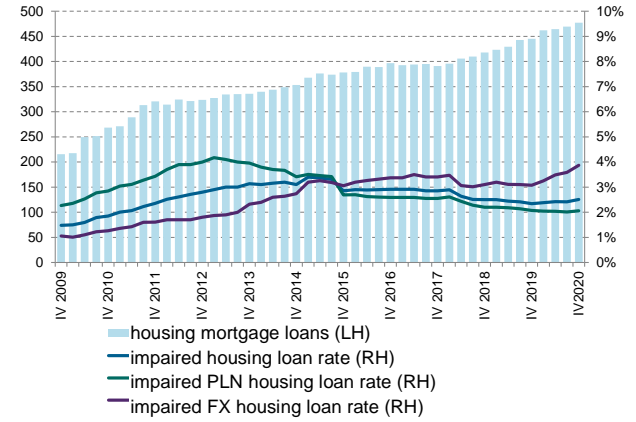
Source: BIK

Figure 28 New residential mortgage loans: value and number, cumulated quarterly values



Source: ZBP (AMRON)

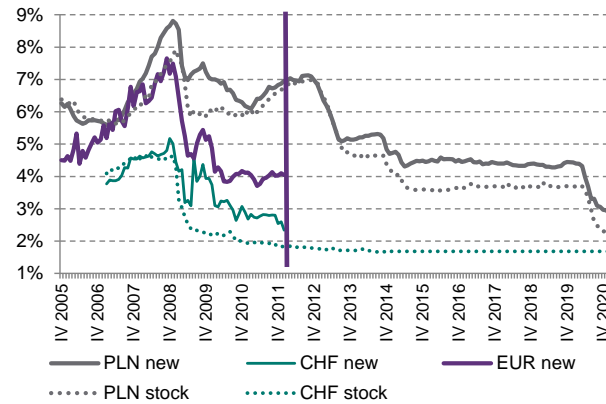
Figure 29 Household loans for housing real estate and loans recognised as impaired



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

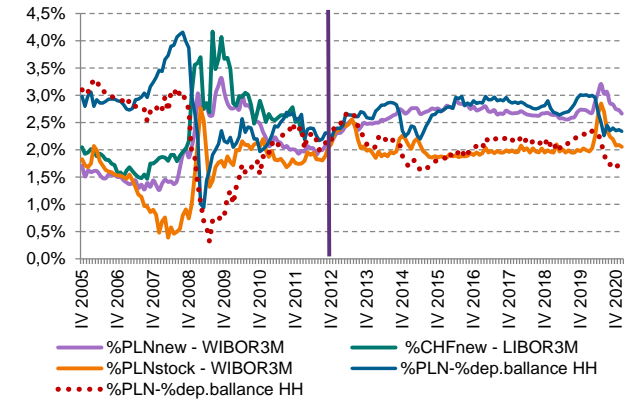
Figure 30 Interest rates on residential mortgage loans for households in Poland



Note to Figure 30 and 31: the violet vertical line separates a period with no FX loans; these loans practically have ceased to be granted since 2012. Note to Figure 31: bank margin is the difference between the 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 gross residential mortgage loan disbursements to households in Poland and the estimated value of cash and loan-financed*/ purchases of developer housing in 7 cities (7M; in PLN million)/

Date	Estimated value of 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 home purchases in the RP 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	6,480	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	7,156	2 705	676	4,450	72%
2019 Q2	14 653	6,713	3 341	835	3,372	63%
2019 Q3	14,554	7,282	3,318	830	3,964	66%
2019 Q4	12,770	8,147	2,912	728	5 235	73%
2020 Q1	14,871	9,059	3,391	848	5,669	72%
2020 Q2	13,009	3,244	2,966	742	278	31%
2020 Q3	13,859	6,565	3,160	790	3,405	64%
2020 Q4	16,185	6,834	3,690	923	3,144	60%

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

The estimated 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, a down-payment of 20% more prudently than the requirement of the amended S Recommendation), whereas cash-financed home purchases are the difference between the value of transactions and credit funds. In order to calculate the estimated value of transactions in the primary market in 7M (Gdańsk, Gdynia, Kraków, Łódź, Poznań, Warsaw, Wrocław), the average home price in 7M (NBP) was multiplied by the average home size in square metres (Statistics Poland (GUS) data) and the number of dwellings sold (JLL based on REAS data). On the basis of ZBP data it was assumed that the value of newly granted loans for the purchase of housing in the primary markets of 7M 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.

**/ Other real estate sold/exchanged may also be the source of own funds.

***/The decrease in the estimated share of home purchases made partially with own funds in the PM in 7M posted in 2020 Q2 is related to very low sales of dwellings in this period.

Source: NBP, JLL (former REAS), ZBP, Statistics Poland (GUS)

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

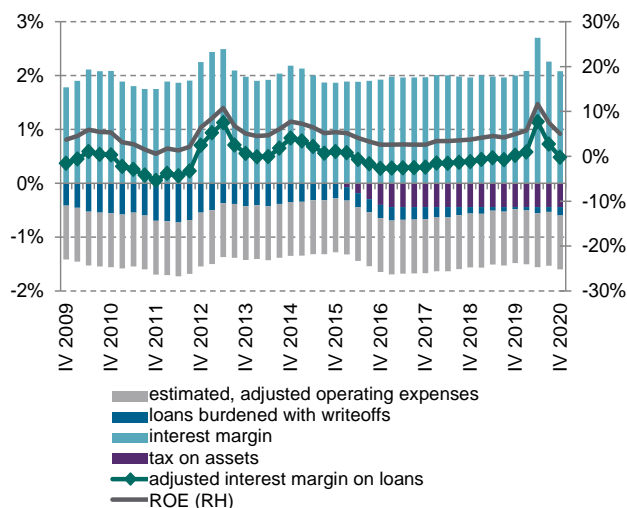
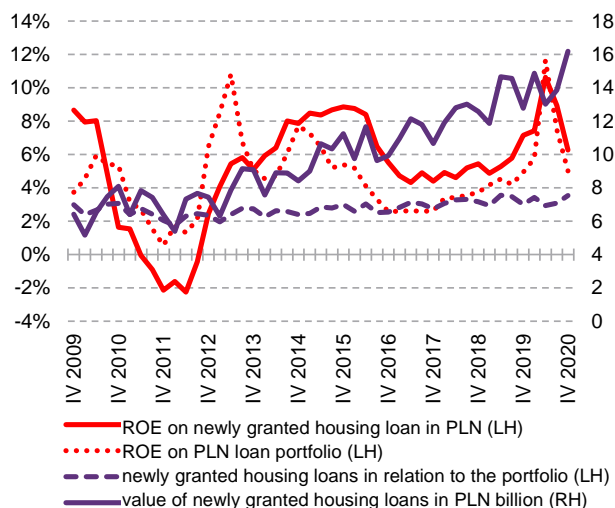


Figure 33 Estimated ROE on residential mortgage loans denominated in PLN for banks in Poland, taking into account interest income and non-interest profit and operating costs and bank tax



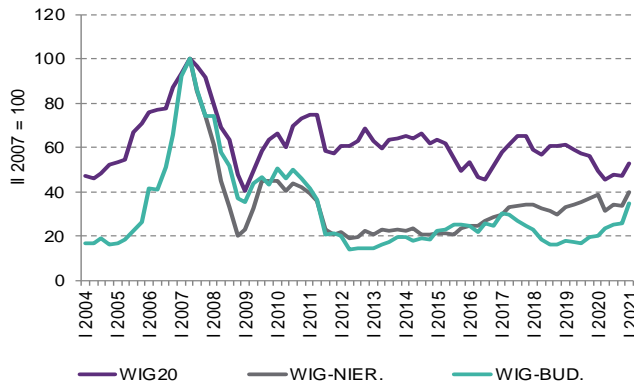
Note to Figures 32 and 33: for calculation, interest income, non-interest income and operating costs were taken into account. The estimated ROE is calculated as the adjusted interest margin in relation to equity. The adjusted interest margin is the interest margin less write-offs, less the estimated operating expenses (adjusted for the non-interest result on residential mortgage loans), less bank tax. Operating expenses less non-interest income were estimated at 1% of the value of the credit portfolio and at 1.5% of the value of new loans. Data concerning equity calculated on the basis of KNF publications. Interest margin based on NBP data.

Source: NBP, KNF

Source: NBP, KNF

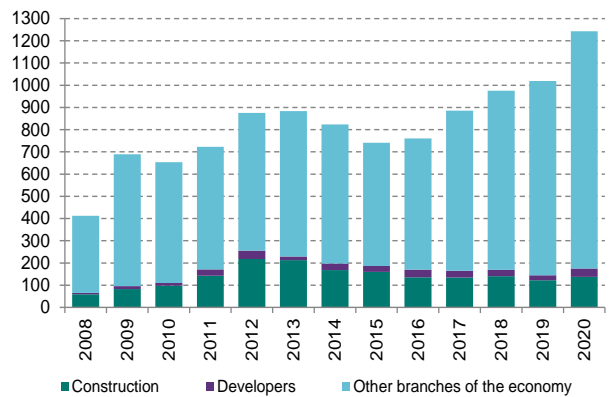
4. Operating profitability of dwellings and real estate development projects, costs of construction and assembly output and economic situation of real estate developers in Poland

Figure 34 Rescaled stock exchange indices:: WIG20 and for real estate developers (WIG-NIER) and construction companies (WIG-BUD) (2007 Q2=100)



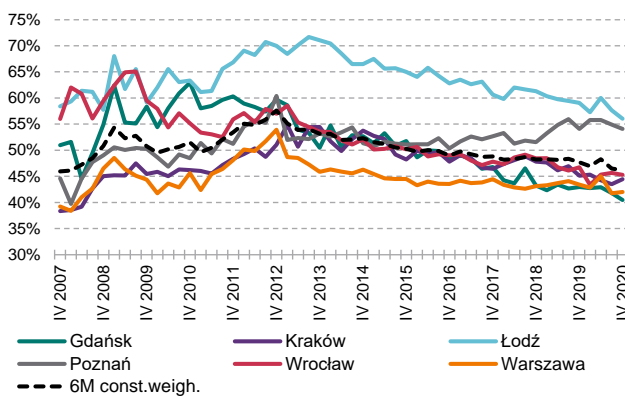
Note: harmonized data, 2007 Q2 = 100 (WIG for real estate developers has been quoted since 2007 Q2); 2021 Q1 - data as at 17 February 2021
Source: Warsaw Stock Exchange

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



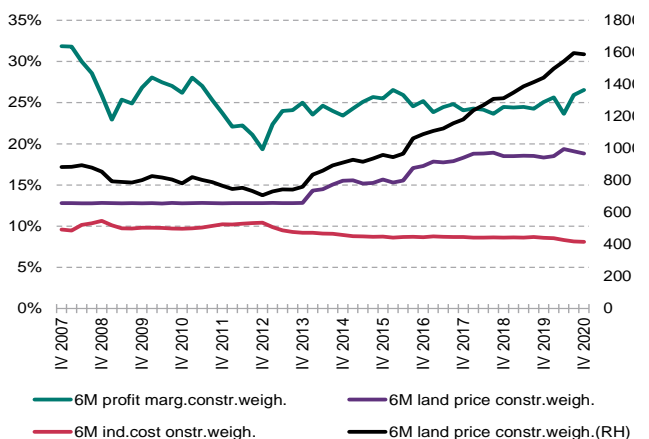
Note: breakdown according to the first entry into the KRS.
Source: Coface Poland

Figure 36 Estimated share of direct construction costs per square metre of the residential building's usable area (type 1122-302³²) in net transaction price in PM 6M



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

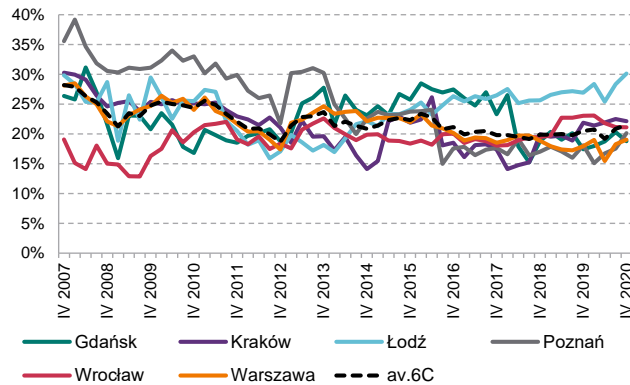
Figure 37 Estimated share of various construction costs per square metre of the residential building's usable area (type 1122-302³²) in net transaction price in PM 6M



Source: NBP based on Sekocenbud

³² 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. The change in the type of the analysed building in 2017 is related to closing of the cost estimation of the building 1121. Analytical assumptions related to building 1121 have been maintained.

