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# **Information on home prices and the situation in housing and commercial real estate market in Poland in 2021 Q3**

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**Approved by:**

Olga Szczepańska, Director of the Financial Stability Department

Team of authors:

Hanna Augustyniak

Krystyna Gałaszewska

**Jacek Łaszek**

Krzysztof Olszewski

Łukasz Mikołajczyk

Anna Stołecka

Joanna Waszczuk

Marzena Zaczek

NBP Regional Branch in Gdańsk

NBP Regional Branch in Opole

NBP Regional Branch in Rzeszów

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## The analysis of the situation in the real estate market in Poland in 2021 Q3<sup>1</sup> leads to the following conclusions:

- In 2021 Q3, a record number of approx. 230 thousand dwellings were completed and put on the market in Poland, which was the result of developers' activity in the previous years. However, the number of housing construction contracts sold in the largest primary markets fell compared to 2021 Q2, with the annual contract sales returning to the levels recorded in 2018. The decline in contract sales is associated with a drop in the size of market offers from developers. Housing construction costs, especially costs of materials, increased significantly. The period saw an increase in the average transaction prices per square metre of housing, both in the primary and in the secondary markets and an increase in rental transaction rates.
- In 2021 Q3, further increases in home prices in quarter-on-quarter terms were recorded in the majority of the cities analysed and the growth rates of prices also increased (see Table 1). Transaction prices in the primary market (PMT) increased, particularly in Łódź, Wrocław and Kraków. Rising prices of housing in primary markets (mainly in the developer's standard, i.e. to be finished by buyers on their own and purchased with delayed delivery) amid high demand are also accompanied by buyers' high interest in cheaper secondary market, where dwellings are usually ready for occupancy. The secondary market also observed an increase in asking prices (SMO) and transaction prices (SMT) in all groups of cities. Transaction prices in the secondary market increased particularly in Łódź, Gdańsk and Warsaw. Hedonic index-adjusted prices rose in all groups of cities, which means that similar dwellings were sold at a price higher than in the previous quarter.

Table 1 Quarter-on-quarter price growth per square metre of housing in the analysed cities in 2021 Q3.

	PMO	PMT	SMO	SMT
Gdańsk	6.1%	-2.1%	3.1%	4.3%
Gdynia	6.0%	1.6%	5.4%	2.7%
Kraków	4.6%	3.5%	3.7%	3.0%
Łódź	8.1%	11.6%	11.2%	4.7%
Poznań	4.9%	1.2%	2.3%	1.6%
Wrocław	6.2%	3.7%	2.0%	0.6%
<b>Warsaw</b>	<b>0.4%</b>	<b>3.0%</b>	<b>3.8%</b>	<b>3.1%</b>
<b>6 cities</b>	<b>5.4%</b>	<b>3.5%</b>	<b>5.1%</b>	<b>2.8%</b>
<b>10 cities</b>	<b>5.0%</b>	<b>4.2%</b>	<b>3.2%</b>	<b>2.8%</b>

Source: NBP

Note to Table 1: the growth rates resulting from the average transaction price are underestimated due to the limited number of transactions recorded in the Register of Real Estate Prices and Values (Rejestr Cen i Wartości Nieruchomości - RCiWN (smaller number of more expensive dwellings). Figures will be revised the next quarter.

<sup>1</sup> The analysis carried out in this issue of the *Information* is based on data available as at the end of 2021 Q3. Data collected in the NBP database during the quotation include offers available as at 1 September 2021 and transactions concluded in the period from June to August 2021. Due to delays in access to some data, some charts and tables include information until 2021 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 the cut-off-date. Historical data are subject to revision. In listings (BaRN basis) concerning 2021 Q3, approx. 113.3 thousand records were collected, including approx. 32.4% records concerning transactions and 67.7% records concerning offers. Altogether, over 4.3 million records were collected in the data base, including 24.9% records concerning transactions and 75.1% records concerning offers.

- **The growth rate of the average transaction rental rates per sq. m. of dwellings** (excluding service charges and utility fees) **increased in quarter-on-quarter terms** both in **Warsaw and in the group of 6. and 10. cities** (see Figure 15). Homes for sale were not offered on a mass-scale<sup>2</sup>. Investors continued to look for safe investment in real estate rather than expect attractive rates of return. Despite the increased interest in rental, large cities continue to see a high supply of housing offers in the long-term rental markets, including those purchased as an investment, which may put a downward pressure on rent rates in the future. The recent years have seen an increased interest in purchase of home rental by investment funds, including foreign funds<sup>3</sup>. Up to date, the State Treasury represented by the Housing for Rent Fund has played a major role in this market.
- **Housing investment (excluding transaction costs) continued to be competitive compared with interest rates on bank deposits or yields on 10-year Treasury bonds.** The rate of return on rented housing is low (approx. 2.9%, see Table 3), nevertheless, rental dwellings are considered an attractive investment which enables investors to retain value in the long term.
- **The index of the estimated availability of housing in the group of large cities** (based on the average wage in the enterprise sector) **decreased slightly in the analysed quarter**, nevertheless, it was still approx. 0.3 sq.m higher than the record low registered in 2007 Q3 (see Figure 16). The estimated maximum affordable housing loan<sup>4</sup> also decreased slightly for the average household, as did the estimated affordability of loan-financed housing<sup>5</sup>. Rising home prices were the main factor behind current decreases in home affordability.
- **Quarterly sales of residential construction contracts in the six largest primary markets in Poland**<sup>6</sup> (see Figure 56) **was approx. 23.1% lower compared to the previous quarter and reached approx. 15.0 thousand at the end of 2021 Q3. At the same time, approx. 13.8 thousand contracts for housing construction, i.e. approx. 12.9% less q/q, were put on sale.** The supply of unsold contracts for the construction of dwellings put on the market decreased from the previous quarter by approx. 1.2 thousand and amounted to approx. 36.6 thousand at the end of the period. The number of contracts offering dwellings commonly referred to as “ready to move-in” in the sale offer in the group of six cities decreased in comparison with the previous quarter to 0.4 thousand while the home selling time in the primary market in the six largest markets decreased to 2.2 quarters from 2.3 quarters recorded in the previous

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<sup>2</sup> On the basis of results of the NBP survey “The analysis of the level of demand and supply in the secondary residential market including the housing rental market”, April 2021.

<sup>3</sup> The most active group of investors comprises specialised German funds, private equity funds from the USA and the United Kingdom and other investment institutions from the Central and Eastern Europe region.

<sup>4</sup> The maximum housing loan available in a particular market is a measure expressed in PLN thousand, taking into account banks’ lending requirements and loan parameters (i.e. interest rate, amortisation period of 25 years, minimum wage understood as the minimum income after the repayment of loan instalments). The estimate does not take into consideration changes in banks’ lending policy, including lending terms and criteria.

<sup>5</sup> 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), considering 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 across markets provide important information.

<sup>6</sup> Based on the JLL (former REAS) data.

quarter (see Figure 63). These figures indicate that supply is getting tight compared to demand in the largest cities.

- **In 2021 Q3, the value of new residential mortgage loan disbursements in Poland was higher than in the same period of 2020.** The value of new contracts for residential mortgage loans in PLN for households<sup>7, 8</sup> (excluding renegotiated contracts) according to the NBP data<sup>9</sup>, amounted to PLN 23.6 billion in 2021 Q3, i.e. it was by approx. PLN 1.4 billion (6.1%) higher than in the previous quarter and by approx. PLN 9.7 billion (70.0%) higher than in 2020 Q3. The results of the NBP survey on the situation in the credit market in 2021 Q3<sup>10</sup> indicate that banks tightened their lending criteria in connection with the entry into force of certain provisions of the amended S Recommendation. Some lending conditions also changed, e.g. a the maximum lending period was reduced. Banks expect tightening of lending policies and the decline of demand in 2021 Q4.
- **The estimated rate of return on equity (ROE) on development projects for housing developers remained at a level of approx. 22% recorded in the previous quarter.** This was the result of an increase in transaction prices, which exceeded the increase in the costs of home producers. According to the Coface report<sup>11</sup>, the total number of bankruptcies increased in the three quarters of 2021 from 795 (in 2020) to 1,841 (in 2021), while construction activities increased, respectively, from 93 to 178 and the number of real estate businesses, respectively, from 22 to 58 (cf. Figure 36). At the same time, there was a significant increase in bankruptcies in services, agriculture, manufacturing and transport. The stock indices of construction and development companies show high levels (cf. Figure 35).

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<sup>7</sup> According to the BIK data, in 2021 Q3, banks and credit unions granted approximately 71.5 thousand residential mortgage loans to individual clients for the amount of approx. PLN 23.7 billion (in 2020 Q3, 52.3 thousand in the amount of PLN 14.8 bn, respectively). The negative y/y growth in sales of residential mortgage loans recorded in 2021 Q3 concerned the lowest group of loans in terms of their number, whereas all other groups of loans increased. In the range structure of residential mortgage loans in terms of their value, the share of loans above PLN 350 thousand increased from 47.6% in 2020 Q3 to 58.8% in 2021 Q3.

<sup>8</sup> According to the AMRON report, in 2021 Q3, the number of granted residential mortgage loans amounted to 68.4 thousand (compared to 67.0 thousand in the previous quarter), the value of newly granted mortgage loans amounted to PLN 23.2 billion (compared to 22.1 thousand in the previous quarter), and the average amount of a residential mortgage loan granted was approx. PLN 339.6 thousand (compared to 330.1 thousand in the previous quarter). Loans ranging from PLN 200 to PLN 300 thousand continued to be granted most frequently (24% compared to 25% in the previous quarter). In the structure of new loans, the share of loans with the LtV 30-50%, 50-80% and above 80% increased, reaching 6.6%, 51.1% and 30.1%, respectively, while it decreased for loans with LtV up to 30%. Compared to the previous quarter, there was an increase in the share of residential mortgage loans with the maturity of up to 15 years (6.9%), 25- 35 years (67.3%) and over 35 years (0.9%), while the share of those with maturities of 15- 25 years (25.0%) fell slightly. At the end of 2021 Q3, the number of active loan agreements (during repayment) amounted to approx. 2.54 million (compared to 2.51 million in 2021 Q2), while their value at the end of the period under discussion amounted to PLN 500.1 billion (compared to 486.1 in the previous quarter).

<sup>9</sup> 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](https://www.nbp.pl/home.aspx?f=/statystyka/pieniezna_i_bankowa/oprocentowanie.html). According to NBP data, at the end of September 2021, the value of residential mortgage loans granted by banks to households stood at PLN 501.0 bn, i.e. PLN 14.1 billion higher than in the previous quarter and PLN 32.7 billion higher than the end of September 2020 figure (a 7.0% y/y increase, while in 2020 Q3 it increased by 6.4%).

<sup>10</sup> "Situation in the credit market - results of the senior loan officer opinion survey, 2021 Q4" NBP, October 2021 [http://www.nbp.pl/home.aspx?f=/aktualnosci/wiadomosci\\_2018/kredytowy2018\\_4.htm](http://www.nbp.pl/home.aspx?f=/aktualnosci/wiadomosci_2018/kredytowy2018_4.htm).

<sup>11</sup> According to Coface experts (COFACE Report – insolvency of enterprises in Poland in 3 quarters of 2021), the number of insolvencies of small construction companies increased significantly in the three quarters of 2021. Currently, the construction sector continues to develop rapidly but it also faces major challenges from rising prices of construction materials and shortages of labour. An increase in debt in the specialised works sector (e.g. demolition, installation, finishing) is observed.

- **In 2021 Q3, a high number of approx. 58.7 thousand dwellings were completed in Poland<sup>12</sup>, however, it was 0.8% lower compared to 2020 Q3** (see Figure 52). Mainly housing units for sale and rental (62%) and dwellings for buyers' own housing needs (36%) were delivered. **Approx. 71.8 thousand dwellings were started<sup>13</sup> which was also a high number, close to the record high recorded in 2020 Q3** (see Figure 53). Also in this case, dwellings for sale and rental (56%) and dwellings for buyers' own housing needs (39%) prevailed. It should be added that the share of started home construction projects increased in Warsaw (15% share vs. 11% in 2020 Q3) and in the rest of Poland (55% vs. 51% in 2020 Q3), while it decreased in large cities (20% share vs. 23% in 2020 Q3).
- **The estimated high rates of return on housing development projects, continuing investment and high consumer demand contributed to a record high growth in the number of applications for new home building permits<sup>14</sup>**. Permits were granted mainly for the construction of housing for sale and rental (62% share in the total number of permits) and dwellings for owners' own housing needs (36% share in the total number of permits). In the period discussed, the share of building permits granted for cooperative housing was close to zero. The share of housing permits decreased slightly in Warsaw (8%), 6 and 10 cities (21% and 13% respectively), while it increased to 58% in the rest of Poland. It means that given the problems in purchasing construction land in some large cities, residential buildings are constructed outside city administrative boundaries. The high number of building permits was largely the result of making up for their shortage being a consequence of the COVID-19 constraints, delayed processing of applications for permits submitted before the end of 2020, including before the change in regulations concerning energy efficiency requirements for buildings<sup>15</sup> and the continually reported high demand.
- **The commercial real estate market was severely affected by the Covid-19 pandemic, and the resulting limited trade and business activities affected rents and real estate sale transactions and will be noticeable in a longer perspective.**
- **In 2021 Q3, in the largest office real estate markets imbalances resulting from oversupply of space for rent as compared to demand for such space increased.** The supply of new space and space under construction remains high, amid lower tenant activity. According to the data released by consulting companies, at the end of the period under discussion, the total stock of office space in the largest office markets<sup>16</sup> stood at approx. 12 million square metres; with approx. 1.2 million square metres under construction. The vacancy rate in the largest markets stood at 13.5% (compared to 12.9% in Q2) while in

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<sup>12</sup> According to the Statistics Poland data, in 2021 Q3, approx. 58.7 thousand homes were completed and made ready for occupancy in Poland, i.e. approx. 0.5 thousand less compared to 2020 Q3, however, approx. 6.2 thousand more than in the previous quarter. A total of 230.0 thousand dwellings were completed and made ready for occupancy over the last 4 quarters, i.e. approx. 12.0 thousand more than in the corresponding period of last year (a rise of 5.5% y/y).

<sup>13</sup> According to the Statistics Poland data, in 2021 Q3, the construction of approx. 71.8 thousand homes was started, which is approx. 4.4 thousand more compared to 2020 Q3, however, approx. 9.1 thousand less than in the previous quarter. Altogether, the last four quarters saw the launch of construction of approx. 272.8 thousand dwellings, i.e. approx. 46.6 thousand less than in the same period of 2020 (a rise of 20.6% y/y).

<sup>14</sup> According to the Statistics Poland data, in 2021 Q3, approx. 83.5 thousand home building permits were issued in Poland, i.e. approx. 14.1 thousand more than in 2020 Q3, however, approx. 3.6 thousand less than in the previous quarter. In the last four quarters a total of approx. 339.6 thousand permits were issued, i.e. 80.6 thousand more than in the corresponding period of last year (a 31.1% y/y increase).

<sup>15</sup> In accordance with Regulation of the Minister of Infrastructure of 12 April 2002 concerning technical conditions to be met by buildings and their location (Paragraph 320), as of 1 January 2021, a new energy standard applies and the value of primary energy (the so-called EP ratio) is decreased.

<sup>16</sup> The nine office space markets include: Warsaw, Kraków, Wrocław, Tri City, Katowice, Łódź, Poznań, Szczecin, Lublin.

Warsaw alone it amounted to 12.5%<sup>17</sup>, which means that it remained at a level of the previous quarter. The vacancy rate of office space depends on the age<sup>18</sup> and mainly on the location of the office building<sup>19</sup>. Construction of almost 10% of additional space does not mean an automatic increase in vacancy rates, however, it will generate significant competition for tenants, especially as regards older buildings or those in poorer locations. Consequently, in addition to an increase in vacancy rates, we will see the withdrawal of this space from the market or its transformation into modern and marketable space, including residential premises.