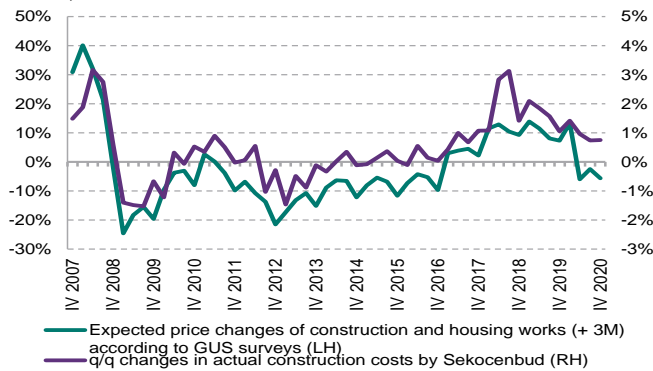
Figure 38 Estimated rate of return on investment projects (type 1122-302^{32/}) in the largest cities



* /ROE modified = net financial result/ (income from sale – net result from sale); ** / DFD – average large real estate development company (according to Statistics Poland employment =>50 employees), MFD – average small real estate development company (employment 9-49 employees).

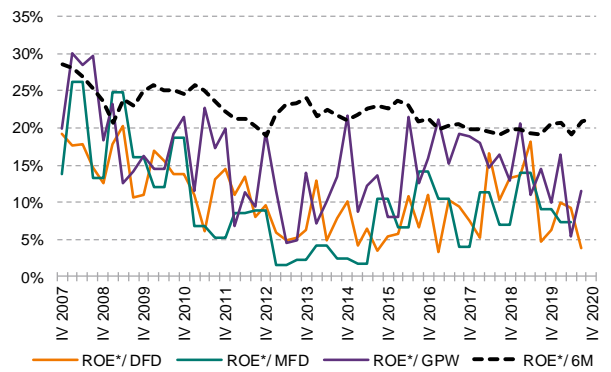
Source: NBP based on Sekocenbud, Statistics Poland (F01) (GUS)

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^{32/})



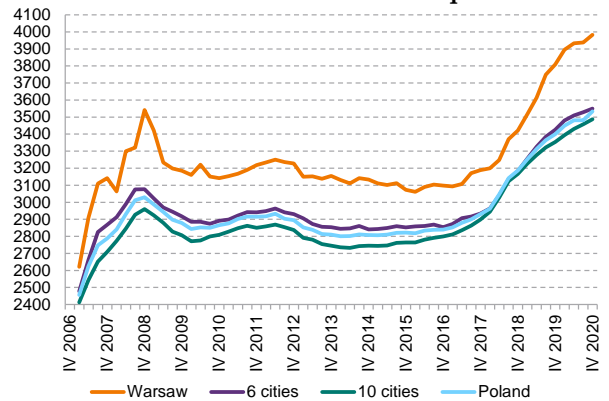
Source: NBP based on Statistics Poland (GUS) (business conditions survey), Sekocenbud

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



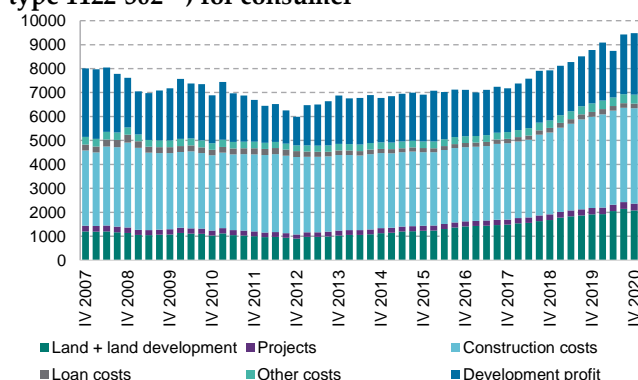
Source: NBP based on Sekocenbud, Financial Statements, Statistics Poland (F01) (GUS)

Figure 41 Average cost of construction of square metre of the residential building's usable area (type 1122-302^{32/}) in selected markets (PLN/sq.m.)



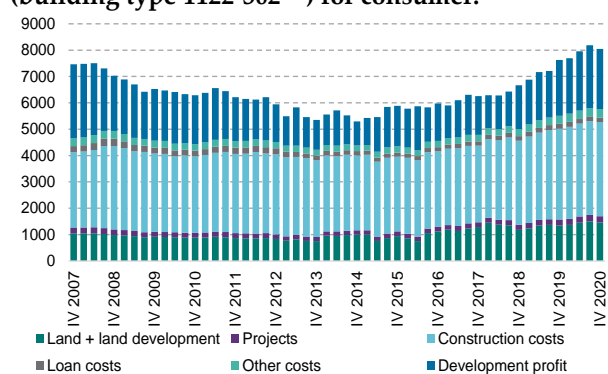
Source: NBP based on Sekocenbud

Figure 42 Warsaw – estimated structure of net price per square metre of housing usable area in PM (building type 1122-302³²⁾) for consumer



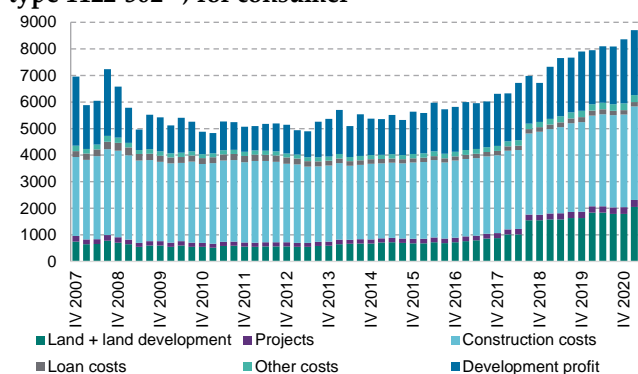
Source: NBP based on Sekocenbud, JLL (former REAS)

Figure 43 Kraków - estimated structure of net price per square metre of housing usable area in PM (building type 1122-302³²⁾) for consumer.



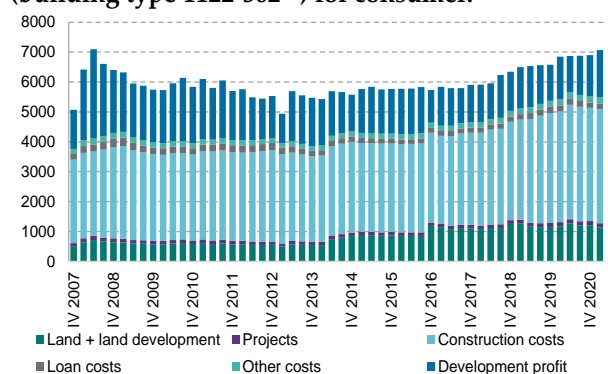
Source: NBP based on Sekocenbud, JLL (former REAS)

Figure 44 Gdańsk – estimated structure of net price per square metre of housing usable area in PM (building type 1122-302³²⁾) for consumer



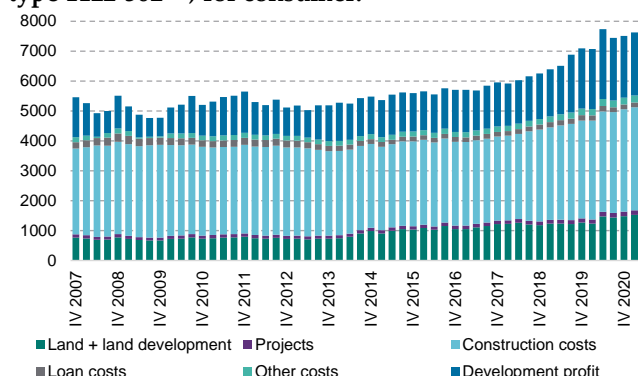
Source: NBP based on Sekocenbud, JLL (former REAS)

Figure 45 Poznań – estimated structure of net price per square metre of housing usable area in PM (building type 1122-302³²⁾) for consumer.



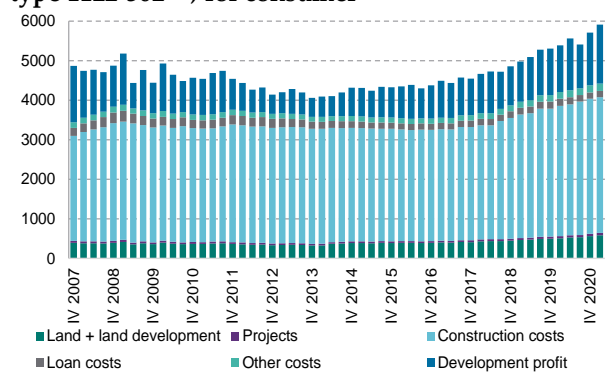
Source: NBP based on Sekocenbud, JLL (former REAS)

Figure 46 Wrocław – estimated structure of net price per square metre of housing usable area in PM (building type 1122-302³²⁾) for consumer.



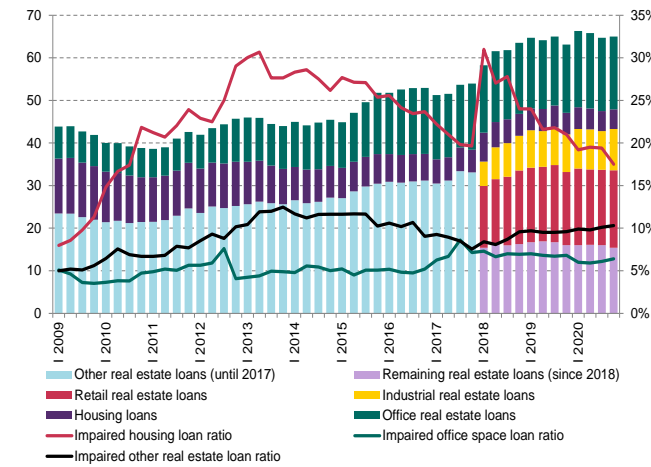
Source: NBP based on Sekocenbud, JLL (former REAS)

Figure 47 Łódź – estimated structure of net price per square metre of housing usable area in PM (building type 1122-302³²⁾) for consumer



Source: NBP based on Sekocenbud, JLL (former REAS)

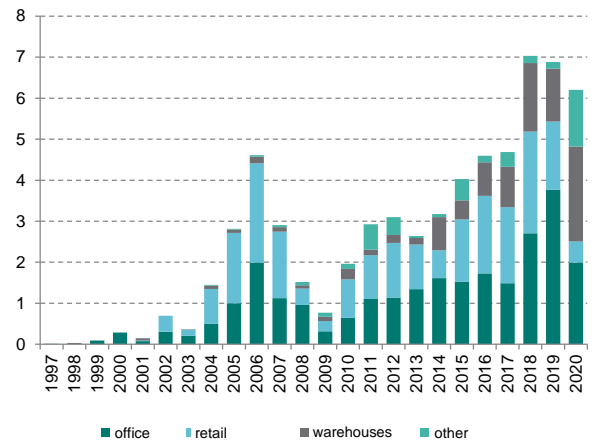
Figure 48 Loans to corporations for real estate purchases (in PLN billion, left-hand scale) and the share of loans recognised as impaired loans (in % right-hand scale)