- **In 2021 Q2, the retail sector continued to be affected by the COVID-19 pandemic which coincided with the market changes that had already begun, namely the development of e-commerce.** The stock of modern retail space at the end of 2021 Q3 amounted to over 12.2 million sq.m., which translates into a saturation of 320 sq.m./1000 inhabitants.<sup>20</sup> On the other hand, there were approximately 400 thousand sq. m.<sup>21</sup> of modern retail space under construction. It can be concluded that in view of such a low growth in new space, investors consider the market to be saturated. This is also confirmed by the emergence of projects transforming the existing retail space into multi-function projects. The problem faced by this sector is, therefore, to retain the existing customers, and to a lesser extent to compete with new projects.
- **The market for modern warehouse space in Poland was in the expansion phase for another consecutive quarter while the supply and demand also remained high.** The market of modern warehouse space benefits from the changes in consumer habits already observed earlier and accelerated by the pandemic. The segment of warehouses located in urban areas continues to develop very rapidly with a view to reducing product delivery to customer. At the end of 2018 Q3, the total stock of the warehouse space market increased to 22.6 million sq.m. , with over 3.6 million sq.m. of modern warehouse space under construction. The vacancy rate across the country recorded a further decline to the level of 4.9%<sup>22</sup> compared to 5.6% in 2021 Q2.
- **In 2021 Q3, the estimated value of commercial real estate purchased for investment purposes<sup>23</sup>, i.e. for rental, amounted to nearly EUR 3.1 billion.** Approximately 59.9% of the transaction value concerned warehouse space, 26.9% office space and only 14.9% retail space.
- **The exposure of the financial sector to commercial real estate (loans to housing developers, loans for office, retail, warehouse real estate and other loans) comes in two main forms. The first is to the loan taken to finance of a particular property.** Usually, in this case, the loan is secured on this particular property, but alternative forms of security are also possible. **The second form of banks' exposure are loans taken by enterprises for various purposes, secured on real estate.**

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<sup>17</sup> See: Colliers International Report: Market Insights, 2021 Q3, Poland.

<sup>18</sup> Cushman & Wakefield, Marketing as one of the key factors supporting the modernisation process of older office buildings, 2018.

<sup>19</sup> See: Knight Frank, Report: Poland, Commercial Market, 1st half of 2018.

<sup>20</sup> It is estimated that this value is 15% lower than the average for the entire European Union.

<sup>21</sup> See: Colliers International Report: Market Insights, 2021 Q1, Poland.

<sup>22</sup> See: Colliers International Report: Market Insights, 2021 Q1, Poland.

<sup>23</sup> 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 take place between: 1/ the real estate developer who has commercialised the property and sells it to the investor, or 2 / two investors.

- At the end of 2021 Q3, **the value of loans granted by banks for real estate financing in Poland**<sup>24</sup> amounted to PLN 60.80 billion<sup>25</sup>, (a PLN 1.3 billion decline compared to Q2), including 56% of loans denominated in EUR. The value of enterprises' debt due to residential properties at the end of 2021 Q3 decreased slightly to PLN 4.1 billion. The value of loans for office real estate fell to PLN 15.3 billion against PLN 16.0 billion in 2021 Q2. Outstanding loans granted for retail real estate stood at PLN 16.4 billion while for warehouse and industrial real estate their value decreased to PLN 9.3 billion against PLN 10.1 billion in 2021 Q2. On the other hand, the value of loans granted for other real estate stood at PLN 15.4 billion.
- **The value of corporate loans secured by mortgage on commercial real estate** at the end of 2021 Q3 amounted to PLN 134 billion<sup>26</sup>, i.e. it did not change compared to the previous quarter. Of these loans, 37% were denominated in EUR.
- **The quality of loans granted to enterprises for real estate did not change significantly in relation to the previous quarter.** The ratio of non-performing loans granted for office real estate increased to 6.8%, in the case of loans extended for retail space, it decreased slightly to 15.3% compared to 15.4% in 2021 Q2. The non-performing loans ratio in the warehouse and industrial space segment increased to 6.9% compared to 6.7% in 2021 Q2, while in the case of other real estate it decreased to 7.7% from 8.0%. The non-performing loans ratio among loans granted for housing developer real estate decreased to 15.3 % against the level of 15.5 % in 2021 Q2. The relatively high value of this ratio is mainly due to non-performing loans from previous years held in banks' loan portfolios.<sup>27</sup>
- **In the market of small office real estate, the median of the asking prices all over Poland and in the majority of the largest cities saw a slight increase.** Only Warsaw and Katowice posted minor decreases. Also small retail premises, in the majority of large cities saw a slight increase in the median of offer prices. Poznań, on the other hand, posted a slight decrease compared to 2021 Q2.

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<sup>24</sup> The value 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 bn. The estimate has been computed 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 314 bn. This estimate has been calculated by multiplying the volume of stock in square metres (published by consulting companies) by the hedonic appraisal of relevant properties 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 estimated at 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 97 bn). 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, since 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.

<sup>25</sup> FINREP data.

<sup>26</sup> The fall in debt by PLN 4.6 billion in comparison with Q3 was mainly due to the repayment of loans denominated in PLN.

<sup>27</sup> See: Financial Stability Report, NBP, December 2018.



The figures below describe the key developments in the housing market in Poland's major cities in 2021 Q3. Charts and figures present:

- 1) home prices (Figures 1–15),
- 2) affordability of loan-financed housing, loan affordability, profitability of housing investment (Figures 16–24),
- 3) mortgage loan disbursements and interest rates (Figures 25–34),
- 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 35–50),
- 5) housing construction and the residential market in selected cities in Poland (Figures 51–64),
- 6) rents and transaction prices of commercial real estate and estimated rate of return (Figures 65–75),
- 7) extended analysis of financial standing of real estate developers (Figures 76-107), construction companies involved in the construction of buildings (Figures 108-125), companies dealing with sale of construction materials (Figures 126-146), companies manufacturing construction materials (Figures 147-164).

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

In addition, the analyses relied on the data from PONT Info Nieruchomości, AMRON and SARFIN Polish Banks' Association and Comparables.pl. 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<sup>28</sup>.

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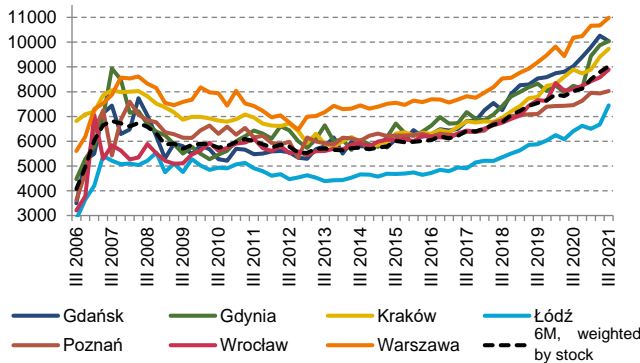
<sup>28</sup> Data and studies were used, among others, Sekocenbud, Spectis, PAB, OLX Group.

**List of abbreviations:**

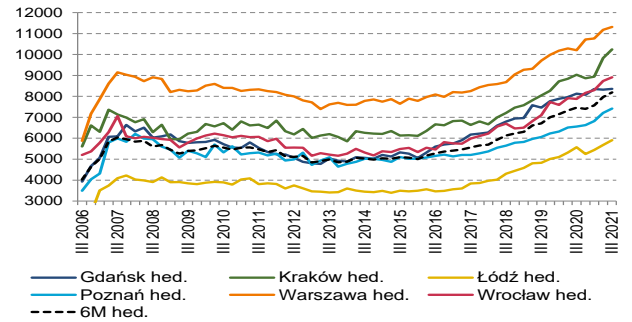
<b>5M</b>	5 biggest cities: Gdańsk, Kraków, Łódź, Poznań, Wrocław
<b>6M</b>	6 biggest cities: Gdańsk, Gdynia, Kraków, Łódź, Poznań, Wrocław
<b>7M</b>	7 biggest cities: Gdańsk, Gdynia, Kraków, Łódź, Poznań, Warszawa, Wrocław
<b>10M</b>	10 biggest cities: Białystok, Bydgoszcz, Katowice, Kielce, Lublin, Olsztyn, Opole, Rzeszów, Szczecin, Zielona Góra
<b>BaNK</b>	Commercial Real Estate Market Database
<b>BaRN</b>	Real Estate Market Database
<b>BIK</b>	Biuro Informacji Kredytowej (Credit Information Bureau)
<b>CPI</b>	Consumer Price Index
<b>DFD</b>	Large real estate development company
<b>Statistics Poland</b>	Central Statistical Office
<b>EURIBOR</b>	Euro Interbank Offer Rate
<b>KNF</b>	Polish Financial Supervision Authority
<b>LIBOR</b>	Interbank Offered Rate
<b>LTV</b>	The relation of loan value to home value, i.e. Loan-to-Value
<b>MDM</b>	Government-subsidised housing scheme Mieszkanie dla Młodych (Housing for the Young)
<b>NBP</b>	Narodowy Bank Polski
<b>PONT</b>	PONT Info Nieruchomości
<b>RNS</b>	Government-subsidized housing scheme Rodzina na Swoim (Family on their Own)
<b>PM</b>	Primary housing market
<b>SM</b>	Secondary housing market
<b>ROE</b>	Return on Equity
<b>WIBOR</b>	Warsaw Interbank Offered Rate
<b>WIG20</b>	Index including top 20 companies listed on the Warsaw Stock Exchange with the highest value of publicly traded shares
<b>ZBP</b>	Polish Bank Association
<b>ZKPK</b>	Accumulated index of changes in banks' credit policy criteria

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

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



**Figure 2 Transaction prices per square metre of housing adjusted by the hedonic index in Warsaw and in 6M**

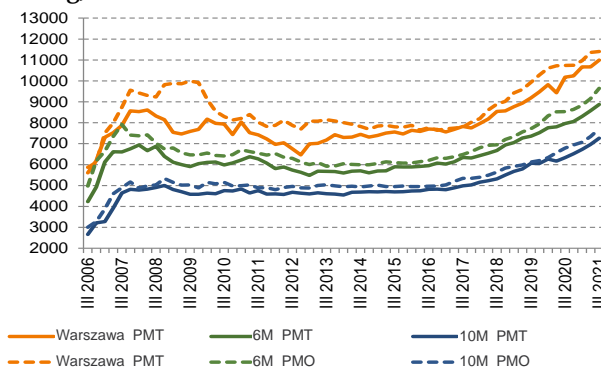


Note: the home price database of NBP (BaRN) has existed since 2006 Q3; description of the database is available on the bank's website [https://www.nbp.pl/home.aspx?f=/publikacje/rynek\\_nieruchomosci/ankieta.html](https://www.nbp.pl/home.aspx?f=/publikacje/rynek_nieruchomosci/ankieta.html).

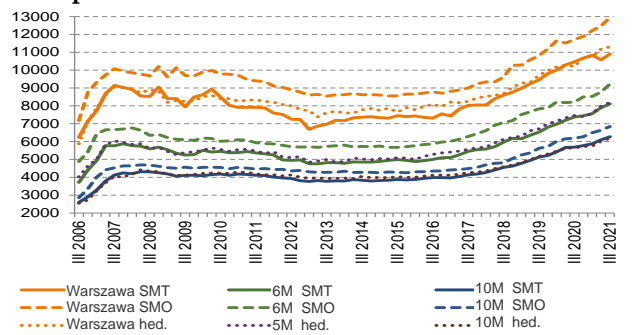
Source: NBP

Source: NBP

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

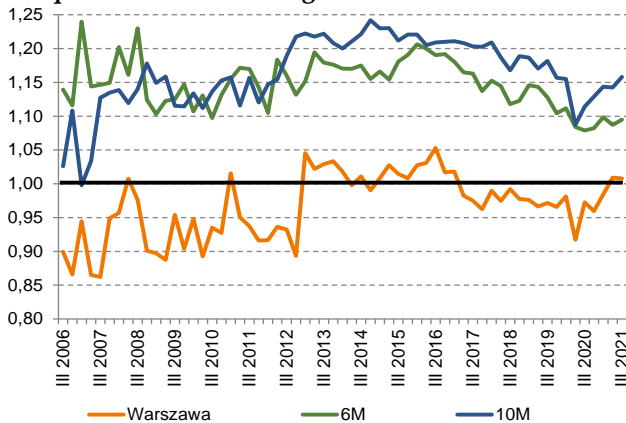


**Figure 4 Weighted average price per square metre of housing, offers (O) and transactions (T) and hedonic (hed.) prices - SM**



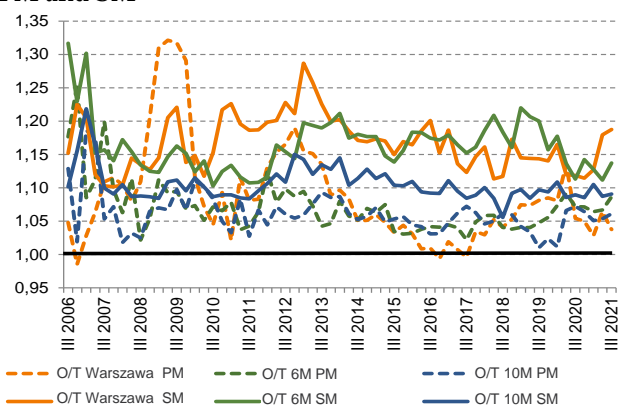
Note to Figures 3-10 and 14-15: prices and rents weighted in 6M and 10M with the share of housing stock, the average price for Warsaw.

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



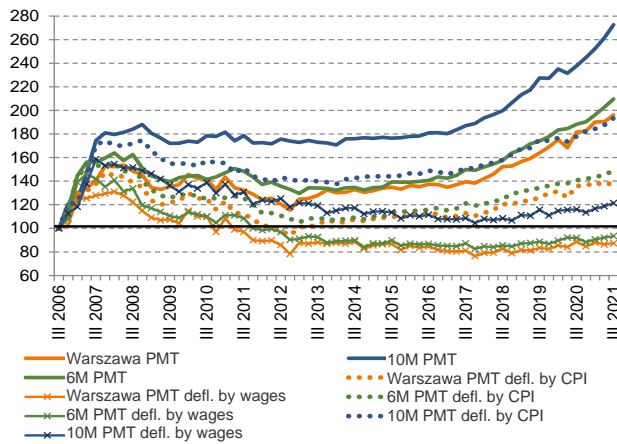
Source: NBP

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



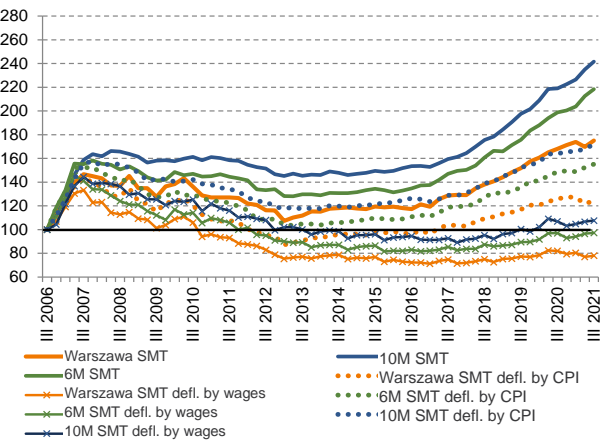
Source: NBP

**Figure 7 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 2006 = 100)**



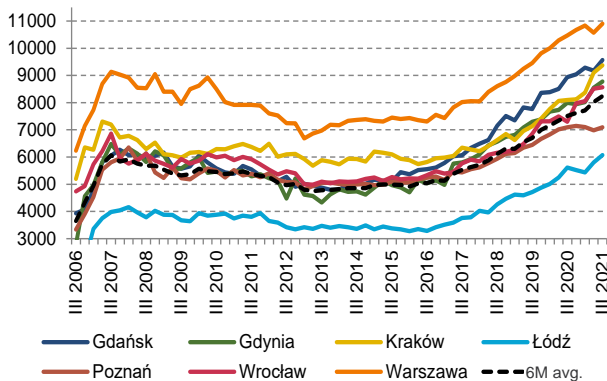
Source: NBP, ZBP (AMRON), Statistics Poland.

**Figure 8 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 2006 = 100)**



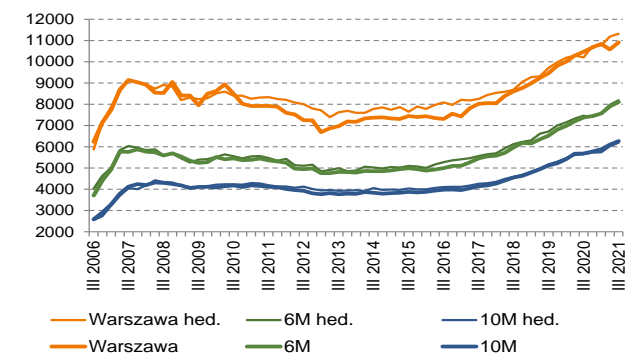
Source: NBP, ZBP (AMRON), Statistics Poland.