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

Source: NBP

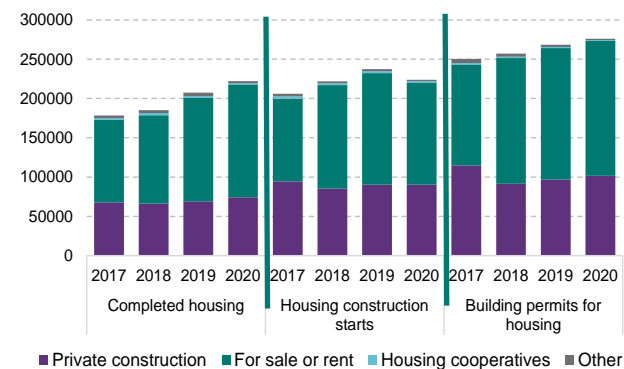
Figure 49 Value of investment transactions in the commercial real estate market (EUR billion)



Source: Comparables.pl

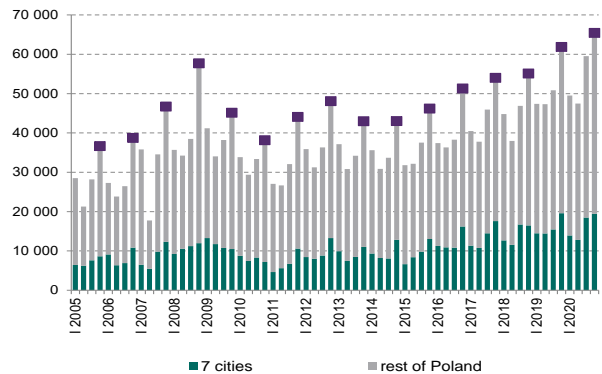
5. Residential construction and the housing market in selected cities in Poland

Figure 50 Structure of investors in residential construction in Poland in the years 2017-2020



Source: Statistics Poland (GUS)

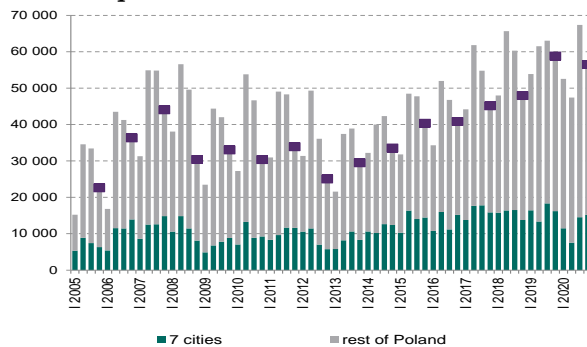
Figure 51 Dwellings completed and made ready for occupancy in Poland, in quarter-on-quarter terms



Note: only fourth quarters have been marked in violet.

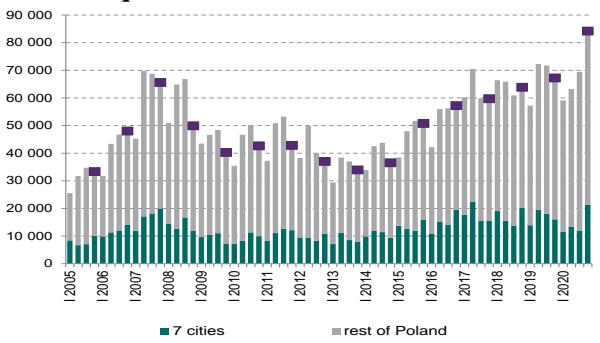
Source: Statistics Poland (GUS)

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



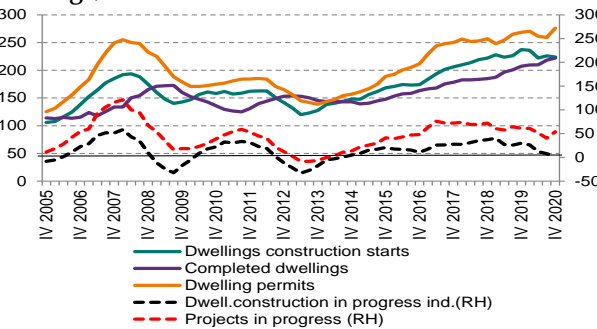
Note: only fourth quarters have been marked in violet.
Source: Statistics Poland (GUS)

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



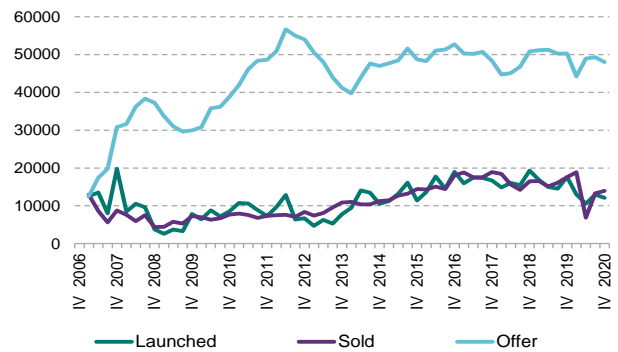
Note: only fourth quarters have been marked in violet.
Source: Statistics Poland (GUS)

Figure 54 Housing construction in Poland (in thousands of dwellings), home construction in progress (dwellings under construction minus completed dwellings) and investment projects in progress (home construction permits minus completed dwellings)



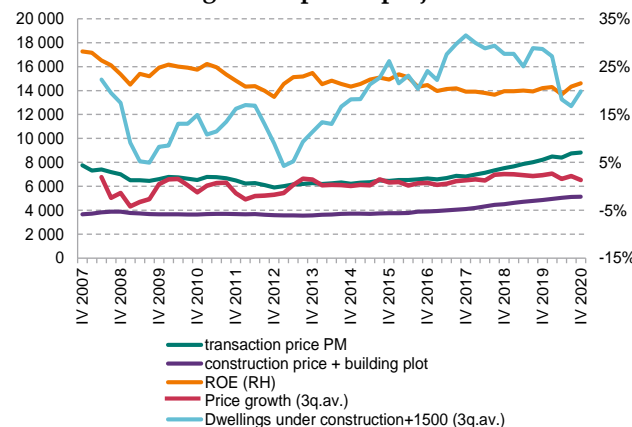
Note: rolling averages for the last four quarters
Source: NBP based on PABB and Statistics Poland (GUS)

Figure 55 Number of contracts for the construction 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 (former REAS)

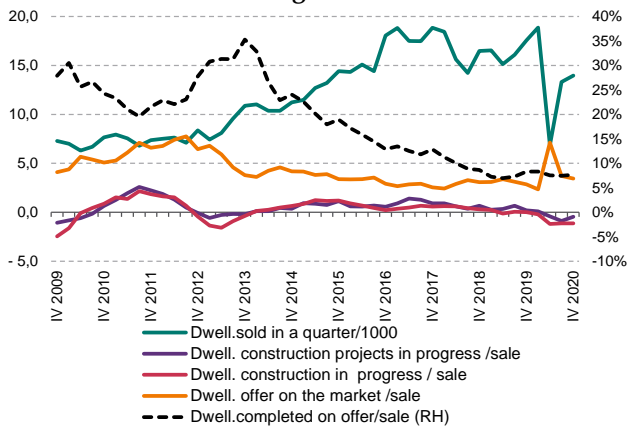
Figure 56 Housing supply and the estimated rate of return on housing development projects in PM in 7M



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.

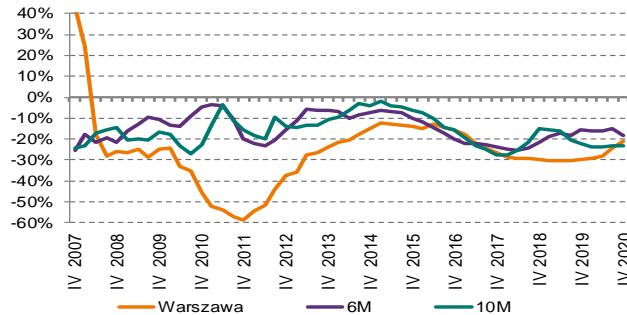
Source: NBP, GUS, JLL (former REAS), Sekocenbud

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



Source: NBP based on Statistics Poland

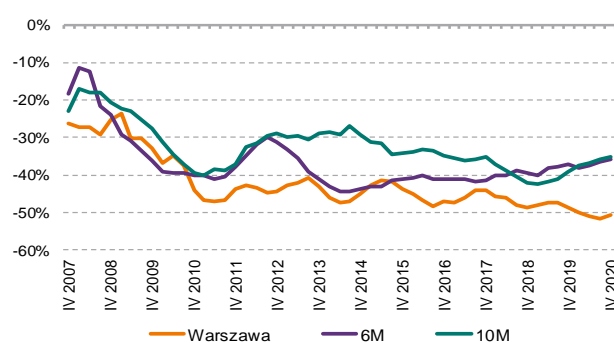
Figure 58 Measure of adjustment of housing units on offer to demand in terms of area ≤ 50 sq. m., PM in selected cities in Poland



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 metres offered for sale to the number of transactions involving housing units with a total area of up to 50 square metres (the average figure for the last four quarters). 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.

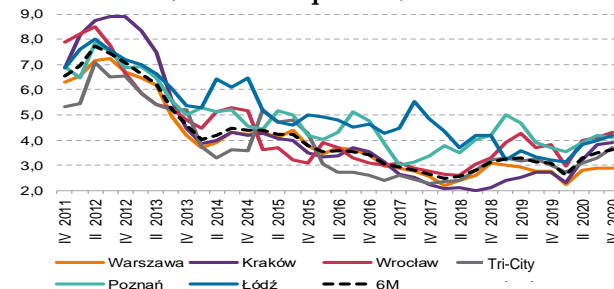
Source: NBP

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



Source: NBP

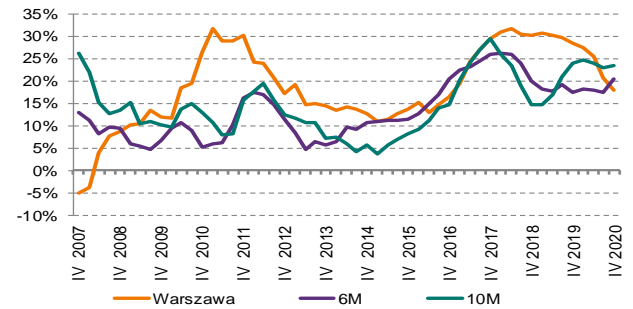
Figure 62 Selling time of dwellings on offer in PM in selected cities (number of quarters)



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

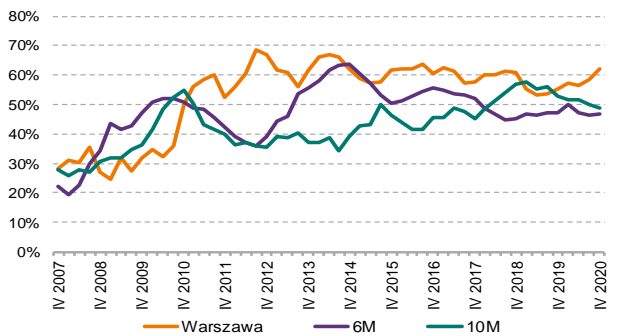
Source: NBP based on JLL (former REAS)