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



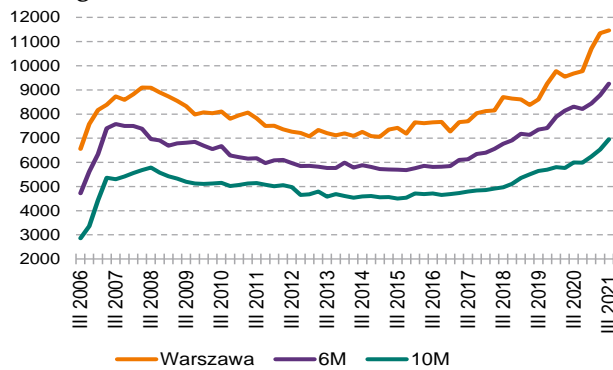
Source: NBP

**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

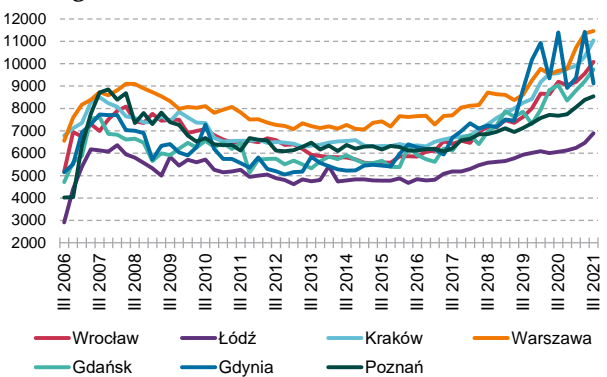
**Figure 11 Average offer prices per square metre of housing in PM, selected markets**



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

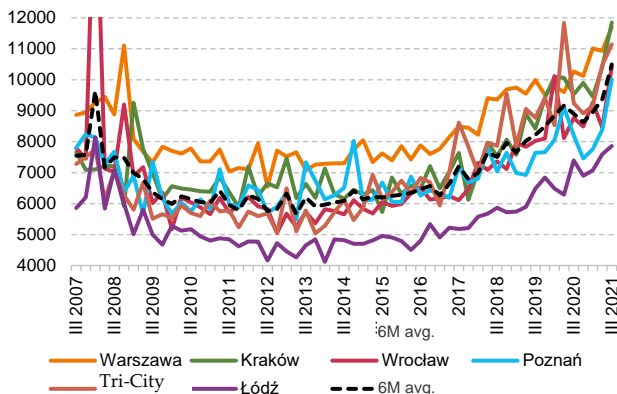
Source: PONT Info Nieruchomości

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



Source: PONT Info Nieruchomości

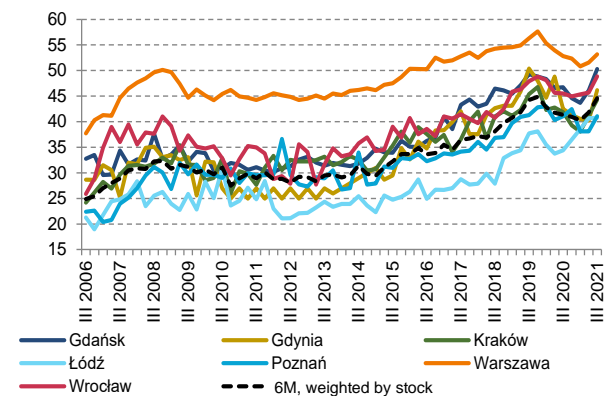
**Figure 13 Average offer prices per square metre of housing, new home construction contracts – PM, selected markets**



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

Source: JLL/d.REAS

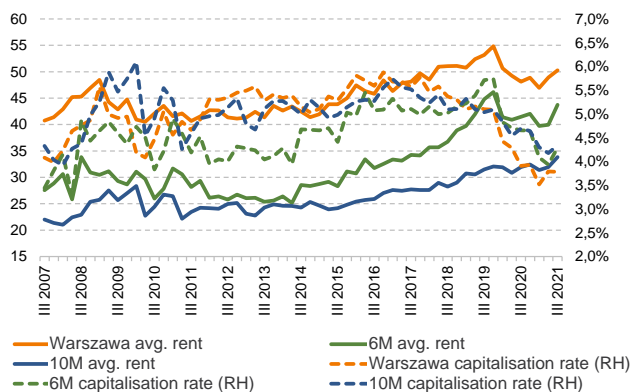
**Figure 14 Average rent rates (offers and transactions) per square metre of housing - SM, selected cities**



Note: in 2020 the change of sample was observed.

Source: NBP, OLX Group

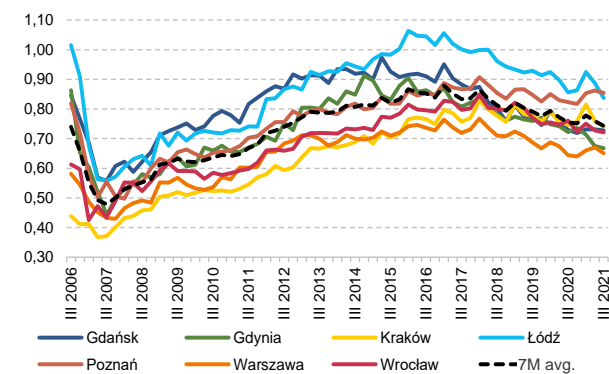
**Figure 15 Average rent rates (transactions) per square metre of housing in the SM (LH scale) and the estimated profitability of housing rental (RH scale) in selected cities**



Note to Figure 15: price per square metre of housing calculated as 50% of PM price and 50% of SM price; the price per square metre of housing in the PM was increased to include the average costs of home finishing and 1.5% depreciation; 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.)**

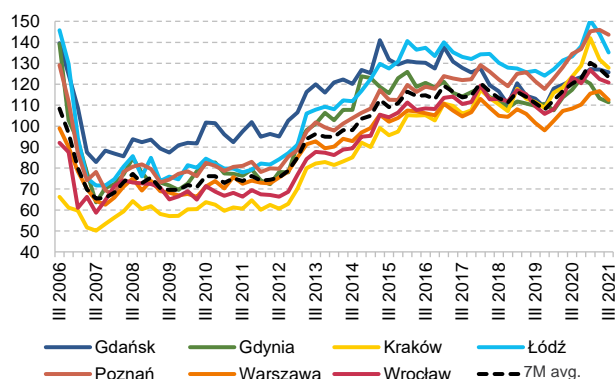


**Housing affordability** – a measure of potential affordability to purchase housing at the transaction price for an average wage in the enterprise sector in a particular city. It expresses the number of square meters of housing that can be purchased for an average wage in the enterprise sector in a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

Source: NBP, Statistics Poland

## 2. Affordability of loan-financed housing, loan affordability, profitability of investment in housing

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



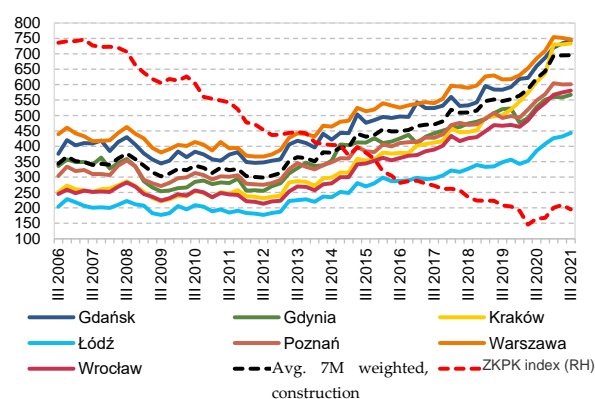
Source: NBP, Statistics Poland

**Affordable residential mortgage loan** – a measure specifying the potential maximum residential mortgage loan; expressed in PLN thousand in a given market 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).

**Affordability of loan-financed housing** – a measure specifying how many square meters of housing may be purchased with a mortgage loan obtained basing on the average monthly wage in the enterprises sector in a particular market (Statistics Poland), in view of bank's lending requirements and loan parameters (interest rate, depreciation period, social minimum wage understood as the minimum income after payment of loan instalments) at an average transaction price of housing (40% in the PM and 60% in the SM) 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; positive values mean easing, and negative values tightening of lending policy as compared to the initial period i.e. 2003 Q4. Computing methods of the index are described in the *Financial Stability Report, December 2012*, NBP.

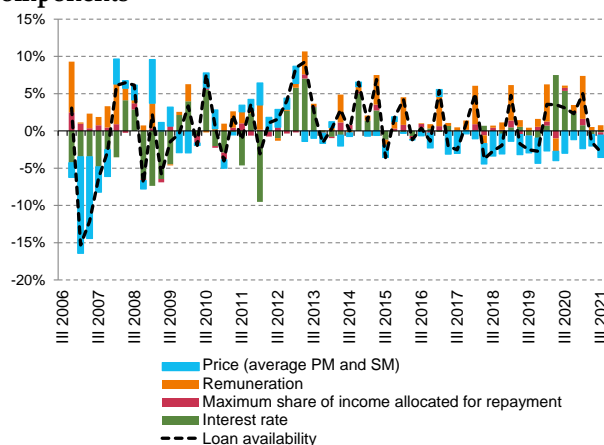
**Figure 19 Estimated affordability of residential mortgage loan and accumulated index of banks' mortgage lending policy (ZPKK, RH scale)**



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.

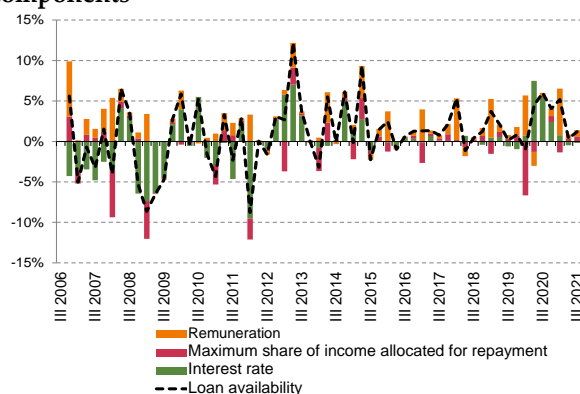
Source: NBP, Statistics Poland

**Figure 18 Quarterly changes in the estimated affordability of loan-financed housing in 7M and the force and directions of the impact of particular components**



Source: NBP, Statistics Poland

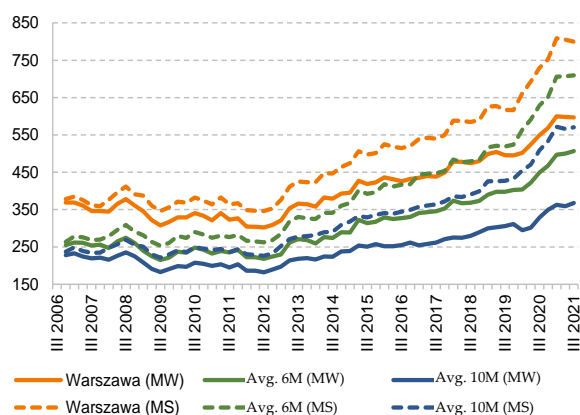
**Figure 20 Quarterly changes in the estimated affordability of loan-financed housing in 7M and the force and directions of the impact of individual components**



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

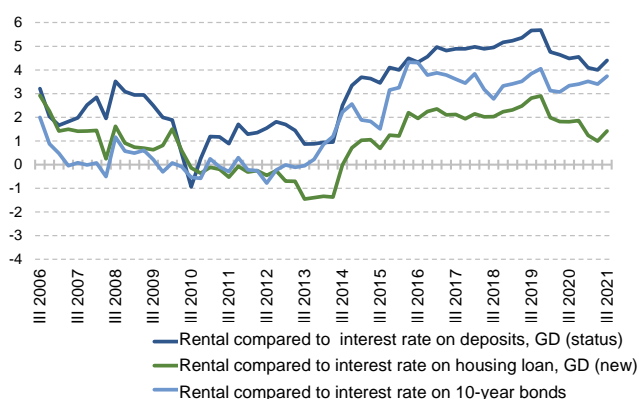
Source: NBP, Statistics Poland

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



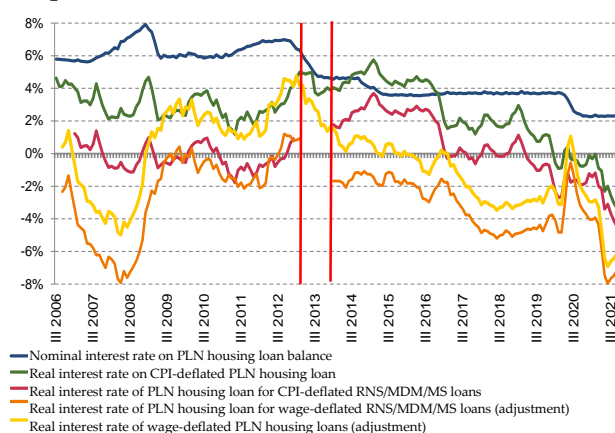
Note: values estimated with the criterion of minimum subsistence wage left (MS) or average monthly wage in the enterprise sector (MW)  
Source: NBP, Statistics Poland, BGK.

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



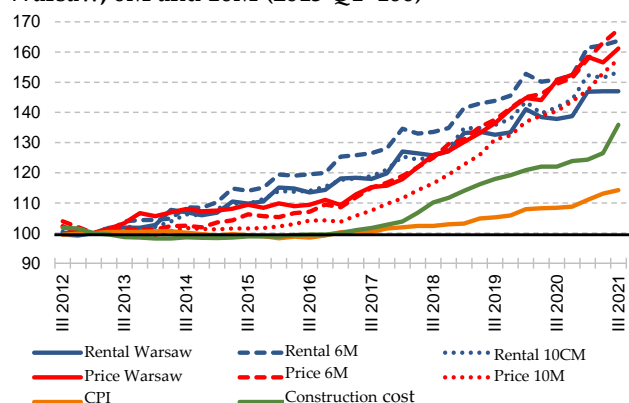
Note to Figure 23: values exceeding 0 denote higher profitability of purchasing property for rental to third persons than other GD investment. This analysis does not take into account high transaction costs in the residential market and the potentially long time of disinvestment. Note to Figure 24: Transaction price per square meter of a dwelling 50% SM and 50%PM (including costs of finishing; details in the description of Table 7). Cost of construction of half a 1121-302 building (details in footnote 31).  
Source: NBP, Statistics Poland

**Figure 22 Residential mortgage loan burden for consumer deflated by 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 subsidized housing scheme, i.e. the RNS scheme (operating in the years 2007- 2012), the MDM scheme (operating in years 2014-2018) and the Housing for the Start (MS) operating since 2019.  
Source: NBP, Statistics Poland, BGK.

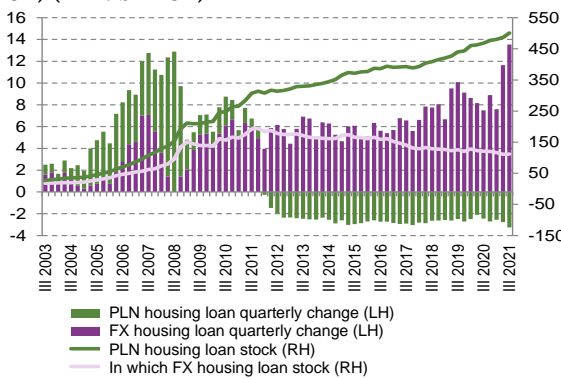
**Figure 24 Growth rate of changes in the level of transaction priced (Price) and household income (Result), home construction costs and CPI, average in Warsaw, 6M and 10M (2013 Q1=100)**



Source: NBP, Statistics Poland

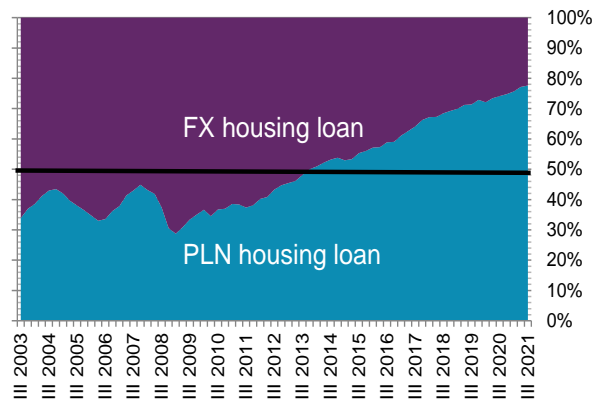
### 3. Disbursement of residential mortgage loans, interest rates

**Figure 25 Outstanding residential mortgage loans and quarter-on-quarter changes in residential mortgage loan receivables of households after adjustments and the currency structure of quarter-on-quarter increases in outstanding residential mortgage loans (PLN billion) (PLN billion)**



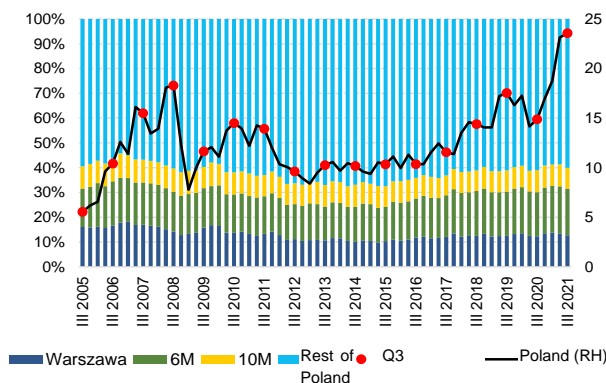
Source: NBP

**Figure 26 Currency structure of residential mortgage loan receivables from households (%)**



Source: NBP

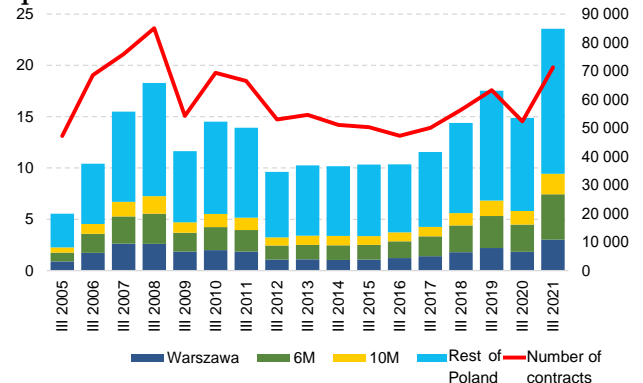
**Figure 27 Geographical structure of the value of new residential mortgage loan contracts in Poland's selected cities, quarterly data**



Note to Figures 27 and 28: the data inform about signed residential mortgage loan contracts rather than about the actual disbursement of loans. Only third quarters are marked by red points in Figure 27.

Source: BIK

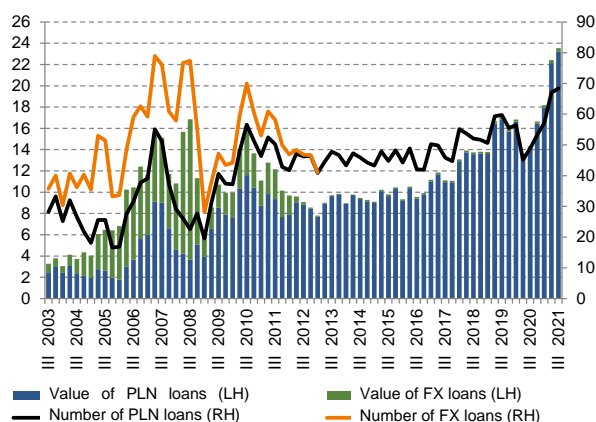
**Figure 28 Value in PLN billion (LH scale) and number (RH scale) of new residential mortgage loan contracts in Poland's selected cities in the third quarters of 2005-2021**



Source: BIK

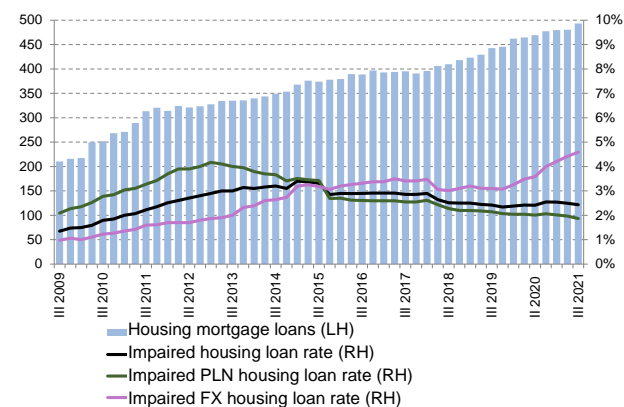


**Figure 29 New residential mortgage loan contracts: value and number, cumulated quarterly values**



Source: ZBP (AMRON)

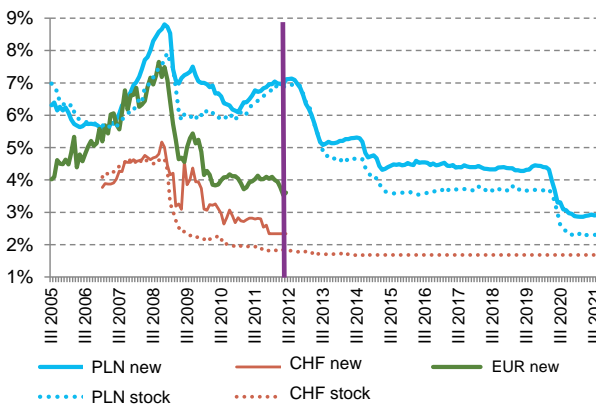
**Figure 30 Loans granted to households for residential real estate and loans recognised as non-performing loans**



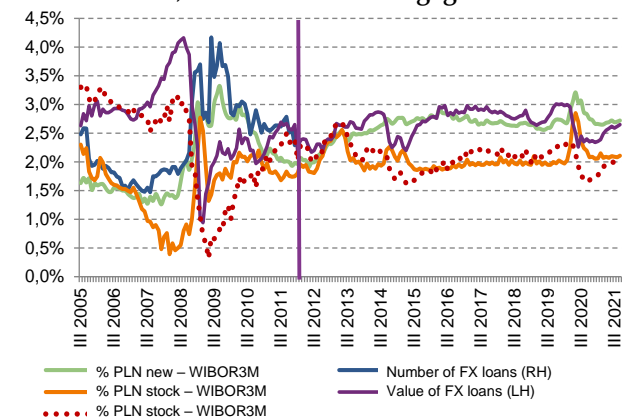
Note: receivables (loans) with determined loss of value – receivables from portfolio B, in relation to which objective evidence of impaired value were observed and a decrease in the expected value of future cash flows (in banks using the IFRS) or which were recognized as non-performing receivables in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

Source: NBP

**Figure 31 Interest rates on residential mortgage loans to households in Poland**



**Figure 32 Bank margins (for WIBOR, LIBOR, EURIBOR 3M) for residential mortgage loans**



Note to Figure 31 and 32: the violet vertical line separates the period with no FX loans which practically ceased to be granted in 2012. Note to Figure 31: bank margin is the difference between the interest rate on residential mortgage loan (NBP data) and the WIBOR3M rate or the LIBORCHF3M rate.

Source: NBP

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	Disbursement of residential mortgage loans in Poland	Estimated value of housing transactions in PM and 7M	Loan demand including client's down payment in PM in 7M	Down payment on account of loans in PM in 7M**/	Cash demand for housing (without down payments) in PM in 7M	Estimated share of cash home purchases in PM in 7M
2012 Q1	5385	3135	1228	307	1907	71%
2012 Q2	7325	3079	1670	418	1409	59%
2012 Q3	7661	2773	1747	437	1026	53%
2012 Q4	7441	3164	1697	424	1467	60%
2017 Q1	10945	6851	2495	624	4356	73%
2017 Q2	12139	6480	2768	692	3712	68%
2017 Q3	11794	6676	2689	672	3987	70%
2017 Q4	10652	7152	2429	607	4724	75%
2018 Q1	11914	7015	2716	679	4299	71%
2018 Q2	12807	6072	2920	730	3152	64%
2018 Q3	13024	5697	2969	742	2727	61%
2018 Q4	12584	6759	2869	717	3890	68%
2019 Q1	11865	7156	2705	676	4450	72%
2019 Q2	14653	6713	3341	835	3372	63%
2019 Q3	14554	7282	3318	830	3964	66%
2019 Q4	12770	8147	2912	728	5235	73%
2020 Q1	14871	9059	3391	848	5669	72%
2020 Q2	13009	3260	2966	742	294	***/ 32%
2020 Q3	13859	6565	3160	790	3405	64%
2020 Q4	16185	6834	3690	923	3144	60%
2021 Q1	17392	9882	3965	991	5917	70%
2021 Q2	22244	10085	5072	1268	5014	62%
2021 Q3	23607	8006	5382	1346	2624	****/50%

Note to Table 2: the 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 with a loan and the minimum share of cash (a down payment of 25% was assumed; in big cities, a 20% down payment was more prudent than the requirement of the amended S Recommendation), whereas cash home purchases are a difference between the value of transactions and credit funds.

In order to calculate the estimated value of primary market transactions in 7M (Gdańsk, Gdynia, Kraków, Łódź, Poznań, Warszawa, Wrocław), the average home price 7M (NBP) was multiplied by the average home size in square metres (Statistics Poland data) and the number of housing units sold (JLL/former REAS). On the basis of the 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 was calculated as the difference between transactions in 7M and disbursements of loans requiring buyer's own contribution (down-payment). Data concerning prices for all the periods have been updated.

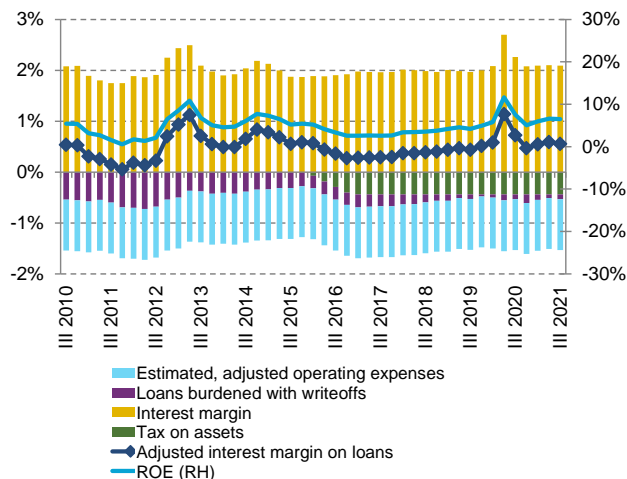
\*\*/ Other real estate sold/exchanged may also be the source of own funds.

\*\*\*/ The decline in estimated share of home purchases with down payment on the PM in 7M, recorded in 2020 Q2 is related to very low sale of dwellings in this period associated with the pandemic mobility restrictions.

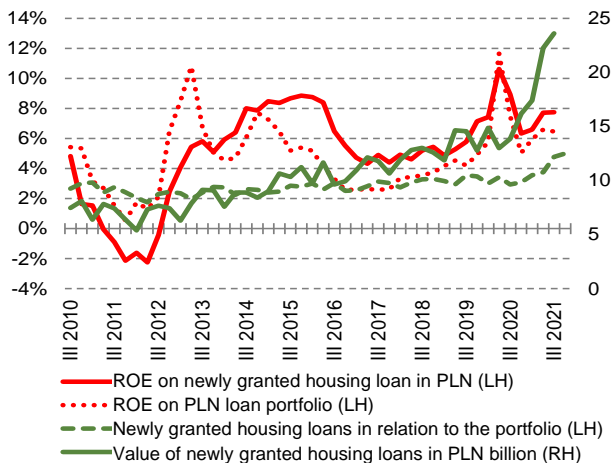
\*\*\*\*/ Low share of own funds in 2021 Q3 relative to the previous third quarters is associated with the high level of disbursement of residential mortgage loans compared to the number of dwellings sold.

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

**Figure 33 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 expenses and bank tax**



**Figure 34 Estimated ROE on residential mortgage loans denominated in PLN for banks in Poland, taking into account interest income and non-interest profit and operating expenses and bank tax**



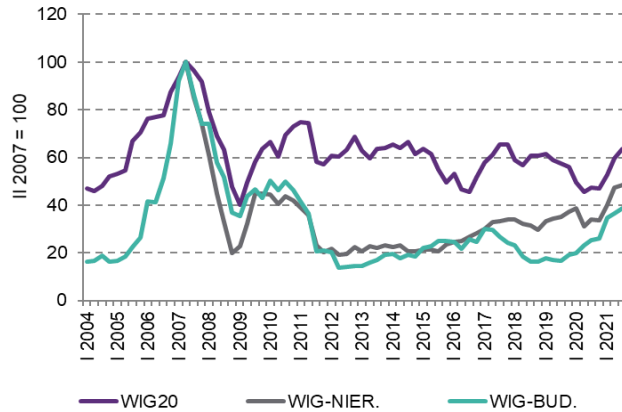
Note to Figures 33 and 34: for calculation, interest income, non-interest income and operating expenses were taken into account. The estimated ROE (return on equity) is calculated as the adjusted interest margin in relation to equity. The adjusted interest margin is the interest margin less write-offs, less the estimated operating expenses (adjusted for 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 loan 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

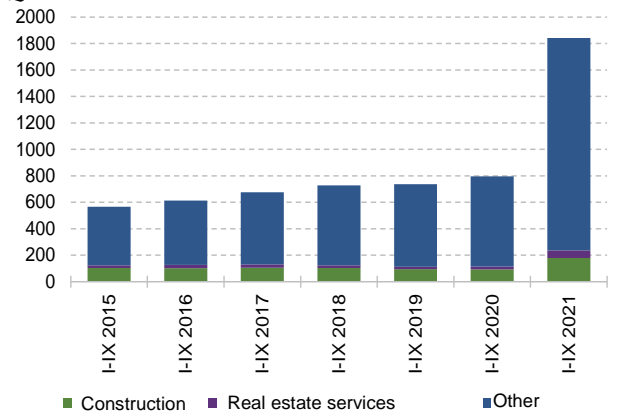
#### 4. Operating profitability of housing and real estate development projects, costs of construction and assembly output and economic situation of real estate developers in Poland

**Figure 35 Rescaled exchange indices: WIG20 and for real estate developers (WIG-NIER) and construction companies (WIG-BUD) (2007 Q2=100)**



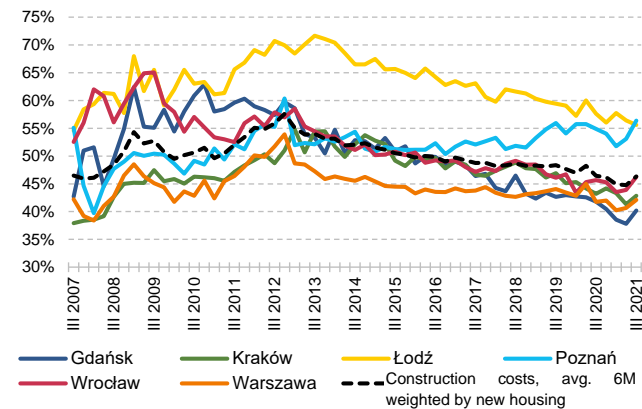
Note: standardised data, = 100 (developers' WIG has been listed since 2007 Q2); 2020 Q3, situation as at 7 December 2021.  
Source: Warsaw Stock Exchange

**Figure 36 Structure of bankruptcies of enterprises, including in the construction industry (as at the end of Q3)**



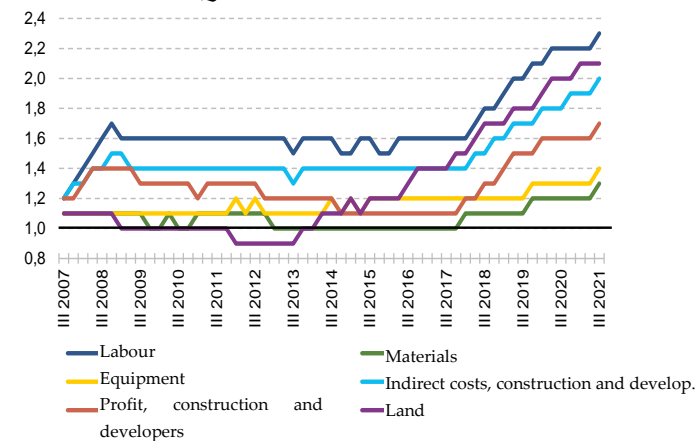
Note: breakdown according to the first entry into the KRS.  
Source: Coface Poland

**Figure 37 Estimated share of direct construction costs per square metre of the residential building's usable floor area (type 1122-302<sup>29</sup>) in net transaction price in PM 6M**



Note to Figures 37 and 38: Since 2014 NBP has used its own appraisal of land for residential multifamily construction.  
Source: NBP based on Sekocenbud.

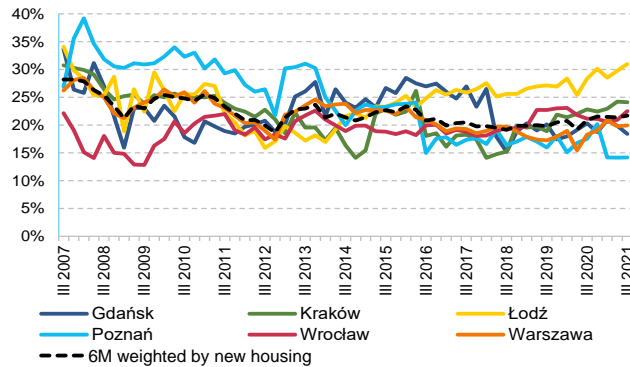
**Figure 38 Estimated share of various construction costs per square metre of the residential building's usable floor area (type 1122-302<sup>29</sup>) in net transaction price in PM of 6M (2007 Q1=1)**



Source: NBP based on Sekocenbud.