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



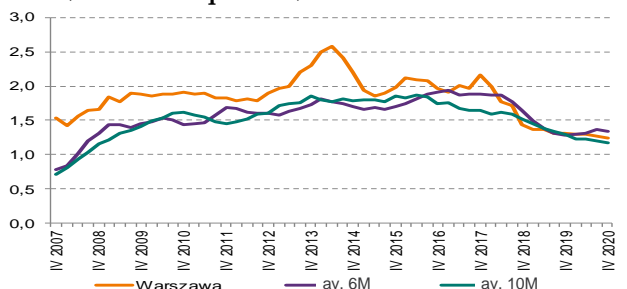
Source: NBP

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

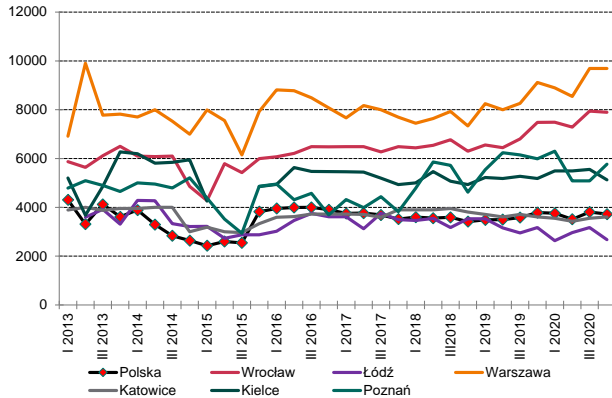
Figure 63 Selling time of dwellings in SM in selected cities (number of quarters)



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

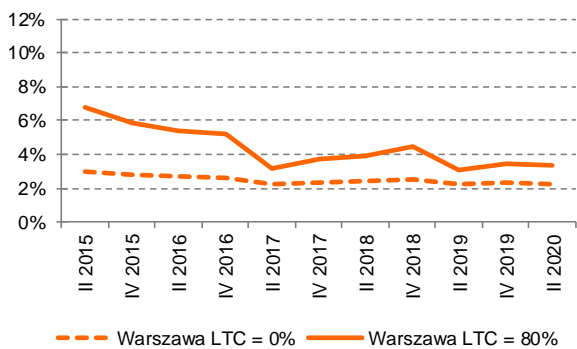
6. Offer prices of real estate and the estimated rate of return

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



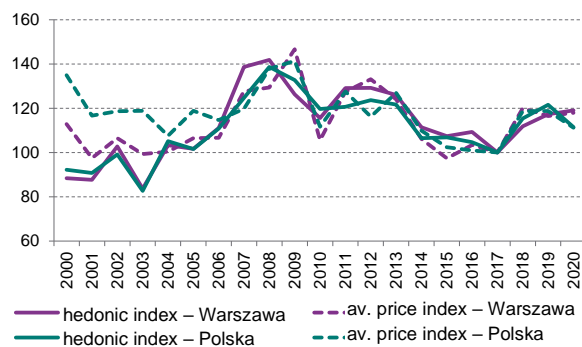
Source: PONT, NBP's study

Table 66 Estimated rate of return on equity from investment in B class office space from the existing stock in Warsaw



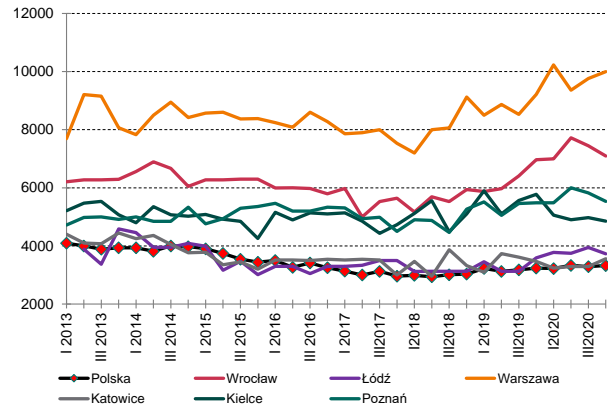
Source: NBP

Figure 68 Growth of average and hedonic prices of office real estate in Warsaw and the whole of Poland (2017=100)



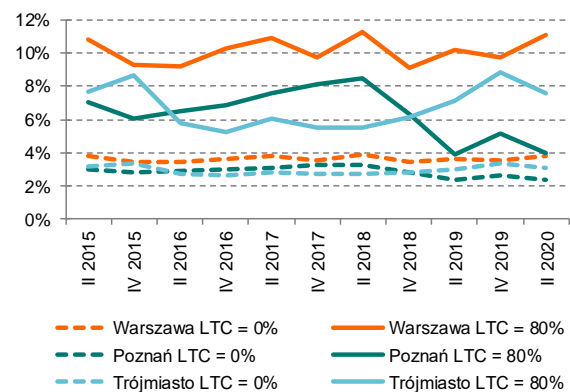
Source: NBP

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



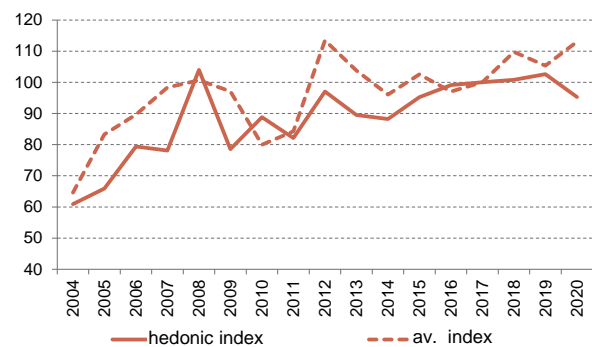
Source: PONT, NBP's study

Table 67 Estimated rate of return on equity from investment in the building and putting to commercial use of A class office space



Source: NBP

Figure 69 Growth of average and hedonic prices of retail real estate in the whole of Poland (2017=100)



Source: NBP

Table 3 Estimated rate of return on investment in housing of 50 sq. m. in Warsaw

Date	Transaction rent (PLN/sq.m.)	Average transaction price PM (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	Interest of a new mortgage in PLN
IV 2013	43,5	7 558	6,9%	4,3%	3,8%	0,9%	4,4%	5,1%
II 2014	43,4	7 574	6,9%	4,3%	3,2%	0,2%	3,4%	5,3%
IV 2014	43,6	7 601	6,9%	4,3%	3,8%	0,3%	2,6%	5,3%
II 2015	43,8	7 659	6,9%	4,2%	4,1%	3,8%	2,8%	4,4%
IV 2015	45,0	7 682	7,0%	4,4%	4,3%	4,0%	2,8%	4,5%
II 2016	46,4	7 719	7,2%	4,5%	4,5%	4,4%	3,0%	4,6%
IV 2016	48,4	7 871	7,4%	4,7%	4,9%	5,5%	3,3%	4,5%
II 2017	47,9	8 002	7,2%	4,5%	4,6%	4,8%	3,3%	4,4%
IV 2017	49,7	8 202	7,3%	4,6%	4,8%	5,3%	3,4%	4,4%
II 2018	51,2	8 638	7,1%	4,5%	4,6%	4,9%	3,2%	4,3%
IV 2018	52,2	9 013	7,0%	4,3%	4,3%	4,1%	3,1%	4,4%
II 2019	53,3	9 414	6,8%	4,2%	4,1%	3,8%	2,7%	4,3%
IV 2019	55,2	9 857	6,6%	4,0%	3,6%	2,4%	2,0%	4,4%
II 2020	49,3	10 029	5,8%	3,3%	3,0%	2,0%	1,4%	3,7%
IV 2020	48,9	10 517	5,6%	3,1%	3,4%	4,0%	0,5%	2,9%

Assumptions: Transaction price per square metre of housing (50% from the primary market, increased by finishing costs – amounting to +PLN 700.00/sq.m. since 2018 – 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%. Calculated capitalization rate includes amortization costs (1.5%; two thorough renovations in the period of 100 years). Taxable with lump-sum tax of 8.5%. ROE – net income/equity. Calculations have been verified against those presented before.

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

Table 4 Average prices of a square metre of housing in the primary market in Gdańsk

specification	IV Q 2019		I Q 2020		II Q 2020		III Q 2020		IV Q 2020	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	9 806	8 585	9 904	8 741	9 803	8 733	9 641	9 024	9 689	9 401
growth (q-o-q)	103,5	100,6	101,0	101,8	99,0	99,9	98,3	103,3	100,5	104,2
growth (y-o-y)	114,0	108,4	119,9	105,8	108,5	105,4	101,8	105,7	98,8	109,5
dwelling price range	3 625	1 478	3 110	1 204	3 393	739	3 551	1 189	3 951	1 408
<=4 000 PLN/sq.m	14	1	4	1	4	3	13	0	7	1
(4 001; 6 000] PLN/sq.m	172	204	59	84	83	54	42	51	16	31
(6 001; 8 000] PLN/sq.m	957	540	1 000	478	1 046	310	1 064	498	1 283	501
(8 001; 10 000] PLN/sq.m	1 004	331	613	297	767	170	1 057	253	1 099	320
>10 001 PLN/sq.m	1 478	402	1 434	344	1 493	202	1 375	387	1 546	555
dwelling space range	3 625	1 478	3 110	1 204	3 393	739	3 551	1 189	3 951	1 408
<= 40 sq.m	600	361	416	290	520	169	506	263	515	304
(40,1; 60] sq.m	1 605	707	1 430	548	1 479	349	1 566	600	1 780	631
(60,1; 80] sq.m	998	323	872	288	956	170	1 010	243	1 175	334
> 80,1 sq.m	422	87	392	78	438	51	469	83	481	139
average price of 1 sq.m. of dwelling	9 806	8 585	9 904	8 741	9 803	8 733	9 641	9 024	9 689	9 401
<=4 000 sq.m	10 941	8 744	10 456	9 575	10 440	8 915	10 156	8 976	10 361	9 573
(40,1; 60] sq.m	9 681	8 404	9 769	8 536	9 656	8 914	9 498	9 072	9 491	9 284
(60,1; 80] sq.m	8 932	8 306	9 257	8 024	9 237	7 785	9 239	8 333	9 246	9 015
> 80,1 sq.m	10 736	10 438	11 252	9 731	10 778	10 051	10 429	10 862	10 786	10 484
average offer price deviation	14,2%	x	13,3%	x	12,3%	x	6,8%	x	3,1%	x
<= 40 sq.m	25,1%	x	9,2%	x	17,1%	x	13,1%	x	8,2%	x
(40,1; 60] sq.m	15,2%	x	14,4%	x	8,3%	x	4,7%	x	2,2%	x
(60,1; 80] sq.m	7,5%	x	15,4%	x	18,7%	x	10,9%	x	2,6%	x
> 80,1 sq.m	2,9%	x	15,6%	x	7,2%	x	-4,0%	x	2,9%	x