<sup>29</sup> Half of the building (type 1122-302) monitored by NBP since 2016 Q2 based on the Sekocenbud data.. An average residential multi-family building, with an underground garage, constructed in the technology: foundation footings, construction walls and ceilings - monolithic reinforced concrete, curtain walling - bricked walls of hollow MAX blocks. Change of the type of the analysed building in 2017 is related to closing of the cost estimation of the building 1121. Analytical assumptions related to building 1121 have been maintained.

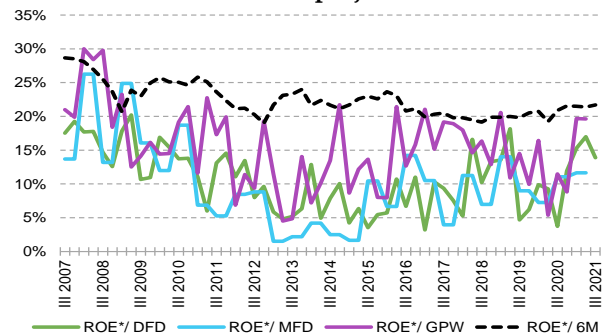
**Figure 39 Estimated rate of return on investment projects (type 1122-302<sup>29/</sup>) in the largest cities**



\* /ROE modified = net financial result/ (sales revenues – net result on sales); \*\*/ 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).

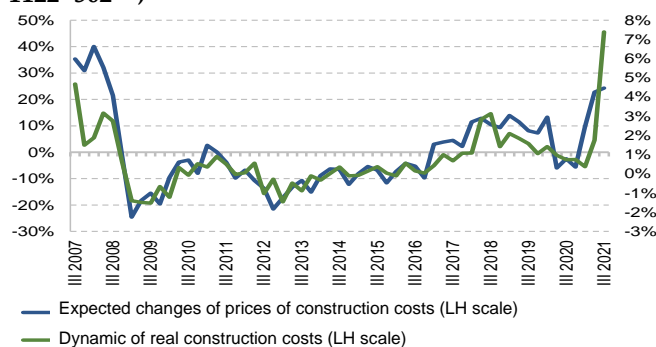
Source: NBP based on Sekocenbud, Statistics Poland (F01)

**Figure 40 Estimated profitability indicators of development projects ROE\* for real estate developers listed on the Stock Exchange, for large real estate developers (DFD)\*\*, small real estate developers (MFD)\*\*\* and investment projects in 6 cities (6M)**



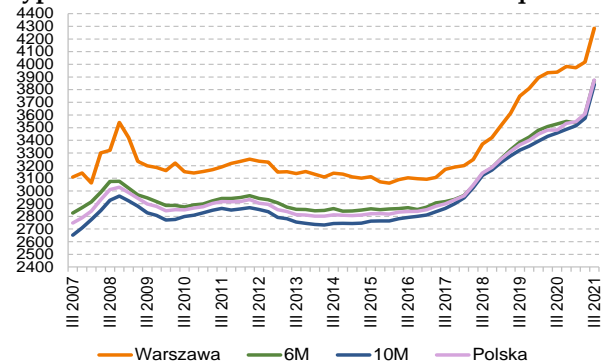
Source: NBP based on Sekocenbud, Financial Statements, Statistics Poland (F01)

**Figure 41 Predicted changes in prices of construction and assembly works (+3C) and growth in construction costs of usable floor area of a residential building (type 1122- 302<sup>29/</sup>)**



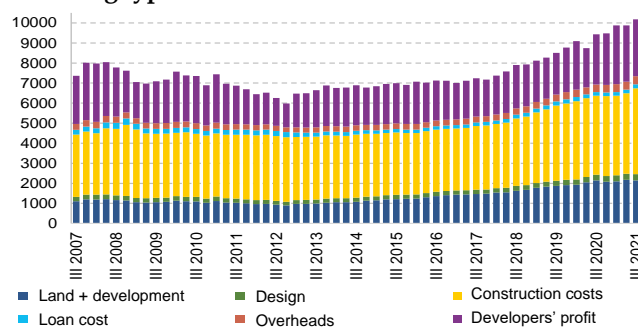
Source: NBP based on the Statistics Poland data (business conditions survey), Sekocenbud.

**Figure 42 Average cost of construction of square metre of the residential building's usable floor area (type 1122- 302<sup>29/</sup>) in selected markets (PLN/sq.m)**



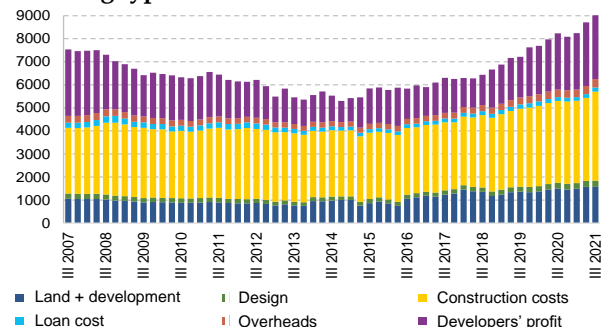
Source: NBP based on Sekocenbud.

**Figure 43 Warsaw – estimated structure of net price per square metre of housing usable floor area in PM (building type 1122-302<sup>29/</sup>) for consumers**



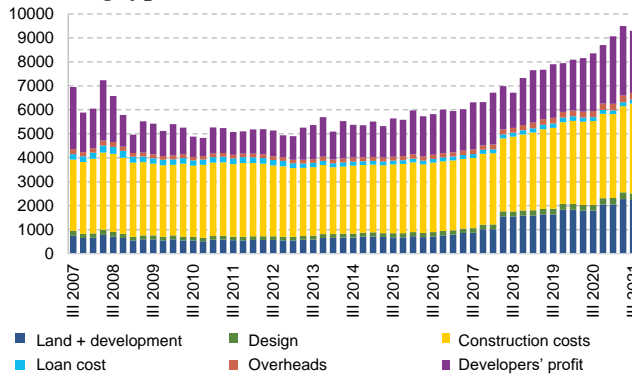
Source: NBP based on Sekocenbud, JLL (former REAS)

**Figure 44 Kraków – estimated structure of net price per square metre of housing usable floor area in PM (building type 1122- 302<sup>29/</sup>) for consumers**



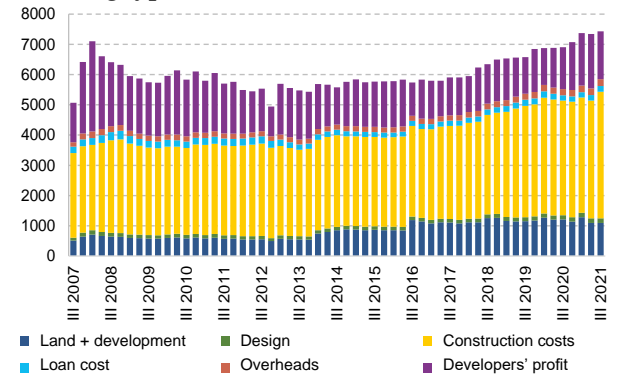
Source: NBP based on Sekocenbud, JLL (former REAS)

**Figure 45 Gdańsk – estimated structure of price per square metre of housing usable area in the PM (building type 1122- 302<sup>29</sup>) for consumers**



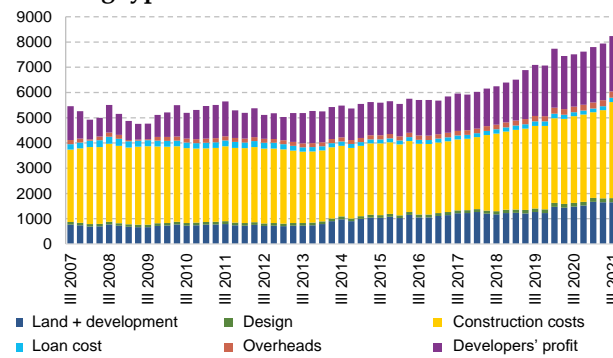
Source: NBP based on Sekocenbud, JLL (former REAS)

**Figure 46 Poznań – estimated structure of price per square metre of housing usable area in the PM (building type 1122- 302<sup>29</sup>) for consumers**



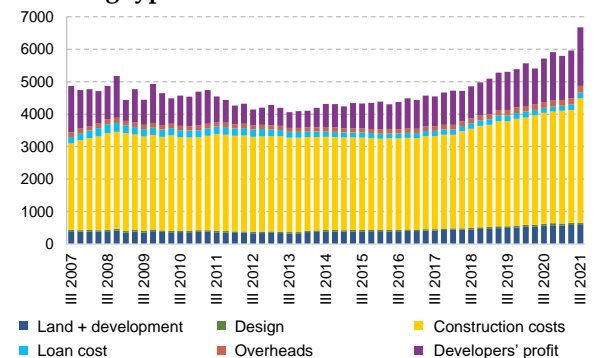
Source: NBP based on Sekocenbud, JLL (former REAS)

**Figure 47 Wrocław – estimated structure of net price per square metre of housing usable floor area in PM (building type 1122- 302<sup>29</sup>) for consumers**



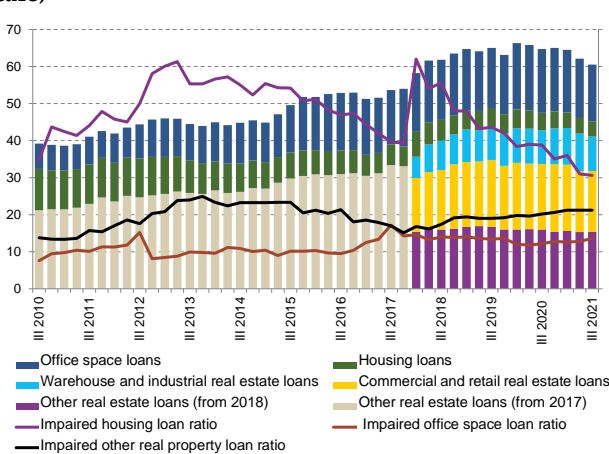
Source: NBP based on Sekocenbud, JLL (former REAS)

**Figure 48 Łódź – estimated structure of net price per square metre of housing usable floor area in PM (building type 1122- 302<sup>29</sup>) for consumers**



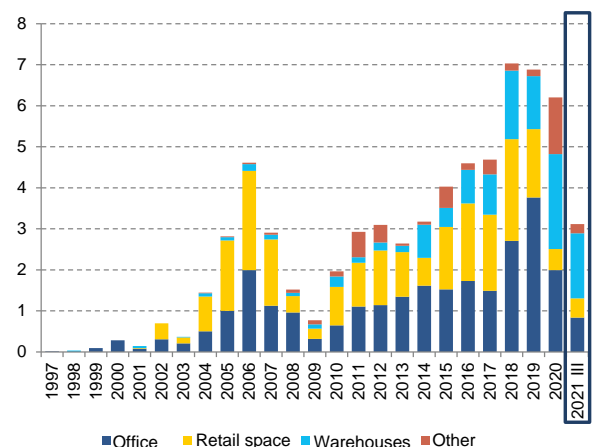
Source: NBP based on Sekocenbud, JLL (former REAS)

**Figure 49 Loans to corporations for real estate purchases (in PLN billion, left-hand scale) and the share of loans recognised as non-performing loans (in % right-hand scale)**



Note: exclusive of BGK. Since 2018, new accounting standards have been in place. Source: NBP

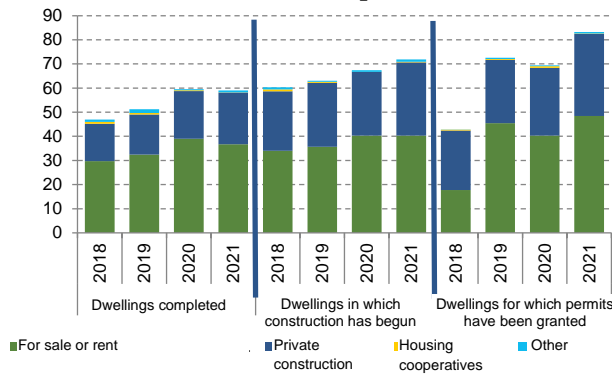
**Figure 50 Value of investment transactions in the commercial real estate (EUR billion)**



Source: Comparables.pl

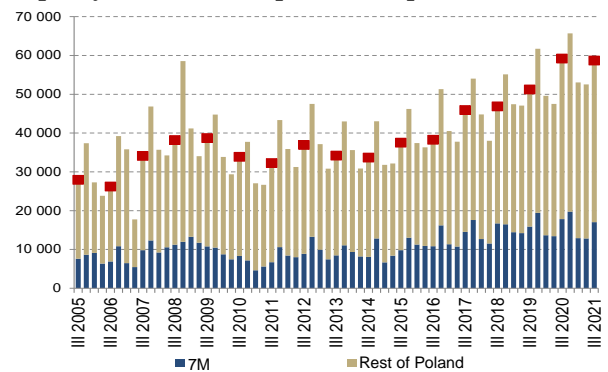
## 5. Residential construction and the housing market in Poland's selected cities

**Figure 51 Structure of residential construction investors in Poland in the third quarters of 2018-2021**



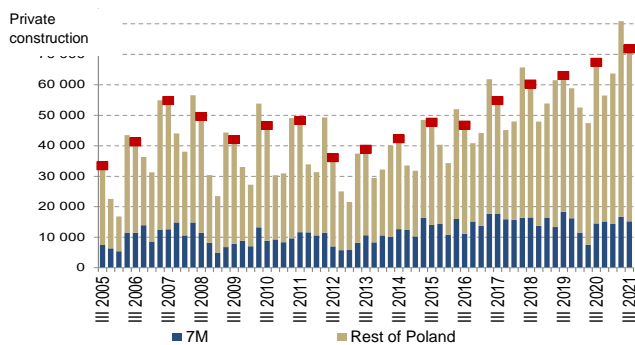
Source: Statistics Poland

**Figure 52 Dwellings completed and made ready for occupancy in Poland, in quarter-on-quarter terms**



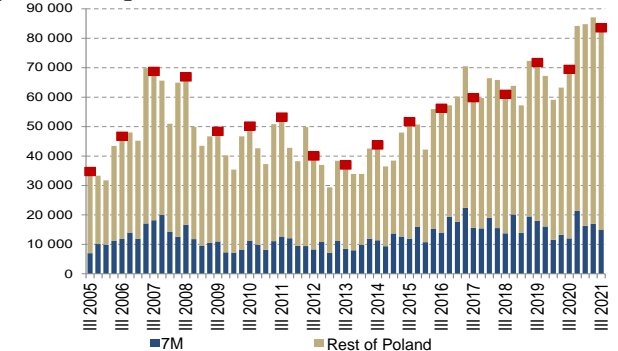
Note: only third quarters have been marked in red. Source: Statistics Poland

**Figure 53 Dwellings under construction in Poland, in quarter-on-quarter terms**



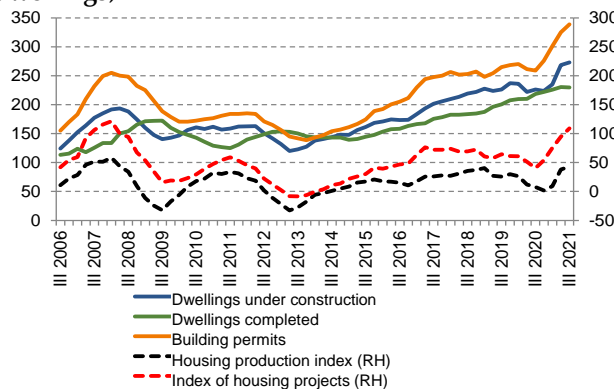
Note: only third quarters have been marked in red. Source: Statistics Poland

**Figure 54 Issued home building permits in Poland, in quarter-on-quarter terms**



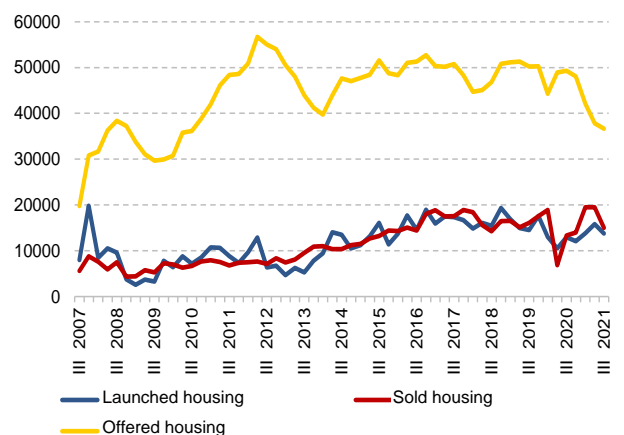
Note: only third quarters have been marked in red. Source: Statistics Poland

**Figure 55 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)**



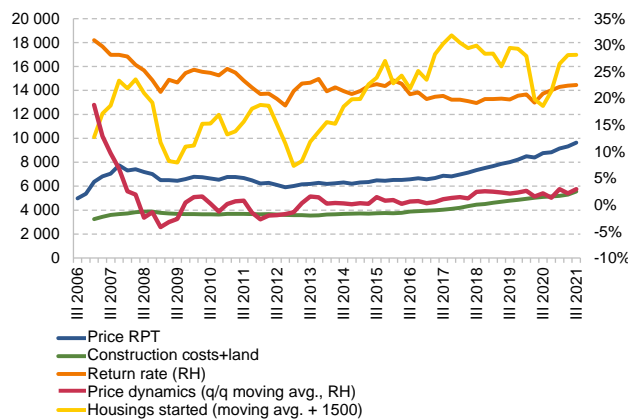
Note: rolling averages for four subsequent quarters. Source: NBP based on PABB and Statistics Poland

**Figure 56 Number of contracts for the construction of dwellings put on the market, both sold and offered for sale in Poland's 6 largest markets.\* /**

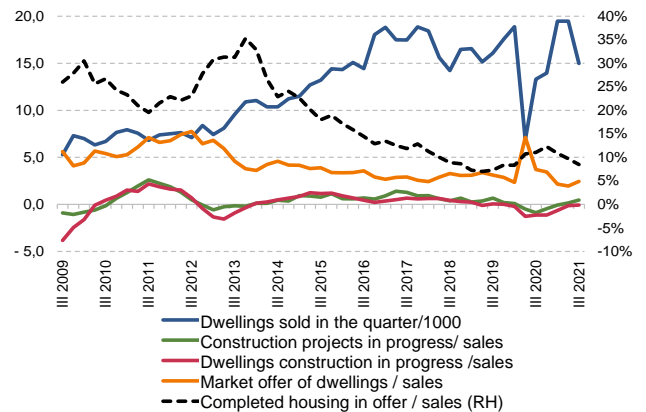


\*/Warsaw, Kraków, Tricity, Wrocław, Poznań, Łódź. Source: JLL/d.REAS

**Figure 57 Housing supply and the estimated rate of return on housing development projects in PM in 7M**



**Figure 58 Housing projects, dwellings under construction and dwellings offered for sale in 7M**

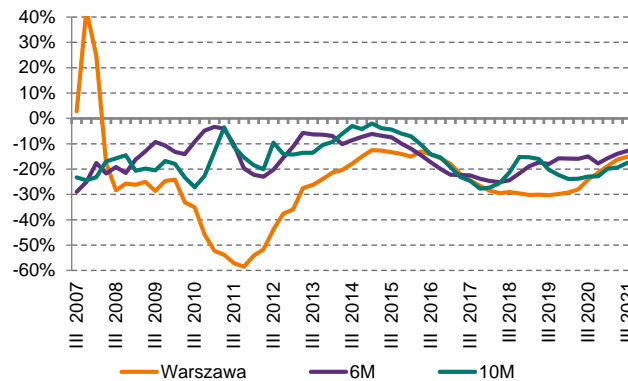


Note to Figure 58: Housing projects under construction=building permits for dwellings minus completed dwellings; dwellings under construction=dwellings whose construction has begun less completed dwellings; cumulative values of the last 4 quarters, divided by sales in a given period.

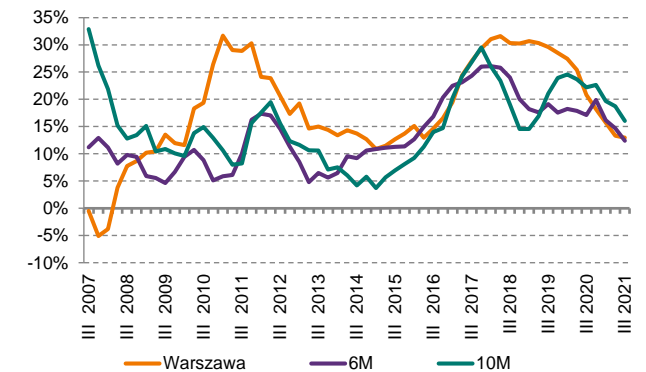
Source: NBP, Statistics Poland, JLL (former REAS), Sekocenbud

Source: NBP based on Statistics Poland, JLL (former REAS)

**Figure 59 Measure of adjustment of dwellings on offer to demand in terms of area ≤ 50 sq. m., PM in selected cities in Poland**



**Figure 60 Measure of adjustment of dwellings on offer to demand in terms of area > 50 sq. m., PM in selected cities in Poland**



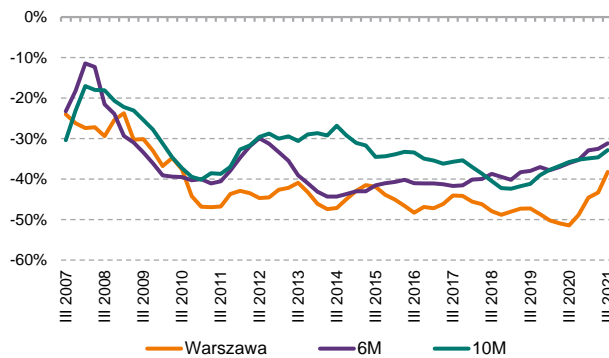
Note: Figure 59 presents, in percentage terms, a short-term mismatch in the primary market between supply (developers' housing offer) and the estimated demand (housing transactions) in terms of the dwelling's size, according to the data from the BaRN database. The mismatch is calculated as the share of dwellings with a usable floor area of up to 50 square meters offered for sale to the number of transactions involving dwellings with a total area of up to 50 square meters (the average figure for the last four quarters). The positive result (above the black line) indicates a surplus of dwellings of this particular size, whereas the negative result indicates a their shortage.. Figure 60 is parallel for the space above 50 sq.m. Figures 61-62 are parallel, but they concern the SM only.

Source: NBP

Source: NBP

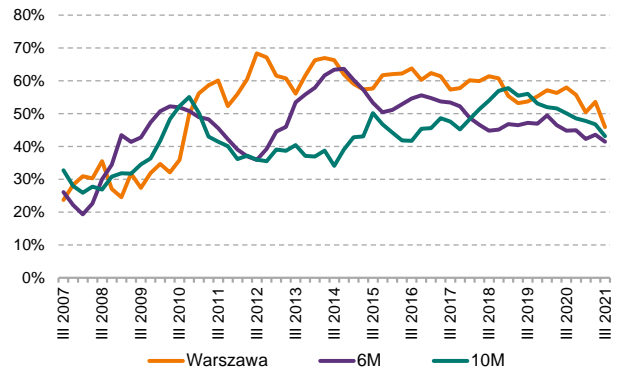


**Figure 61 Measure of adjustment of dwellings on offer to demand in terms of area  $\leq 50$  sq. m., SM in selected cities of Poland**



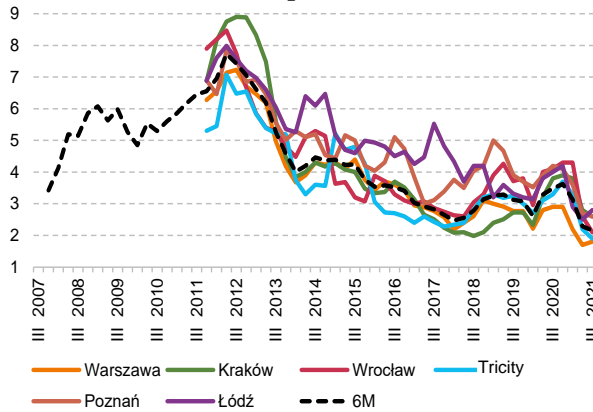
Source: NBP

**Figure 62 Measure of adjustment of dwellings on offer to demand in terms of area  $> 50$  sq. m., SM in selected cities of Poland**



Source: NBP

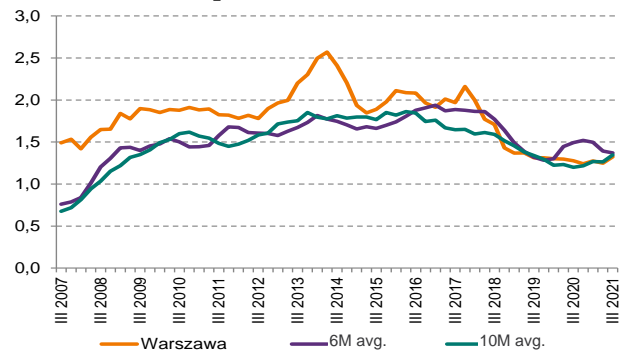
**Figure 63 Selling time of dwellings on offer in PM in selected cities (number of quarters)**



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

Source: NBP based on JLL (former REAS)

**Figure 64 Selling time of dwellings in SM in selected cities (number of quarters)**

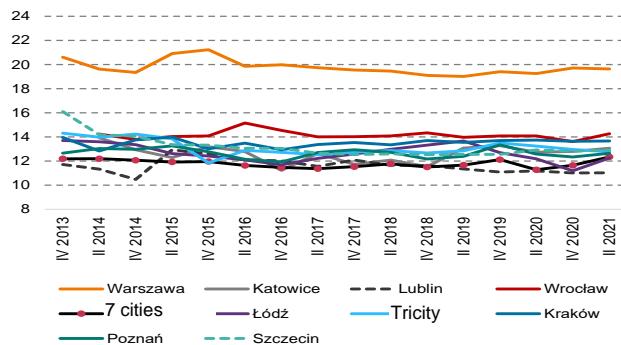


Note: real selling time, average of the last four quarters; data are not comparable with Figure 63. Selling time of housing in the secondary real estate market take into account only transactions concluded with a sales deal. The data are underestimated since they do not contain offers put on the market but not sold yet.

Source: NBP

## 6. Offer prices of commercial real estate and the estimated rate of return on investment

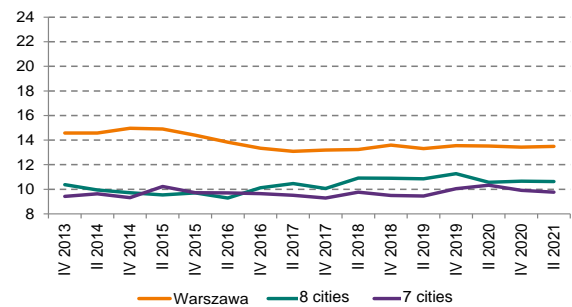
**Figure 65 Transaction rents for A class office space (average prices in EUR/sq.m./month)**



Notes: 7 cities include: Białystok, Bydgoszcz, Kielce, Olsztyn, Opole, Rzeszów, Zielona Góra.

Source: NBP

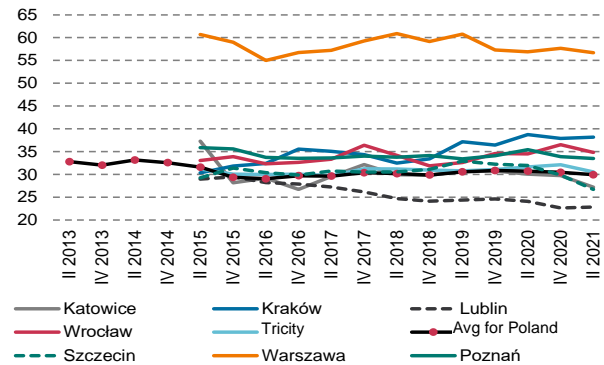
**Figure 66 Transaction rents for B class office space (average prices in EUR/sq.m./month)**



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

Source: NBP

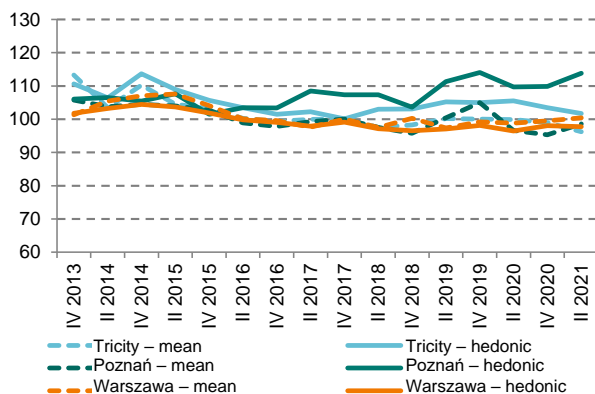
**Figure 67 Transaction rents for retail space in shopping centres (shopping malls) with an area of 100-500 sq. m. (EUR/sq.m./month)**



Source: NBP

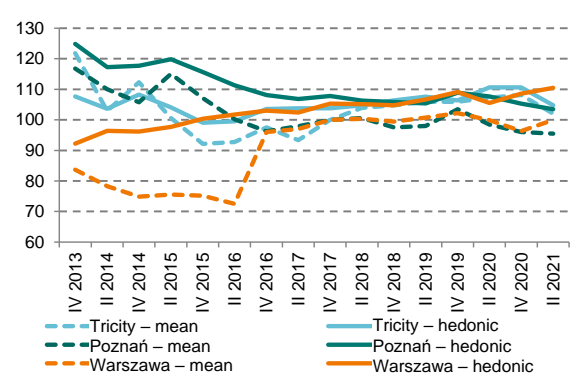
Note to Figure 67: as of the beginning of 2015 Q4, the number of records in the base, including respondents, has increased significantly, consequently changing the analysed sample.

**Figure 68 Rents for offices, average and hedonic (2017 Q4 = 100)**



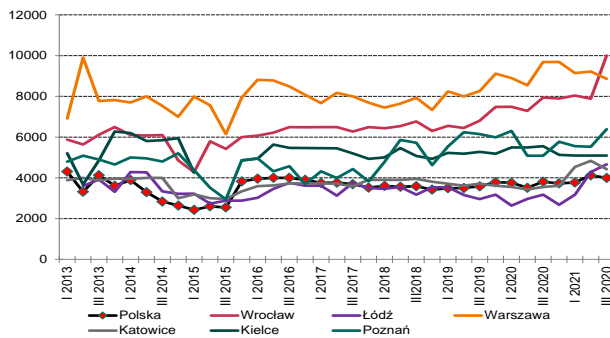
Source: NBP

**Figure 69 Rents for shopping centres, average and hedonic (2017 Q4 = 100)**



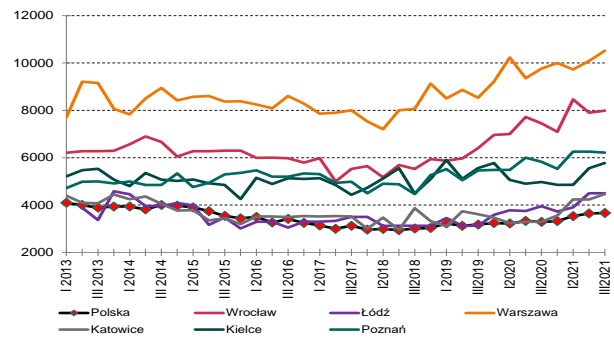
Source: NBP

**Figure 70 Median of asking selling price of small office premises in SM (PLN/sq.m.)**



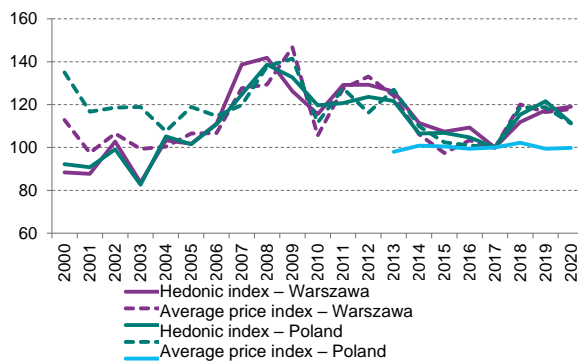
Source: PONT, NBP report

**Figure 71 Median of asking selling price of small retail premises in SM (PLN/sq.m.)**



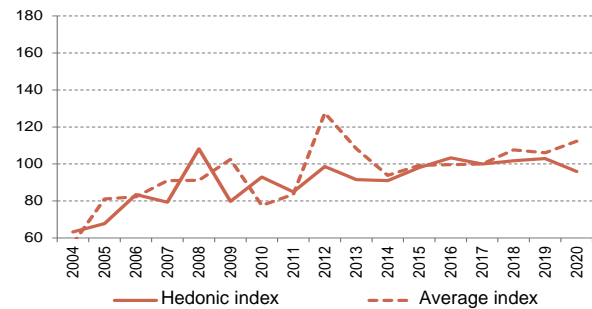
Source: PONT, NBP report

**Figure 72 Growth of average and hedonic prices of office real estate in Warsaw and the whole of Poland (2017=100) and the implied price index for Warsaw**



Note: The analysis comprises transaction prices and bank appraisals of commercial properties. The implied price was calculated by discounting the hedonic rent for Warsaw with a discount rate of 6%. Source: NBP, Comparables.pl, AMRON

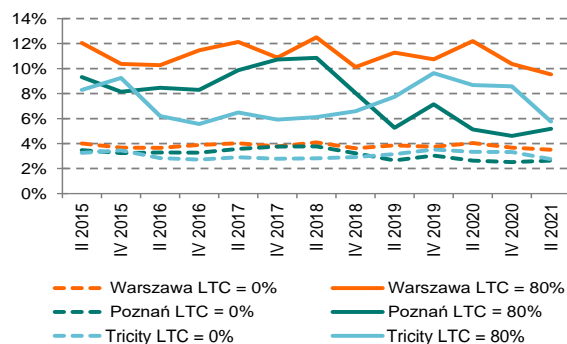
**Figure 73 Growth of average and hedonic prices of retail real estate in the whole of Poland (2017=100)**



Note: The analysis comprises transaction prices and bank appraisals of commercial properties.