Source: NBP

Table 5 Average prices of a square metre of housing in the secondary market in Gdańsk

specification	IV Q 2019		I Q 2020		II Q 2020		III Q 2020		IV Q 2020	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	9 893	8 364	10 573	8 383	10 332	8 480	10 264	8 882	10 523	8 874
growth (q-o-q)	99,4	107,7	106,9	100,2	97,7	101,1	99,3	104,7	102,5	99,9
growth (y-o-y)	111,7	111,4	112,3	114,0	110,6	108,4	103,1	114,4	106,4	106,1
dwelling price range	1 251	1 127	886	1 332	1 057	955	1 052	937	825	499
<=4 000 PLN/sq.m	0	3	0	11	0	5	2	5	0	0
(4 001; 6 000] PLN/sq.m	40	112	27	109	31	75	45	60	26	22
(6 001; 8 000] PLN/sq.m	347	471	178	524	218	349	211	328	110	173
(8 001; 10 000] PLN/sq.m	391	331	259	465	325	354	324	313	298	179
>10 001 PLN/sq.m	473	210	422	223	483	172	470	231	391	125
dwelling space range	1 251	1 127	886	1 332	1 057	955	1 052	937	825	499
<= 40 sq.m	230	288	124	335	160	229	143	218	123	116
(40,1; 60] sq.m	459	566	337	648	422	435	398	435	328	226
(60,1; 80] sq.m	348	198	253	273	289	205	319	213	220	119
> 80,1 sq.m	214	75	172	76	186	86	192	71	154	38
average price of 1 sq.m. of dwelling	9 893	8 364	10 573	8 383	10 332	8 480	10 264	8 882	10 523	8 874
<=4 000 sq.m	10478	9250	11571	9010	11647	9131	12019	9744	11857	9813
(40,1; 60] sq.m	10027	8267	10978	8374	10308	8632	10530	8575	10819	8788
(60,1; 80] sq.m	9404	7533	9700	7703	9739	7671	9482	8516	9731	8288
> 80,1 sq.m	9772	7894	10342	8143	10177	7904	9706	9212	9957	8356
average offer price deviation	18,3%	x	26,1%	x	21,8%	x	15,6%	x	18,6%	x
<= 40 sq.m	13,3%	x	28,4%	x	27,5%	x	23,3%	x	20,8%	x
(40,1; 60] sq.m	21,3%	x	31,1%	x	19,4%	x	22,8%	x	23,1%	x
(60,1; 80] sq.m	24,8%	x	25,9%	x	27,0%	x	11,3%	x	17,4%	x
> 80,1 sq.m	23,8%	x	27,0%	x	28,8%	x	5,4%	x	19,2%	x

Source: NBP

Table 6 Average prices of a square metre of housing in the primary market in Kraków

specification	IV Q 2019		I Q 2020		II Q 2020		III Q 2020		IV Q 2020	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	8 532	8 237	9 212	8 306	9 758	8 591	9 463	8 838	9 617	8 685
growth (q-o-q)	106,4	105,8	108,0	100,8	105,9	103,4	97,0	102,9	101,6	98,3
growth (y-o-y)	116,0	114,4	120,9	111,9	122,6	111,0	118,0	113,5	112,7	105,4
dwelling price range	6 437	2 029	5 453	2 137	5 984	1 078	7 304	1 330	6 948	1 637
<=4 000 PLN/sq.m	0	0	0	0	0	0	0	0	0	0
(4 001; 6 000] PLN/sq.m	358	152	98	158	98	58	95	37	63	44
(6 001; 8 000] PLN/sq.m	2 332	799	1 455	826	1 287	400	1 659	435	1 437	529
(8 001; 10 000] PLN/sq.m	2 790	861	2 356	903	2 205	407	3 077	536	2 950	765
>10 001 PLN/sq.m	957	217	1 544	250	2 394	213	2 473	322	2 498	299
dwelling space range	6 437	2 029	5 453	2 137	5 984	1 078	7 304	1 330	6 948	1 637
<= 40 sq.m	1188	556	1030	522	1197	231	1481	381	1485	356
(40,1; 60] sq.m	3220	1017	2591	1112	2761	545	3311	639	3028	860
(60,1; 80] sq.m	1618	354	1468	392	1543	230	1948	245	1918	331
> 80,1 sq.m	411	102	364	111	483	72	564	65	517	90
average price of 1 sq.m. of dwelling	8 532	8 237	9 212	8 306	9 758	8 591	9 463	8 838	9 617	8 685
<=4 000 sq.m	8899	8701	9927	8687	10982	9234	10546	9529	10706	9108
(40,1; 60] sq.m	8533	8136	9145	8357	9575	8503	9295	8580	9477	8657
(60,1; 80] sq.m	8266	7823	8851	7743	9078	8304	8876	8330	8966	8244
> 80,1 sq.m	8505	8147	9131	7992	9941	8111	9630	9228	9720	8891
average offer price deviation	3,6%	x	10,9%	x	13,6%	x	7,1%	x	10,7%	x
<= 40 sq.m	2,3%	x	14,3%	x	18,9%	x	10,7%	x	17,5%	x
(40,1; 60] sq.m	4,9%	x	9,4%	x	12,6%	x	8,3%	x	9,5%	x
(60,1; 80] sq.m	5,7%	x	14,3%	x	9,3%	x	6,6%	x	8,8%	x
> 80,1 sq.m	4,4%	x	14,3%	x	22,6%	x	4,4%	x	9,3%	x

Source: NBP

Table 7 Average prices of a square metre of housing in the secondary market in Kraków

specification	IV Q 2019		I Q 2020		II Q 2020		III Q 2020		IV Q 2020	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	9 109	7 414	9 518	7 766	9 672	8 061	9 542	8 100	9 820	8 118
growth (q-o-q)	102,2	103,9	104,5	104,8	101,6	103,8	98,7	100,5	102,9	100,2
growth (y-o-y)	107,6	108,3	109,4	117,2	108,7	115,9	107,1	113,5	107,8	109,5
dwelling price range	493	330	569	310	587	201	470	286	614	243
<=4 000 PLN/sq.m	0	0	0	0	0	0	0	0	0	0
(4 001; 6 000] PLN/sq.m	15	47	6	32	2	17	2	16	2	13
(6 001; 8 000] PLN/sq.m	139	176	138	147	132	83	109	130	130	109
(8 001; 10 000] PLN/sq.m	211	94	239	108	253	82	205	110	259	99
>10 001 PLN/sq.m	128	13	186	23	200	19	154	30	223	22
dwelling space range	493	330	569	310	587	201	470	286	614	243
<= 40 sq.m	123	155	145	128	161	69	124	126	164	103
(40,1; 60] sq.m	208	132	251	140	283	101	227	124	284	106
(60,1; 80] sq.m	111	40	121	39	109	22	91	31	117	31
> 80,1 sq.m	51	3	52	3	34	9	28	5	49	3
average price of 1 sq.m. of dwelling	9 109	7 414	9 518	7 766	9 672	8 061	9 542	8 100	9 820	8 118
<=4 000 sq.m	10079	7821	10512	8463	10614	8249	10359	8614	10939	8455
(40,1; 60] sq.m	8782	7228	9275	7442	9399	8153	9228	7884	9500	7973
(60,1; 80] sq.m	8602	6401	8875	6733	8928	7617	8858	7100	9080	7409
> 80,1 sq.m	9205	8036	9413	6618	9873	6671	10700	6668	9693	9017
average offer price deviation	22,9%	x	22,6%	x	20,0%	x	17,8%	x	21,0%	x
<= 40 sq.m	28,9%	x	24,2%	x	28,7%	x	20,3%	x	29,4%	x
(40,1; 60] sq.m	21,5%	x	24,6%	x	15,3%	x	17,0%	x	19,2%	x
(60,1; 80] sq.m	34,4%	x	31,8%	x	17,2%	x	24,8%	x	22,6%	x
> 80,1 sq.m	14,5%	x	42,2%	x	48,0%	x	60,5%	x	7,5%	x

Source: NBP

Table 8 Average prices of a square metre of housing in the primary market in Łódź

specification	IV Q 2019		I 2020		II Q 2020		III Q 2020		IV 2020	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	6 274	6 026	6 608	6 249	6 510	6 080	6 734	6 406	6 761	6 624
growth (q-o-q)	104,1	102,5	105,3	103,7	98,5	97,3	103,4	105,4	100,4	103,4
growth (y-o-y)	110,8	109,4	114,0	111,0	108,3	103,9	111,7	108,9	107,8	109,9
dwelling price range	1 869	420	1 049	323	1 218	171	1 390	287	1 431	437
<=4 000 PLN/sq.m	4	0	0	0	0	0	0	0	0	1
(4 001; 5 000] PLN/sq.m	26	4	13	6	5	4	4	2	3	2
(5 001; 6 000] PLN/sq.m	759	260	326	117	399	85	247	91	281	94
(6 001; 7 000] PLN/sq.m	792	129	391	169	533	58	708	135	692	224
> 7 000 PLN/sq.m	288	27	319	31	281	24	431	59	455	116
dwelling space range	1 869	420	1 049	323	1 218	171	1 390	287	1 431	437
<= 40 sq.m	362	75	232	105	201	34	275	52	307	120
(40,1; 60] sq.m	921	216	529	174	557	83	655	145	646	221
(60,1; 80] sq.m	480	111	221	35	363	42	350	75	370	80
> 80,1 sq.m	106	18	67	9	97	12	110	15	108	16
average price of 1 sq.m. of dwelling	6 274	6 026	6 608	6 249	6 510	6 080	6 734	6 406	6 761	6 624
<=4 000 sq.m	6952	6504	7481	6692	7456	6911	7386	7327	7547	7220
(40,1; 60] sq.m	6177	6007	6542	6079	6464	6002	6701	6405	6691	6517
(60,1; 80] sq.m	5931	5722	5895	5781	6068	5520	6312	5782	6286	6073
> 80,1 sq.m	6354	6143	6467	6200	6463	6225	6637	6346	6566	6388
average offer price deviation	4,1%	x	5,7%	x	7,1%	x	5,1%	x	2,1%	x
<= 40 sq.m	6,9%	x	11,8%	x	7,9%	x	0,8%	x	4,5%	x
(40,1; 60] sq.m	2,8%	x	7,6%	x	7,7%	x	4,6%	x	2,7%	x
(60,1; 80] sq.m	3,6%	x	2,0%	x	9,9%	x	9,2%	x	3,5%	x
> 80,1 sq.m	3,4%	x	4,3%	x	3,8%	x	4,6%	x	2,8%	x

Source: NBP

Table 9 Average prices of a square metre of housing in the secondary market in Łódź

specification	IV Q 2019		I Q 2020		II Q 2020		III Q 2020		IV Q 2020	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	5 392	4 870	5 465	5 011	5 203	4 708	5 392	4 870	5 465	5 011
growth (q-o-q)	103,6	103,4	101,3	102,9	101,7	102,4	103,6	103,4	101,3	102,9
growth (y-o-y)	112,1	109,1	108,1	108,6	110,4	110,6	112,1	109,1	108,1	108,6
dwelling price range	304	83	243	167	425	179	304	83	243	167
<= 3 000 PLN/sq.m	4	0	0	2	3	10	4	0	0	2
(3 001; 4 000] PLN/sq.m	25	11	27	19	53	24	25	11	27	19
(4 001; 5 000] PLN/sq.m	87	44	69	71	145	85	87	44	69	71
(5 001; 6 000] PLN/sq.m	122	18	84	49	146	41	122	18	84	49
(6 001; 7 000] PLN/sq.m.	38	10	33	22	52	16	38	10	33	22
> 7 001 PLN/sq.m	28	0	30	4	26	3	28	0	30	4
dwelling space range	304	83	243	167	425	179	304	83	243	167
<= 40 sq.m	50	27	25	57	68	67	50	27	25	57
(40,1; 60] sq.m	101	35	84	79	148	76	101	35	84	79
(60,1; 80] sq.m	78	14	57	23	91	25	78	14	57	23
> 80,1 sq.m	75	7	77	8	118	11	75	7	77	8
average price of 1 sq.m. of dwelling	5 392	4 870	5 465	5 011	5 203	4 708	5 392	4 870	5 465	5 011
<=4 000 sq.m	5 871	4 982	6 040	5 317	5 692	4 804	5 871	4 982	6 040	5 317
(40,1; 60] sq.m	5 507	4 970	5 660	4 887	5 295	4 653	5 507	4 970	5 660	4 887
(60,1; 80] sq.m	5 349	4 864	5 437	4 810	5 187	4 739	5 349	4 864	5 437	4 810
> 80,1 sq.m	4 962	3 953	5 085	4 631	4 817	4 436	4 962	3 953	5 085	4 631
average offer price deviation	10,7%	x	9,1%	x	10,5%	x	10,7%	x	9,1%	x
<= 40 sq.m	17,8%	x	13,6%	x	18,5%	x	17,8%	x	13,6%	x
(40,1; 60] sq.m	10,8%	x	15,8%	x	13,8%	x	10,8%	x	15,8%	x
(60,1; 80] sq.m	10,0%	x	13,0%	x	9,5%	x	10,0%	x	13,0%	x
> 80,1 sq.m	25,5%	x	9,8%	x	8,6%	x	25,5%	x	9,8%	x