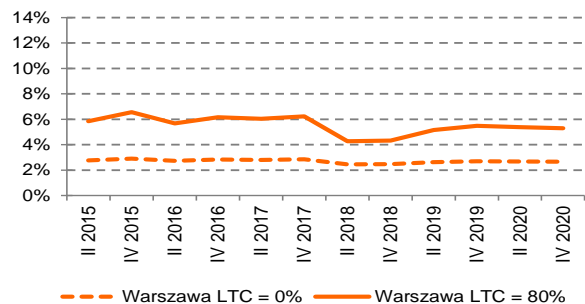
Source: NBP, Comparables.pl, AMRON

**Figure 74 Estimated rate of return on equity (ROE) on investment in the building and putting to commercial use of A class office building**



Note: A description of the ROE calculation method can be found under Tables 3 to 5. Differences in ROE between cities result from different levels of construction costs and different levels of effective rents, i.e. rents adjusted by the vacancy rate in a given market. Source: NBP, Sockenbud, NBP report.

**Figure 75 Estimated rate of return on equity (ROE) from investment in B class office space from the existing stock in Warsaw**



Note: A description of the ROE calculation method can be found under Table 6.

Source: NBP, Comparables.pl, AMRON, NBP report

**Table 3 Estimated rate of return on investment in a dwelling of 50 sq. m. in Warsaw**

Quarter	Transaction rent (PLN/sq. m.)	Transaction price PM and SM (PLN/sq. m.)	Calculated capitalisation rate	ROE (LTV = 0%)	ROE (LTV = 50%)	ROE (LTV = 80%)	Average market rates of 10-year Treasury bonds	Interest rate on new loans
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%	2,3%	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	51,0	8 638	7,1%	4,4%	4,5%	4,8%	3,2%	4,3%
IV 2018	51,1	9 013	6,8%	4,2%	4,0%	3,4%	3,1%	4,4%
II 2019	52,4	9 438	6,7%	4,1%	3,8%	3,2%	2,7%	4,3%
IV 2019	54,9	9 994	6,6%	4,0%	3,6%	2,3%	2,0%	4,4%
II 2020	49,2	10 213	5,8%	3,3%	3,0%	2,0%	1,4%	3,7%
IV 2020	48,9	10 805	5,4%	3,0%	3,1%	3,4%	1,3%	2,9%
II 2021	48,9	11 089	5,3%	2,9%	2,9%	2,9%	1,7%	2,9%

Assumptions: Transaction price per square metre of housing (50% from the primary market, increased by finishing costs - amounting to +PLN 500/sq.m. since 2013, +PLN 600/sq.m. since 2017 Q4, +PLN 700/sq.m. since 2018 Q2, +PLN 950/sq.m. since 2021 Q1) and 50% from the secondary market). Average transaction rent. PLN-denominated loan granted for 25 years, equal instalments, payable four times a year. Occupancy of 95%. Calculated capitalization rate includes depreciation costs (1.5%; two thorough renovations in the period of 100 years). Taxed with a flat-rate tax of 8.5%. ROE means net profit/equity employed. Calculations have been verified against those presented before.

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

**Table 4 Estimated rate of return on equity from investment in the building and commercial exploitation of A class office building in Warsaw**

Date	Average rent per sq.m of space in EUR - A class	Cost of constructed usable floor area of offices including land, per sq.m in EUR	ROE at LTC = 0%	ROE at LTC = 50%	ROE at LTC = 80%	Average market rates of 10-year Treasury bonds
2015 Q4	21.23	2774	3.7%	5.3%	10.4%	2.8%
IV 2016	19.96	2714	3.9%	5.8%	11.5%	3.3%
2017 Q4	19.53	2846	3.8%	5.5%	10.9%	3.4%
2018 Q4	18.95	2949	3.6%	5.2%	10.1%	3.1%
2019 Q2	18.93	3041	3.8%	5.7%	11.3%	2.7%
2019 Q4	19.34	3123	3.7%	5.5%	10.7%	2.0%
2020 Q2	19.15	3028	4.0%	6.1%	12.2%	1.4%
2020 Q4	19.71	3052	3.7%	5.3%	10.4%	1.3%
2021 Q2	19.63	3065	3.5%	5.0%	9.5%	1.3%

Assumptions: The costs of construction of the office building (Sekocenbud data) were increased by 15% of the developer's costs related to organisation of the investment and commercialisation of the building, as well as the cost of land estimated by experts (based on public information). Loan in euro granted for 25 years, payable four times a year in equal instalments. Depreciation of the building at 2.5%, standard for commercial real estate. On the income side, the effective rent has been taken into account, i.e. the average rent adjusted by the vacancy rate in a given market. The calculated capitalisation rate includes the depreciation cost of the building. CIT is included. ROE means net profit/equity contributed.

Source: NBP (rents and calculations), MF (rates of return on 10-year bonds), estimation of construction costs based on Sekocenbud data, BCO Bulletin of prices of construction facilities, part I - non-residential buildings, facility 1220-102.

**Table 5 Estimated rate of return on equity from investment in the building and commercial exploitation of A class office building in Poznań**

Date	Average rent per sq.m of space in EUR - A class	Cost of constructed usable floor area of offices including land, per sq.m in EUR	ROE at LTC = 0%	ROE at LTC = 50%	ROE at LTC = 80%	Average market yields on 10-year Treasury bonds
2015 Q4	12.8	1645.27	3.2%	4.5%	8.1%	2.8%
IV 2016	11.9	1593.50	3.3%	4.5%	8.3%	3.3%
2017 Q4	12.9	1731.58	3.7%	5.5%	10.7%	3.4%
2018 Q4	12.2	1825.06	3.2%	4.4%	8.0%	3.1%
2019 Q2	12.4	1928.46	2.7%	3.3%	5.3%	2.7%
2019 Q4	13.3	1984.00	3.0%	4.1%	7.1%	2.0%
2020 Q2	12.6	1940.29	2.6%	3.3%	5.1%	1.4%
2020 Q4	12.3	1951.75	2.5%	3.0%	4.6%	1.3%
2021 Q2	12.7	1975.34	2.6%	3.3%	5.2%	1.3%

Assumptions: cf. Table 3

Source: NBP (rents and calculations), MF (rates of return on 10-year bonds), estimation of construction costs based on the Sekocenbud data, BCO Bulletin of prices of construction facilities, part I - non-residential buildings, facility 1220-102.

**Table 6 Estimated rate of return on equity from investment in the building and commercial exploitation of A class office building in the Tri-City**

Assumptions: The costs of construction of the office building (Sekocenbud data) were increased by 15% of the developer's costs related to organisation of the investment and commercialisation of the building, as well as the cost of land estimated by experts (based on public information).

Date	Average rent per sq.m. of space in EUR - A class	Cost of constructed usable area of offices including land, per sq.m. in EUR	ROE at LTC = 0%	ROE at LTC = 50%	ROE at LTC = 80%	Average market yields on 10-year Treasury bonds
2015 Q4	12.7	1728.2	3.5%	4.9%	9.2%	2.8%
IV 2016	12.1	1696.7	2.7%	3.4%	5.6%	3.3%
2017 Q4	12.1	1778.2	2.8%	3.6%	5.9%	3.4%
2018 Q4	12.7	1829.6	2.9%	3.8%	6.6%	3.1%
2019 Q2	12.8	1924.9	3.2%	4.3%	7.7%	2.7%
2019 Q4	13.5	1972.2	3.5%	5.1%	9.6%	2.0%
2020 Q2	13.0	1910.9	3.3%	4.7%	8.7%	1.4%
2020 Q4	13.2	1935.5	3.3%	4.6%	8.6%	1.3%
2021 Q2	13.0	1997.4	2.8%	3.5%	5.8%	1.3%

Assumptions: cf. Table 3

Source: NBP (rents and calculations), MF (rates of return on 10-year bonds), estimation of construction costs based on Sekocenbud data, BCO Bulletin of prices of construction facilities, part I - non-residential buildings, facility 1220-102.

**Table 7 Estimated rate of return on equity from investment in the purchase of B class office building from the existing stock in Warsaw**

Date	Average rent per sq.m of space in EUR	Smoothed price per sq.m of space in EUR	Calculated capitalisation rate (yield)	ROE at LTC = 0%	ROE at LTC = 50%	ROE at LTC = 80%	Average market rates of 10-year Treasury bonds	Date
2014 Q2	13.8	2312	7.2%	2.7%	3.4%	5.4%	3.4%	2014 Q2
2014 Q4	14.3	2289	7.5%	2.9%	3.8%	6.5%	2.6%	2014 Q4
2015 Q2	14.1	2319	7.3%	2.8%	3.5%	5.9%	2.8%	2015 Q2
2015 Q4	13.9	2222	7.5%	2.9%	3.8%	6.6%	2.8%	2015 Q4
2016 Q2	13.3	2196	7.3%	2.7%	3.5%	5.7%	3.0%	2016 Q2
2016 Q4	13.1	2114	7.5%	2.8%	3.7%	6.2%	3.3%	2016 Q4
2017 Q2	13.2	2139	7.4%	2.8%	3.6%	6.0%	3.3%	2017 Q2
2017 Q4	13.2	2119	7.5%	2.8%	3.7%	6.2%	3.4%	2017 Q4
2018 Q2	13.0	2272	6.8%	2.5%	2.9%	4.3%	3.2%	2018 Q2
2018 Q4	13.1	2286	6.9%	2.5%	2.9%	4.3%	3.1%	2018 Q4
2019 Q2	13.1	2199	7.1%	2.6%	3.3%	5.2%	2.7%	2019 Q2
2019 Q4	13.1	2181	7.2%	2.7%	3.4%	5.5%	2.0%	2019 Q4
2020 Q2	13.1	2186	7.2%	2.7%	3.4%	5.4%	1.4%	2020 Q2
2020 Q4	13.2	2210	7.2%	2.7%	3.3%	5.3%	1.3%	2020 Q4

Assumptions: The analysis takes into account contractual rents for B class office space, and transaction prices and appraisals of B class office real estate. As there are relatively few transaction prices and appraisals of class B office real estate in a given six-month period, a moving average has been applied, calculated on the basis of the price in a given six-month period and the previous and the next half-year period, with equal weights. Loan in euro granted for 25 years has been assumed, payable four times a year in equal instalments. Building depreciation of 2.5%, standard for commercial real estate. It was assumed that the cost of land in the cost of investment is 20%. The calculated capitalisation rate includes the depreciation cost of the building. CIT is included. ROE means net profit/equity contributed.

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

**Table 8 Average prices per square metre of housing in the primary market in Gdańsk**

specification	III Q 2020		IV Q 2020		I Q 2021		II Q 2021		III Q 2021	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	9 621	9 024	9 691	9 400	10 068	9 795	9 714	10 257	10 310	10 043
growth (q-o-q)	98,4	102,5	100,7	104,2	103,9	104,2	96,5	104,7	106,1	97,9
growth (y-o-y)	101,6	105,7	98,8	109,5	101,7	112,1	99,3	116,5	107,2	111,3
dwelling price range	3 533	1 189	3 946	1 407	4 047	1 603	4 194	2 199	4 079	1 635
<=4 000 PLN/sq.m	12	0	7	1	3	4	1	0	0	1
( 4 001; 6 000] PLN/sq.m	42	51	15	31	17	20	11	8	16	3
( 6 001; 8 000] PLN/sq.m	1 064	498	1 281	501	872	436	1 161	547	767	378
(8 001; 10 000] PLN/sq.m	1 057	253	1 099	320	1 562	478	1 721	650	1 659	634
>10 001 PLN/sq.m	1 358	387	1 544	554	1 593	665	1 300	994	1 637	619
dwelling space range	3 533	1 189	3 946	1 407	4 047	1 603	4 194	2 199	4 079	1 635
<= 40 sq.m	507	263	515	304	475	334	799	526	807	328
(40,1; 60] sq.m	1561	600	1776	630	1861	731	1820	1008	1730	755
(60,1; 80] sq.m	1000	243	1175	334	1222	373	1180	461	1138	421
> 80,1 sq.m	465	83	480	139	489	165	395	204	404	131
average price of 1 sq.m. of dwelling	9 621	9 024	9 691	9 400	10 068	9 795	9 714	10 257	10 310	10 043
<=4 000 sq.m	10156	8976	10357	9573	11168	10133	10424	11164	10622	10356
(40,1; 60] sq.m	9486	9072	9492	9282	9943	9859	9446	9905	10183	9710
(60,1; 80] sq.m	9189	8333	9246	9015	9555	9159	9372	9625	9953	10166
> 80,1 sq.m	10421	10862	10801	10484	10754	10264	10533	11083	11230	10786
average offer price deviation	6,6%	x	3,1%	x	2,8%	x	-5,3%	x	2,7%	x
<= 40 sq.m	13,2%	x	8,2%	x	10,2%	x	-6,6%	x	2,6%	x
(40,1; 60] sq.m	4,6%	x	2,3%	x	0,9%	x	-4,6%	x	4,9%	x
(60,1; 80] sq.m	10,3%	x	2,6%	x	4,3%	x	-2,6%	x	-2,1%	x
> 80,1 sq.m	-4,1%	x	3,0%	x	4,8%	x	-5,0%	x	4,1%	x

Source: NBP

**Table 9 Average prices per square metre of housing in the secondary market in Gdańsk**

specification	III Q 2020		IV Q 2020		I Q 2021		II Q 2021		III Q 2021	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	10 264	8 942	10 523	9 039	10 529	9 288	10 819	9 174	11 156	9 566
growth (q-o-q)	99,3	105,2	102,5	101,1	100,1	102,8	102,8	98,8	103,1	104,3
growth (y-o-y)	103,1	115,1	106,4	108,1	99,6	110,7	104,7	107,9	108,7	107,0
dwelling price range	1 052	1 148	825	1 110	574	1 035	2 223	909	1 776	458
<=4 000 PLN/sq.m	2	6	0	2	0	1	0	0	3	1
( 4 001; 6 000] PLN/sq.m	45	69	26	42	11	41	18	45	20	7
( 6 001; 8 000] PLN/sq.m	211	376	110	365	81	296	256	263	186	102
(8 001; 10 000] PLN/sq.m	324	398	298	400	217	379	828	345	575	198
>10 001 PLN/sq.m	470	299	391	301	265	318	1 121	256	992	150
dwelling space range	1 052	1 148	825	1 110	574	1 035	2 223	909	1 776	458
<= 40 sq.m	143	276	123	267	88	240	375	244	284	112
(40,1; 60] sq.m	398	549	328	525	214	495	931	396	696	214
(60,1; 80] sq.m	319	242	220	244	181	229	619	207	521	108
> 80,1 sq.m	192	81	154	74	91	71	298	62	275	24
average price of 1 sq.m. of dwelling	10 264	8 942	10 523	9 039	10 529	9 288	10 819	9 174	11 156	9 566
<=4 000 sq.m	12019	9799	11857	9973	11865	9894	12001	10087	12535	10221
(40,1; 60] sq.m	10530	8636	10819	8902	10797	9252	10840	9056	11060	9598
(60,1; 80] sq.m	9482	8565	9731	8346	9828	8810	10357	8665	10850	9002
> 80,1 sq.m	9706	9221	9957	8925	10001	9040	10226	8040	10557	8767
average offer price deviation	14,8%	x	16,4%	x	13,4%	x	17,9%	x	16,6%	x
<= 40 sq.m	22,7%	x	18,9%	x	19,9%	x	19,0%	x	22,6%	x
(40,1; 60] sq.m	21,9%	x	21,5%	x	16,7%	x	19,7%	x	15,2%	x
(60,1; 80] sq.m	10,7%	x	16,6%	x	11,6%	x	19,5%	x	20,5%	x
> 80,1 sq.m	5,3%	x	11,6%	x	10,6%	x	27,2%	x	20,4%	x