Source: NBP

Table 9 Average prices of a square metre of housing in the primary market in Poznań

specification	IV Q 2019		I Q 2020		II Q 2020		III Q 2021		IV Q 2020	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	7 395	7 397	7 540	7 416	7 763	7 429	7 921	7 449	7 977	7 611
growth (q-o-q)	100,1	104,2	102,0	100,3	103,0	100,2	102,0	100,3	100,7	102,2
growth (y-o-y)	105,1	105,4	102,6	105,1	107,3	105,0	107,2	105,0	107,9	102,9
dwelling price range	5 976	1 620	6 145	1 425	5 939	999	6 103	1 109	5 219	1 362
<=4 000 PLN/sq.m	0	0	0	0	0	0	0	0	0	0
(4 001; 6 000] PLN/sq.m	453	176	391	131	334	92	211	124	133	83
(6 001; 8 000] PLN/sq.m	4 219	1 050	3 913	977	3 511	696	3 512	708	3 121	847
(8 001; 10 000] PLN/sq.m	1 157	362	1 684	278	1 815	179	2 050	248	1 669	376
>10 001 PLN/sq.m	147	32	157	39	279	32	330	29	296	56
dwelling space range	5 976	1 620	6 145	1 425	5 939	999	6 103	1 109	5 219	1 362
<= 40 sq.m	1041	407	1145	412	1044	231	1072	297	895	338
(40,1; 60] sq.m	2829	880	2711	683	2544	499	2560	554	2123	642
(60,1; 80] sq.m	1740	249	1841	280	1841	228	1936	201	1716	301
> 80,1 sq.m	366	84	448	50	510	41	535	57	485	81
average price of 1 sq.m. of dwelling	7 395	7 397	7 540	7 416	7 763	7 429	7 921	7 449	7 977	7 611
<=4 000 sq.m	7 965	7 664	8 200	7 690	8 410	7 405	8 661	7 577	8 765	7 834
(40,1; 60] sq.m	7 380	7 321	7 516	7 467	7 727	7 326	7 898	7 322	7 934	7 599
(60,1; 80] sq.m	7 065	7 240	7 157	6 972	7 398	7 225	7 495	7 359	7 554	7 354
> 80,1 sq.m	7 454	7 355	7 577	6 952	7 938	9 941	8 088	8 327	8 209	7 728
average offer price deviation	0,0%	x	1,7%	x	4,5%	x	6,3%	x	4,8%	x
<= 40 sq.m	3,9%	x	6,6%	x	13,6%	x	14,3%	x	11,9%	x
(40,1; 60] sq.m	0,8%	x	0,7%	x	5,5%	x	7,9%	x	4,4%	x
(60,1; 80] sq.m	-2,4%	x	2,7%	x	2,4%	x	1,9%	x	2,7%	x
> 80,1 sq.m	1,3%	x	9,0%	x	-20,1%	x	-2,9%	x	6,2%	x

Source: NBP

Table 10 Average prices of a square metre of housing in the secondary market in Poznań

specification	IV Q 2019		I Q 2020		II Q 2020		III Q 2020		IV Q 2020	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	7 639	6 630	7 809	6 803	7 823	6 873	7 851	6 842	7 808	6 778
growth (q-o-q)	106,3	102,9	102,2	102,6	100,2	101,0	100,4	99,5	99,5	99,1
growth (y-o-y)	110,1	108,4	112,2	110,6	110,6	108,3	109,2	106,2	102,2	102,2
dwelling price range	740	1 081	1 192	860	975	494	1 312	357	860	389
<=4 000 PLN/sq.m	5	31	3	19	4	6	2	4	0	8
(4 001; 6 000] PLN/sq.m	115	327	156	230	99	104	115	74	80	72
(6 001; 8 000] PLN/sq.m	367	559	559	462	501	309	686	240	450	269
(8 001; 10 000] PLN/sq.m	175	138	355	125	285	65	397	32	256	39
>10 001 PLN/sq.m	78	26	119	24	86	10	112	7	74	1
dwelling space range	740	1 081	1 192	860	975	494	1 312	357	860	389
<= 40 sq.m	127	339	207	280	165	154	281	141	194	125
(40,1; 60] sq.m	307	498	469	370	440	217	598	145	372	186
(60,1; 80] sq.m	193	176	333	156	250	96	282	59	209	69
> 80,1 sq.m	113	68	183	54	120	27	151	12	85	9
average price of 1 sq.m. of dwelling	7 639	6 630	7 809	6 803	7 823	6 873	7 851	6 842	7 808	6 778
<=4 000 sq.m	8 832	7 377	8 895	7 558	8 656	7 359	8 721	7 462	8 736	7 410
(40,1; 60] sq.m	7 816	6 538	8 132	6 753	8 037	6 888	7 870	6 656	7 806	6 671
(60,1; 80] sq.m	6 902	5 942	7 115	5 890	7 192	6 374	7 235	5 921	7 258	6 082
> 80,1 sq.m	7 074	5 359	7 016	5 871	7 207	5 747	7 308	6 314	7 053	5 536
average offer price deviation	15,2%	x	14,8%	x	13,8%	x	14,8%	x	15,2%	x
<= 40 sq.m	19,7%	x	17,7%	x	17,6%	x	16,9%	x	17,9%	x
(40,1; 60] sq.m	19,6%	x	20,4%	x	16,7%	x	18,2%	x	17,0%	x
(60,1; 80] sq.m	16,2%	x	20,8%	x	12,8%	x	22,2%	x	19,3%	x
> 80,1 sq.m	32,0%	x	19,5%	x	25,4%	x	15,7%	x	27,4%	x

Source: NBP

Table 11 Average prices of a square metre of housing in the primary market in Warsaw

specification	IV Q 2019		I Q 2020		II Q 2020		III Q 2020		IV Q 2020	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	10 280	9 476	10 610	9 819	10 717	9 438	10 735	10 183	10 750	10 261
growth (q-o-q)	103,5	103,1	103,2	103,6	101,0	96,1	100,2	107,9	100,1	100,8
growth (y-o-y)	120,0	100,5	121,0	102,4	120,0	95,0	108,1	110,8	113,5	97,7
dwelling price range	12 204	4 622	11 516	4 773	12 347	2 631	12 735	3 154	11 757	3 845
<=4 000 PLN/sq.m	0	0	0	0	0	0	0	0	0	0
(4 001; 6 000] PLN/sq.m	35	31	40	15	32	72	26	6	13	8
(6 001; 8 000] PLN/sq.m	2 381	1 190	2 089	1 117	2 006	679	1 889	609	1 608	603
(8 001; 10 000] PLN/sq.m	4 679	2 092	3 672	1 996	3 980	1 063	4 053	1 111	3 747	1 504
>10 001 PLN/sq.m	5 109	1 309	5 715	1 645	6 329	817	6 767	1 428	6 389	1 730
dwelling space range	12 204	4 622	11 516	4 773	12 347	2 631	12 735	3 154	11 757	3 845
<= 40 sq.m	1 543	911	1 576	1 048	1 784	533	2 084	636	1 801	836
(40,1; 60] sq.m	4 972	2 193	4 617	2 248	4 995	1 240	5 210	1 324	4 858	1 609
(60,1; 80] sq.m	4 101	1 116	3 864	1 129	4 011	647	3 840	855	3 588	994
> 80,1 sq.m	1 588	402	1 459	348	1 557	211	1 601	339	1 510	406
average price of 1 sq.m. of dwelling	10 280	9 476	10 610	9 819	10 717	9 438	10 735	10 183	10 750	10 261
<=4 000 sq.m	12 425	10 474	12 458	10 330	12 772	9 933	12 327	10 851	12 346	10 769
(40,1; 60] sq.m	10 088	9 238	10 460	9 826	10 600	9 315	10 635	10 097	10 603	10 123
(60,1; 80] sq.m	9 389	8 991	9 717	9 245	9 693	9 034	9 774	9 529	9 919	9 431
> 80,1 sq.m	11 098	9 856	11 456	10 088	11 378	10 155	11 297	10 912	11 299	11 798
average offer price deviation	8,5%	x	8,1%	x	13,6%	x	5,4%	x	4,8%	x
<= 40 sq.m	18,6%	x	20,6%	x	28,6%	x	13,6%	x	14,6%	x
(40,1; 60] sq.m	9,2%	x	6,4%	x	13,8%	x	5,3%	x	4,7%	x
(60,1; 80] sq.m	4,4%	x	5,1%	x	7,3%	x	2,6%	x	5,2%	x
> 80,1 sq.m	12,6%	x	13,6%	x	12,0%	x	3,5%	x	-4,2%	x

Source: NBP

Table 12 Average prices of a square metre of housing in the secondary market in Warsaw

specification	IV Q 2019		I Q 2020		II Q 2020		III Q 2020		IV Q 2020	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	11 192	9 810	11 656	9 997	11 522	10 281	11 713	10 297	11 893	10 072
growth (q-o-q)	103,5	103,7	104,1	101,9	98,9	102,8	101,7	100,2	101,5	97,8
growth (y-o-y)	108,9	112,0	113,3	111,3	109,0	111,3	108,3	108,8	106,3	102,7
dwelling price range	1 915	4 049	1 859	3 811	2 099	2 707	2 015	2 320	2 640	1 212
<=4 000 PLN/sq.m	0	0	0	0	0	0	0	0	0	0
(4 001; 6 000] PLN/sq.m	19	47	12	51	17	34	8	6	12	4
(6 001; 8 000] PLN/sq.m	247	850	186	714	200	408	169	305	172	172
(8 001; 10 000] PLN/sq.m	549	1 502	471	1 392	585	934	528	821	657	488
>10 001 PLN/sq.m	1 100	1 650	1 190	1 654	1 297	1 331	1 310	1 188	1 799	548
dwelling space range	1 915	4 049	1 859	3 811	2 099	2 707	2 015	2 320	2 640	1 212
<= 40 sq.m	231	1 192	209	1 074	268	712	262	739	425	435
(40,1; 60] sq.m	617	1 743	580	1 683	697	1 210	681	966	950	544
(60,1; 80] sq.m	450	705	456	645	539	485	514	385	651	171
> 80,1 sq.m	617	409	614	409	595	300	558	230	614	62
average price of 1 sq.m. of dwelling	11 192	9 810	11 656	9 997	11 522	10 281	11 713	10 297	11 893	10 072
<=4 000 sq.m	12 581	10 482	13 095	10 698	12 965	10 998	13 114	10 800	13 250	10 772
(40,1; 60] sq.m	11 159	9 473	11 677	9 639	11 299	9 958	11 529	9 967	11 610	9 659
(60,1; 80] sq.m	10 669	9 343	11 089	9 342	11 102	9 710	11 350	9 992	11 292	9 512
> 80,1 sq.m	11 085	10 090	11 566	10 666	11 513	10 802	11 614	10 579	12 028	10 325
average offer price deviation	14,1%	x	16,6%	x	12,1%	x	13,8%	x	18,1%	x
<= 40 sq.m	20,0%	x	22,4%	x	17,9%	x	21,4%	x	23,0%	x
(40,1; 60] sq.m	17,8%	x	21,2%	x	13,5%	x	15,7%	x	20,2%	x
(60,1; 80] sq.m	14,2%	x	18,7%	x	14,3%	x	13,6%	x	18,7%	x
> 80,1 sq.m	9,9%	x	8,4%	x	6,6%	x	9,8%	x	16,5%	x

Source: NBP

Table 13 Average prices of a square metre of housing in the primary market in Wrocław

specification	IV Q 2019		I Q 2020		II Q 2020		III Q 2020		IV Q 2020	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	7 976	7 634	8 483	8 354	8 652	8 041	8 670	8 109	8 630	8 233
growth (q-o-q)	100,8	99,6	106,4	109,4	102,0	96,2	100,2	100,9	99,5	101,5
growth (y-o-y)	110,3	110,6	113,8	118,8	113,3	108,1	109,6	105,8	108,2	107,8
dwelling price range	6 456	1 724	6 491	2 157	6 792	786	6 092	1 487	6 411	1 362
<=4 000 PLN/sq.m	0	2	0	0	0	0	0	1	0	0
(4 001; 6 000] PLN/sq.m	609	259	531	138	325	91	375	106	267	80
(6 001; 8 000] PLN/sq.m	3 060	874	2 445	777	2 403	350	2 180	708	2 478	623
(8 001; 10 000] PLN/sq.m	2 073	457	2 120	957	2 502	249	2 282	470	2 343	437
>10 001 PLN/sq.m	714	132	1 395	285	1 562	96	1 255	202	1 323	222
dwelling space range	6 456	1 724	6 491	2 157	6 792	786	6 092	1 487	6 411	1 362
<= 40 sq.m	1240	345	1292	559	1531	124	1333	380	1248	323
(40,1; 60] sq.m	3072	856	3133	1046	3185	440	2871	669	3085	648
(60,1; 80] sq.m	1644	446	1581	434	1592	179	1448	357	1630	295
> 80,1 sq.m	500	77	485	118	484	43	440	81	448	96
average price of 1 sq.m. of dwelling	7 976	7 634	8 483	8 354	8 652	8 041	8 670	8 109	8 630	8 233
<=4 000 sq.m	8913	8411	9789	9077	9787	9135	9983	8952	9691	9389
(40,1; 60] sq.m	7840	7527	8316	8162	8433	7996	8496	7763	8562	7931
(60,1; 80] sq.m	7489	7253	7771	7816	7929	7448	7774	7748	7862	7626
> 80,1 sq.m	8091	7545	8402	8616	8884	7810	8781	8607	8946	8244
average offer price deviation	4,5%	x	1,5%	x	7,6%	x	6,9%	x	4,8%	x
<= 40 sq.m	6,0%	x	7,8%	x	7,1%	x	11,5%	x	3,2%	x
(40,1; 60] sq.m	4,2%	x	1,9%	x	5,5%	x	9,4%	x	7,9%	x
(60,1; 80] sq.m	3,3%	x	-0,6%	x	6,5%	x	0,3%	x	3,1%	x
> 80,1 sq.m	7,2%	x	-2,5%	x	13,8%	x	2,0%	x	8,5%	x

Source: NBP

Table 14 Average prices of a square metre of housing in the secondary market in Wrocław

specification	IV Q 2019		I Q 2020		II Q 2020		III Q 2020		IV Q 2020	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	7 720	7 316	8 158	7 315	8 024	7 496	8 303	7 301	8 597	7 973
growth (q-o-q)	102,0	106,7	105,7	100,0	98,4	102,5	103,5	97,4	103,5	109,2
growth (y-o-y)	117,5	118,2	111,2	116,7	107,8	115,6	109,7	106,5	111,4	109,0
dwelling price range	1 719	263	1 227	188	1 161	282	2 252	139	1 920	449
<=4 000 PLN/sq.m	1	5	2	0	2	1	0	3	1	2
(4 001; 6 000] PLN/sq.m	180	53	81	33	74	38	103	28	58	47
(6 001; 8 000] PLN/sq.m	957	123	554	97	552	155	964	63	754	191
(8 001; 10 000] PLN/sq.m	430	65	446	50	413	69	925	33	779	159
>10 001 PLN/sq.m	151	17	144	8	120	19	260	12	328	50
dwelling space range	1 719	263	1 227	188	1 161	282	2 252	139	1 920	449
<= 40 sq.m	214	60	137	34	150	48	293	29	285	124
(40,1; 60] sq.m	660	122	455	78	466	136	964	68	799	203
(60,1; 80] sq.m	548	52	394	50	340	75	656	30	559	95
> 80,1 sq.m	297	29	241	26	205	23	339	12	277	27
average price of 1 sq.m. of dwelling	7 720	7 316	8 158	7 315	8 024	7 496	8 303	7 301	8 597	7 973
<=4 000 sq.m	9 099	8 172	9 486	8 196	9 313	8 712	9 534	8 160	10 038	8 994
(40,1; 60] sq.m	7 767	7 128	8 366	7 330	8 126	7 489	8 395	7 240	8 610	7 886
(60,1; 80] sq.m	7 244	6 905	7 826	6 925	7 665	7 040	7 851	6 959	8 087	7 225
> 80,1 sq.m	7 498	7 076	7 555	6 872	7 445	6 488	7 854	6 422	8 104	6 577
average offer price deviation	5,5%	x	11,5%	x	7,0%	x	13,7%	x	7,8%	x
<= 40 sq.m	11,3%	x	15,7%	x	6,9%	x	16,8%	x	11,6%	x
(40,1; 60] sq.m	9,0%	x	14,1%	x	8,5%	x	16,0%	x	9,2%	x
(60,1; 80] sq.m	4,9%	x	13,0%	x	8,9%	x	12,8%	x	11,9%	x
> 80,1 sq.m	6,0%	x	9,9%	x	14,7%	x	22,3%	x	23,2%	x

Source: NBP

7. Conclusions from a survey of development companies and construction companies implementing housing projects³³

Development companies

The primary housing market in 2020 remained stable after the COVID-19 shock and ended the year with a lower decline in sales than expected at the outbreak of the pandemic. This was caused by a quick recovery in housing demand in the second half of the year, which had a significant, positive impact on the situation of real estate developers and, to a lesser extent, construction companies. According to NBP data, the decline in the number of housing construction contracts in the primary market compared to 2019 amounted to 14%. Most of the surveyed developers, however, signalled the possibility of a continuation of higher sales levels in 2021 than in 2020.

The economic situation of the vast majority of the surveyed housing developers at the end of 2020 was good and comparable to the situation at the end of 2019. Amid an uncertain market environment, the largest developers, who in the second half of 2020 put many new projects on the market and recorded improving sales, performed much better. In line with the expectations declared by most developers, their economic situation should not change significantly in 2021, and a small percentage of them expect their economic situation to improve. The good financial condition of most developers was largely driven by the ability to maintain the level of housing prices and pass the growing production costs on to customers, despite the sharp decline in sales in 2020 Q2. This was possible thanks to a high concentration of production, experience from the previously recorded slumps in market demand and the economic resilience of development companies, especially the largest ones.

The high concentration of developers' production in terms of the level of annual sales of dwellings and the significant fragmentation of the property development market continue. As in the previous years, nearly half of dwellings sold in 2020 were completed by the 6% largest developers (with annual sales of more than 500 dwellings), while as much as 73% of small development companies (with annual contracts for the sale of no more than 100 dwellings) were involved in the construction of only 19% of dwellings. The remaining sales (31% of transactions) were made by 21% of medium-sized enterprises (with annual sales ranging from 100 to 500 dwellings).

According to the majority of the surveyed real estate developers, the supply of housing on the primary market at the end of 2020 was close to housing demand, although the time it took to sell projects increased. Amid high uncertainty, customers tended to purchase apartments planned to be completed and made ready for occupancy in a short period of time. Developers, fearing excessive investment and an oversupply of housing in the primary market, reduced the number of commenced investment projects and available offers. Observing the recovery in demand, they aimed to maintain a similar level of margins and profitability of projects, which was possible by passing on the rising costs to home buyers. As a result, growth of housing prices in 2020 was

³³ Real estate developers who participated in the survey conducted by Narodowy Bank Polski in November 2020 accounted for approximately 28% of development companies investing in multi-family housing in Poland. The respondents who at the same time took part in the "Study of the economic situation and production capacity of construction companies providing, among others, services in the field of housing construction" accounted for about 21% of micro companies, 43% of small entities, 30% of medium-sized companies and 6% of large companies involved in building construction. Over 90% of the surveyed real estate developers and over 80% of the surveyed construction companies also took part in previous editions of the survey (in February 2020 and February 2019), which ensures high comparability of results and conclusions from previous surveys.

visible in all local markets and was only slightly lower than in 2019. The policy of lower housing production, with an increase in demand supported by cash purchases, may support a further increase in housing prices. According to Statistics Poland (GUS), the number of newly started flats in 2020 decreased by 5.7% compared to 2019. According to the survey data, the offer of apartments ready to move in at the end of 2020 (12% in the offer structure) was stable and similar to the share of ready apartments at the end of 2019.

In the opinion of the surveyed developers, the purpose for which buyers purchased flats, i.e. for their own needs and for rent, did not change significantly. So far, no deceleration in investment demand has been recorded, despite the decline in rental rates and rising purchase prices of flats. According to the developers, the market was still not unstable, and they defined the fluctuation as “an increase in purchases for resale at a profit in a favourable period”. The share of such transactions was stable and estimated at 4%. The structure of buyers remained stable (92% domestic natural persons, 5% foreign natural persons, 2% enterprises and nearly 1% investment funds). The share of individual sources of financing for the purchased apartments did not change significantly. The basic source of financing the purchase of apartments for own needs was a bank loan or a significant majority of bank funds (60% of transactions). Dwellings purchased for rent or intended to be resold in a favourable period were purchased exclusively with buyers’ own funds or with a significant majority of buyers’ own funds (78%).

Most of the surveyed developers assessed the profitability of sales in 2020 at a satisfactory level, slightly lower than in 2019. In the forecasts of profitability of sales for 2021, there was a certain decline in optimism among developers, which could mainly be due to concerns about the financial situation and the possibilities of buyers in the face of high rises in housing prices and the uncertain economic situation related to the escalation of the pandemic. The overwhelming percentage of the developers surveyed did not have problems with maintaining financial liquidity and do not expect significant changes in 2021 in the area of liquidity and payment of liabilities.

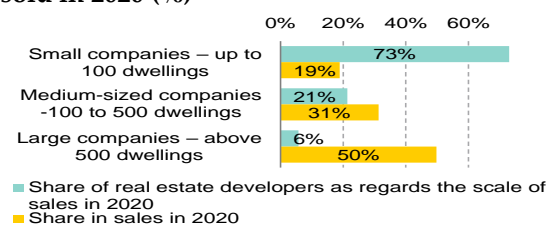
Equity and down payments of buyers played the key role in financing the activities of the surveyed developers. Bank loans and developer bonds were treated as auxiliary sources. Financing of operations from liabilities, especially towards construction companies, also played an important role, which is visible in the comparison of the balance sheet data of these two types of companies. Large development companies financing their operations with buyers’ down payments less frequently resorted to loans to finance their investments. More than half of the respondents did not apply for credit, which coincided with a low share of projects carried out in the SPV formula – the basic bank credit requirement. Also the rising stock of cash is worth mentioning, as this may provide a safety buffer in the case of plunging revenue.

According to the developers surveyed, the most important factors which may hold back demand in 2021 include: an unexpected slump in consumer sentiment, a worsening situation in the labour market, reduced purchasing power, a tightening of lending criteria, a further rise in housing prices exceeding wage growth, a change in buyers’ preferences and their migration to the secondary market, as well as a drop in the profitability of the purchase of rental housing. Nearly half of the developers surveyed expect a slight slowdown in the housing market to last up to a year, and a sizeable percentage of them envisage a similar slowdown lasting from one to two years. A significant percentage of developers (26%) have not felt the effect of the pandemic on their operations.

In 2020 the surveyed developers indicated delays in administrative proceedings and difficulties in acquiring attractive land plots as the most important barriers and risks on the supply side. In their opinion

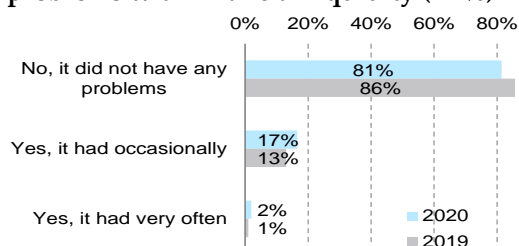
they were the biggest obstacle in starting new investments and they were responsible for supply limitations. Taking into account the fact that developers declared their production capacity to be 38% higher in 2021 (in terms of dwellings made ready for occupancy and those that developers can construct on their land banks) and comparing this with the results from previous surveys and index analyses of enterprises, it can be concluded that in 2020 a significant proportion of developers replenished their stock of land and that supply will meet demand. The housing shortage in Poland, low interest rates and lack of alternative attractive forms of investment, as underscored by developers, allows us to believe that developers will retain high levels of production, high prices of housing and high profitability, and the situation of the sector will remain good. Sectoral analysis also shows that there is another important factor keeping in check excessive increases in the prices of developer housing, coming in the form of the more fragmented and competitive secondary market. Yet another supply factor that might influence the situation of the developer sector, according to the developers surveyed, is the record high number of dwellings to be put on the market in 2021. This development is largely the result of decisions taken earlier and can have a moderating impact of price rises.

Figure 70 Structure of developers broken down by the size of the company in terms of dwellings sold in 2020 (%)



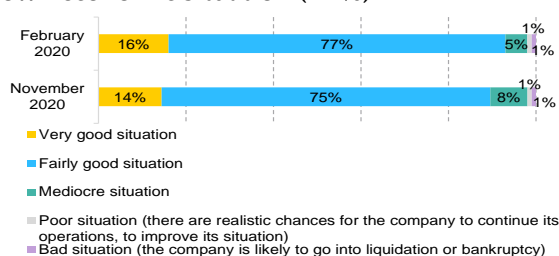
Source: NBP study

Figure 72 Structure of responses to the question whether in 2019 and 2020 the company had problems with financial liquidity (in %)



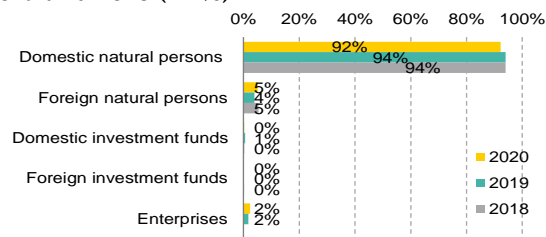
Source: NBP study

Figure 71 Developers' assessment of current own economic situation (in %)



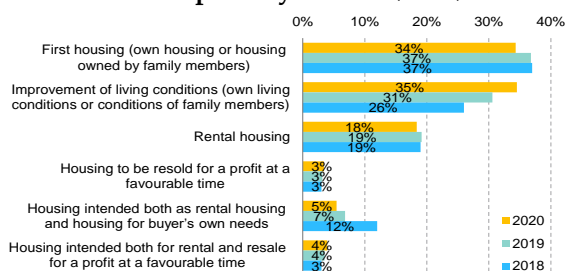
Source: NBP study

Figure 73 The structure of purchasers of dwellings sold according to developers in 2020, 2019 and 2018 (in %)



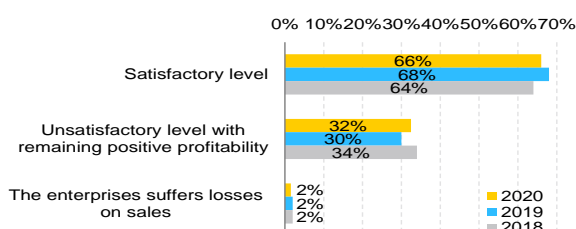
Source: NBP study

Figure 74 Structure of developers' responses to the question about the intended use for housing purchased in the primary market (in %)



Source: NBP study

Figure 76 Sales profitability assessment (net profit) by developers (in %)

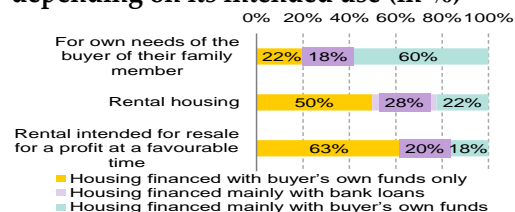


Source: NBP study

Construction companies

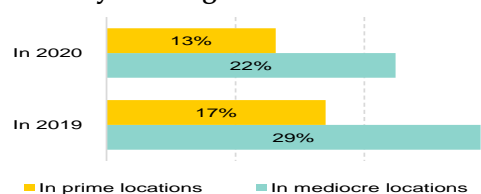
The situation of construction companies has improved considerably over the years, however, it is markedly worse than the situation of real estate developers. Besides problems linked to COVID-19, these companies are affected by the ending of the EU financial perspective and a decline in infrastructural investments. As a result, the sector sees rising competition affecting financial results. According to financial data and surveys conducted among construction companies, changes in investors' plans in 2020 as a result of the pandemic cut into the profits of almost half of large building construction companies. However, the decrease in profitability went hand in hand with an increase in the share of companies with a lower, yet still satisfactory level of profitability in y/y terms, which was due to the conclusion of some unprofitable long-term contracts with undervalued cost estimates opened in 2017-2018. The majority of large building construction companies did not pass the increase in the cost of their activity onto an increase in prices due to growing problems in winning new contracts. The dropping demand for construction services, which was due to the halting of some office space, retail and hotel projects, alleviated acute problems persisting before the pandemic and some of the related risk factors. The risk of economic activity afflicting mainly the developer sector was transferred to construction companies and the construction industry (slower increase in the prices of subcontracting services and direct construction costs including construction materials). Restrictions related to the pandemic did not worsen the condition of companies carrying out housing projects and made it possible to complete construction work according to schedule. A huge majority of the surveyed construction companies assessed their situation as good, and the anticipation of deteriorating conditions expressed by some of them was due to the increasing competition for new contracts to secure business continuity. Among the reasons for the anticipated drop in profitability, a large share of the companies surveyed mentioned most often the rising prices of services provided by subcontractors and the rise in costs coupled with the limited possibility of raising the prices of their own services and a possible

Figure 75 Structure of developers' responses to the question about the various sources of financing for housing purchases in 2020 depending on its intended use (in %)



Source: NBP study

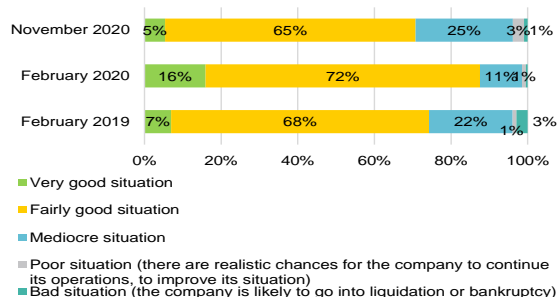
Figure 77 Structure of responses to the question about how much on average the net land prices of commercial construction projects increased in multi-family housing (in %)



Source: NBP study

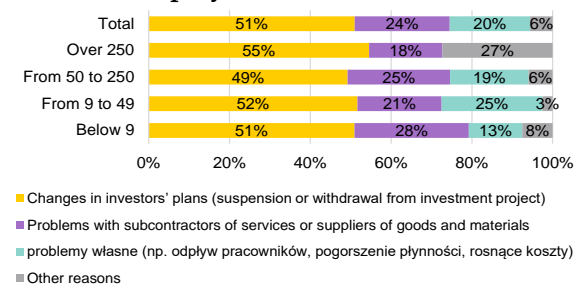
further slowdown in the construction industry. More frequent problems in maintaining liquidity afflicted the smallest companies acting mainly as subcontractors, which carried out shorter-term contracts and consequently experienced difficulties in trying to ensure business continuity and obtain bank financing. The higher percentage of refusals on investment loans rather than on working loans means that in banks' assessment construction companies are creditworthy in the short perspective. In a longer perspective, however, they are perceived by the banking sector as risk-burdened customers. The aggressive strategy of financing the operations at any cost (including delays in settling payments) exacerbated by the uncertainty surrounding the conduct of business led to an increase in the share of third party equity, coming mainly in the form of liabilities to subcontractors. Own capital and trade credit coupled with a low share of bank funds constitute the main sources of financing for construction companies, including those providing services in residential housing.

Figure 78 Assessment of the current economic situation of construction companies (in %)



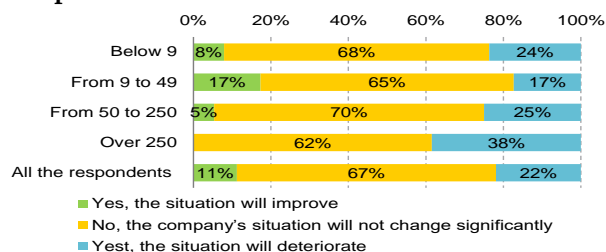
Source: NBP study

Figure 80 Main reasons for the decline of revenue of construction companies in 2020 caused by the pandemic when compared with the anticipated figures, broken down by the number of employees (in %)



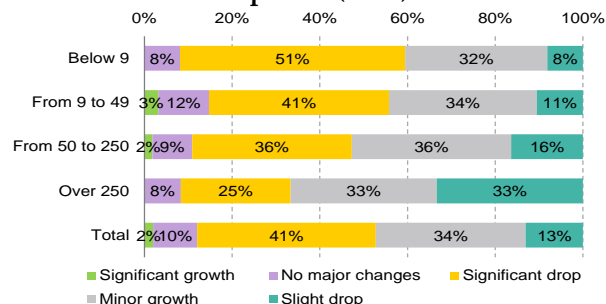
Source: NBP study

Figure 79 Anticipated changes in own economic situation in 2021 according to construction companies 2021 (in %)



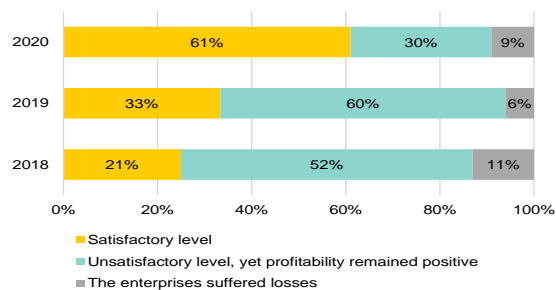
Source: NBP study

Figure 81 Anticipated changes in the demand for construction services in 2021 in comparison with 2020, broken down by the number of employees in construction companies (in %)



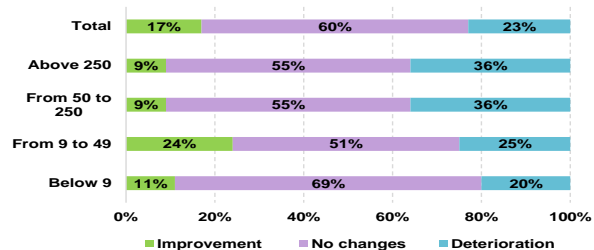
Source: NBP study

Figure 82 Assessments of sales profitability in surveys carried out in residential construction companies in 2018, 2019 and in 2020.



Source: NBP study

Figure 83 Structure of indices describing the anticipated changes in the financial liquidity of residential construction companies in 2021, broken down by the number of employees (in %)



Source: NBP study

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