Source: NBP

**Table 10 Average prices per square metre of housing in the primary market in Kraków**

specification	III Q 2020		IV Q 2020		I Q 2021		II Q 2021		III Q 2021	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	9 466	8 893	9 615	8 735	9 741	8 896	10 140	9 403	10 605	9 736
growth (q-o-q)	97,0	103,3	101,6	98,2	101,3	101,8	104,1	105,7	104,6	103,5
growth (y-o-y)	118,1	114,2	112,7	106,0	105,7	107,1	103,9	109,2	112,0	109,5
dwelling price range	7 328	1 378	6 928	1 714	6 671	1 671	6 491	2 607	5 802	1 732
<=4 000 PLN/sq.m	0	0	0	0	0	0	0	0	0	0
( 4 001; 6 000] PLN/sq.m	95	37	63	44	78	45	27	47	17	21
( 6 001; 8 000] PLN/sq.m	1 658	437	1 436	542	1 212	471	678	550	319	311
(8 001; 10 000] PLN/sq.m	3 087	555	2 941	800	2 818	782	2 815	1 218	2 129	790
>10 001 PLN/sq.m	2 488	349	2 488	328	2 563	373	2 971	792	3 337	610
dwelling space range	7 328	1 378	6 928	1 714	6 671	1 671	6 491	2 607	5 802	1 732
<= 40 sq.m	1484	388	1478	369	1493	380	1493	613	1346	380
(40,1; 60] sq.m	3334	659	3021	895	2874	751	2776	1171	2501	791
(60,1; 80] sq.m	1946	264	1913	353	1766	454	1739	633	1562	409
> 80,1 sq.m	564	67	516	97	538	86	483	190	393	152
average price of 1 sq.m. of dwelling	9 466	8 893	9 615	8 735	9 741	8 896	10 140	9 403	10 605	9 736
<=4 000 sq.m	10549	9546	10703	9151	10871	9597	10819	10251	11419	10494
(40,1; 60] sq.m	9302	8634	9477	8694	9621	8788	10141	9286	10608	9776
(60,1; 80] sq.m	8873	8465	8963	8313	9032	8377	9570	8808	9995	8980
> 80,1 sq.m	9630	9348	9720	9071	9578	9479	10078	9366	10215	9673
average offer price deviation	6,4%	x	10,1%	x	9,5%	x	7,8%	x	8,9%	x
<= 40 sq.m	10,5%	x	17,0%	x	13,3%	x	5,5%	x	8,8%	x
(40,1; 60] sq.m	7,7%	x	9,0%	x	9,5%	x	9,2%	x	8,5%	x
(60,1; 80] sq.m	4,8%	x	7,8%	x	7,8%	x	8,7%	x	11,3%	x
> 80,1 sq.m	3,0%	x	7,2%	x	1,0%	x	7,6%	x	5,6%	x

Source: NBP

**Table 11 Average prices per square metre of housing in the secondary market in Kraków**

specification	III Q 2020		IV Q 2020		I Q 2021		II Q 2021		III Q 2021	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	9 542	8 100	9 820	8 118	9 899	8 366	10 231	9 103	10 614	9 372
growth (q-o-q)	98,7	100,5	102,9	100,2	100,8	103,1	103,4	108,8	103,7	103,0
growth (y-o-y)	107,1	113,5	107,8	109,5	104,0	107,7	105,8	112,9	111,2	115,7
dwelling price range	470	286	614	243	728	302	697	505	865	510
<=4 000 PLN/sq.m	0	0	0	0	0	0	0	0	0	0
( 4 001; 6 000] PLN/sq.m	2	16	2	13	3	18	1	14	4	8
( 6 001; 8 000] PLN/sq.m	109	130	130	109	128	107	81	138	77	120
(8 001; 10 000] PLN/sq.m	205	110	259	99	324	137	304	213	332	233
>10 001 PLN/sq.m	154	30	223	22	273	40	311	140	452	149
dwelling space range	470	286	614	243	728	302	697	505	865	510
<= 40 sq.m	124	126	164	103	186	126	159	208	217	193
(40,1; 60] sq.m	227	124	284	106	331	132	332	198	380	227
(60,1; 80] sq.m	91	31	117	31	149	40	155	79	192	67
> 80,1 sq.m	28	5	49	3	62	4	51	20	76	23
average price of 1 sq.m. of dwelling	9 542	8 100	9 820	8 118	9 899	8 366	10 231	9 103	10 614	9 372
<=4 000 sq.m	10359	8614	10939	8455	10606	8789	11182	9464	11554	9792
(40,1; 60] sq.m	9228	7884	9500	7973	9753	8210	9965	8756	10200	9147
(60,1; 80] sq.m	8858	7100	9080	7409	9274	7546	9678	8810	10346	9119
> 80,1 sq.m	10700	6668	9693	9017	10062	8405	10681	9940	10679	8809
average offer price deviation	17,8%	x	21,0%	x	18,3%	x	12,4%	x	13,3%	x
<= 40 sq.m	20,3%	x	29,4%	x	20,7%	x	18,2%	x	18,0%	x
(40,1; 60] sq.m	17,0%	x	19,2%	x	18,8%	x	13,8%	x	11,5%	x
(60,1; 80] sq.m	24,8%	x	22,6%	x	22,9%	x	9,8%	x	13,5%	x
> 80,1 sq.m	60,5%	x	7,5%	x	19,7%	x	7,5%	x	21,2%	x

Source: NBP



**Table 12 Average prices per square metre of housing in the primary market in Łódź**

specification	III 2020		IV 2020		I 2021		II 2021		III 2021	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	6 734	6 406	6 761	6 624	6 854	6 500	7 409	6 676	8 006	7 451
growth (q-o-q)	103,4	105,4	100,4	103,4	101,4	98,1	108,1	102,7	108,1	111,6
growth (y-o-y)	111,7	108,9	107,8	109,9	103,7	104,0	113,8	109,8	118,9	116,3
dwelling price range	1 390	287	1 431	437	1 463	501	1 642	624	1 693	458
<=4 000 PLN/sq.m	0	0	0	1	0	0	0	0	0	0
(4 001; 6 000] PLN/sq.m	251	93	284	96	212	126	74	126	57	22
(6 001; 8 000] PLN/sq.m	1 051	183	1 032	316	1 111	364	1 147	473	754	283
(8 001; 10 000] PLN/sq.m	88	11	115	24	133	11	415	25	840	148
> 10 000 PLN/sq.m	0	0	0	0	7	0	6	0	42	5
dwelling space range	1 390	287	1 431	437	1 463	501	1 642	624	1 693	458
<= 40 sq.m	275	52	307	120	280	91	374	106	503	152
(40,1; 60] sq.m	655	145	646	221	724	267	742	323	623	204
(60,1; 80] sq.m	350	75	370	80	345	112	410	143	475	70
> 80,1 sq.m	110	15	108	16	114	31	116	52	92	32
average price of 1 sq.m. of dwelling	6 734	6 406	6 761	6 624	6 854	6 500	7 409	6 676	8 006	7 451
<=4 000 sq.m	7386	7327	7547	7220	7554	7223	8022	7035	8873	8023
(40,1; 60] sq.m	6701	6405	6691	6517	6835	6464	7350	6764	7757	7293
(60,1; 80] sq.m	6312	5782	6286	6073	6394	6027	7039	6339	7519	6866
> 80,1 sq.m	6637	6346	6566	6388	6648	6399	7110	6322	7457	7016
average offer price deviation	5,1%	x	2,1%	x	5,4%	x	11,0%	x	7,4%	x
<= 40 sq.m	0,8%	x	4,5%	x	4,6%	x	14,0%	x	10,6%	x
(40,1; 60] sq.m	4,6%	x	2,7%	x	5,7%	x	8,7%	x	6,4%	x
(60,1; 80] sq.m	9,2%	x	3,5%	x	6,1%	x	11,0%	x	9,5%	x
> 80,1 sq.m	4,6%	x	2,8%	x	3,9%	x	12,5%	x	6,3%	x

Source: NBP

**Table 13 Average prices per square metre of housing in the secondary market in Łódź**

specification	III Q 2020		IV Q 2020		I Q 2021		II Q 2021		III Q 2021	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	5 464	5 613	5 721	5 522	5 905	5 433	6 012	5 800	6 683	6 075
growth (q-o-q)	100,6	107,0	104,7	98,4	103,2	98,4	101,8	106,7	111,2	104,7
growth (y-o-y)	105,0	119,2	106,1	113,4	108,1	108,4	110,7	110,6	122,3	108,2
dwelling price range	264	50	342	63	740	75	318	81	1 226	90
<= 4 000 PLN/sq.m	24	2	25	4	43	7	19	5	14	2
(4 001; 6 000] PLN/sq.m	171	31	191	38	400	49	150	44	417	43
(6 001; 8 000] PLN/sq.m	61	17	110	21	254	17	129	29	590	44
(8 001; 10 000] PLN/sq.m	8	0	16	0	40	2	18	3	172	1
> 10 001 PLN/sq.m	0	0	0	0	3	0	2	0	33	0
dwelling space range	264	50	342	63	740	75	318	81	1 226	90
<= 40 sq.m	44	15	73	24	148	22	51	27	324	30
(40,1; 60] sq.m	106	26	128	29	292	36	130	32	523	45
(60,1; 80] sq.m	54	5	81	5	167	9	78	18	217	9
> 80,1 sq.m	60	4	60	5	133	8	59	4	162	6
average price of 1 sq.m. of dwelling	5 464	5 613	5 721	5 522	5 905	5 433	6 012	5 800	6 683	6 075
<=4 000 sq.m	5 911	6 280	6 290	6 097	6 478	6 097	6 697	6 215	7 089	6 593
(40,1; 60] sq.m	5 644	5 402	5 804	5 366	5 903	5 357	6 110	5 903	6 625	5 971
(60,1; 80] sq.m	5 312	5 473	5 639	4 808	5 718	5 143	5 755	5 233	6 530	5 304
> 80,1 sq.m	4 953	4 658	4 962	4 378	5 504	4 278	5 543	4 730	6 264	5 416
average offer price deviation	0	x	0	x	0	x	0	x	0	x
<= 40 sq.m	-5,9%	x	3,2%	x	6,2%	x	7,7%	x	7,5%	x
(40,1; 60] sq.m	4,5%	x	8,2%	x	10,2%	x	3,5%	x	10,9%	x
(60,1; 80] sq.m	-2,9%	x	17,3%	x	11,2%	x	10,0%	x	23,1%	x
> 80,1 sq.m	6,3%	x	13,3%	x	28,7%	x	17,2%	x	15,7%	x

Source: NBP

**Table 14 Average prices per square metre of housing in the primary market in Poznań**

specification	III Q 2020		IV Q 2020		I Q 2021		II Q 2021		III Q 2021	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	7 922	7 459	7 980	7 636	7 990	7 960	8 256	7 928	8 656	8 022
growth (q-o-q)	102,0	100,4	100,7	102,4	100,1	104,2	103,3	99,6	104,9	101,2
growth (y-o-y)	107,2	105,0	107,9	103,3	105,9	107,2	106,3	106,7	109,3	107,6
dwelling price range	6 086	1 128	5 284	1 485	6 225	1 569	5 336	2 291	5 206	1 466
<=4 000 PLN/sq.m	0	0	0	0	0	0	0	0	0	0
( 4 001; 6 000] PLN/sq.m	211	124	122	94	75	70	22	42	20	7
( 6 001; 8 000] PLN/sq.m	3 498	719	3 168	903	3 691	870	2 612	1 312	1 976	896
(8 001; 10 000] PLN/sq.m	2 047	255	1 701	426	2 193	545	2 354	854	2 596	492
>10 001 PLN/sq.m	330	30	293	62	266	84	348	83	614	71
dwelling space range	6 086	1 128	5 284	1 485	6 225	1 569	5 336	2 291	5 206	1 466
<= 40 sq.m	1071	299	895	363	1190	363	997	670	1042	329
(40,1; 60] sq.m	2549	565	2157	688	2509	718	2246	963	2194	621
(60,1; 80] sq.m	1933	204	1747	342	1987	364	1615	514	1552	388
> 80,1 sq.m	533	60	485	92	539	124	478	144	418	128
average price of 1 sq.m. of dwelling	7 922	7 459	7 980	7 636	7 990	7 960	8 256	7 928	8 656	8 022
<=4 000 sq.m	8 660	7 586	8 768	7 869	8 558	8 675	9 079	8 383	9 428	8 529
(40,1; 60] sq.m	7 901	7 336	7 935	7 624	8 064	7 844	8 313	7 933	8 721	8 092
(60,1; 80] sq.m	7 495	7 364	7 569	7 361	7 531	7 570	7 686	7 353	8 025	7 559
> 80,1 sq.m	8 088	8 298	8 204	7 840	8 078	7 676	8 198	7 835	8 738	7 781
average offer price deviation	6,2%	x	4,5%	x	0,4%	x	4,1%	x	7,9%	x
<= 40 sq.m	14,2%	x	11,4%	x	-1,4%	x	8,3%	x	10,5%	x
(40,1; 60] sq.m	7,7%	x	4,1%	x	2,8%	x	4,8%	x	7,8%	x
(60,1; 80] sq.m	1,8%	x	2,8%	x	-0,5%	x	4,5%	x	6,2%	x
> 80,1 sq.m	0	x	0	x	0	x	0	x	0	x

Source: NBP

**Table 15 Average prices per square metre of housing in the secondary market in Poznań**

specification	III Q 2020		IV Q 2020		I Q 2021		II Q 2021		III Q 2021	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	7 851	7 092	7 808	7 145	7 943	7 101	8 137	6 980	8 322	7 091
growth (q-o-q)	100,4	101,1	99,5	100,7	101,7	99,4	102,4	98,3	102,3	101,6
growth (y-o-y)	109,2	110,1	102,2	107,2	101,7	103,9	104,0	99,5	106,0	100,0
dwelling price range	1 312	841	860	859	923	544	865	467	935	468
<=4 000 PLN/sq.m	2	15	0	11	0	6	1	2	0	5
( 4 001; 6 000] PLN/sq.m	115	169	80	154	81	114	45	85	43	65
( 6 001; 8 000] PLN/sq.m	686	457	450	498	473	299	423	306	417	314
(8 001; 10 000] PLN/sq.m	397	163	256	162	275	105	302	69	347	80
>10 001 PLN/sq.m	112	37	74	34	94	20	94	5	128	4
dwelling space range	1 312	841	860	859	923	544	865	467	935	468
<= 40 sq.m	281	281	194	271	196	171	186	131	173	141
(40,1; 60] sq.m	598	377	372	405	373	255	385	227	420	212
(60,1; 80] sq.m	282	131	209	132	265	88	221	90	262	103
> 80,1 sq.m	151	52	85	51	89	30	73	19	80	12
average price of 1 sq.m. of dwelling	7 851	7 092	7 808	7 145	7 943	7 101	8 137	6 980	8 322	7 091
<=4 000 sq.m	8 721	7 793	8 736	7 742	8 901	7 821	9 063	7 558	9 363	7 820
(40,1; 60] sq.m	7 870	6 981	7 806	7 089	8 014	7 044	8 224	6 950	8 369	7 008
(60,1; 80] sq.m	7 235	6 206	7 258	6 514	7 369	6 250	7 316	6 377	7 716	6 367
> 80,1 sq.m	7 308	6 347	7 053	6 054	7 242	5 974	7 803	6 218	7 806	6 192
average offer price deviation	10,7%	x	9,3%	x	11,9%	x	16,6%	x	17,4%	x
<= 40 sq.m	11,9%	x	12,8%	x	13,8%	x	19,9%	x	19,7%	x
(40,1; 60] sq.m	12,7%	x	10,1%	x	13,8%	x	18,3%	x	19,4%	x
(60,1; 80] sq.m	16,6%	x	11,4%	x	17,9%	x	14,7%	x	21,2%	x
> 80,1 sq.m	15,1%	x	16,5%	x	21,2%	x	25,5%	x	26,1%	x

Source: NBP

**Table 16 Average prices per square metre of housing in the primary market in Warsaw**

specification	III Q 2020		IV Q 2020		I Q 2021		II Q 2021		III Q 2021	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	10 735	10 183	10 750	10 240	10 969	10 666	11 359	10 671	11 406	10 992
growth (q-o-q)	100,2	107,9	100,1	100,6	102,0	104,2	103,6	100,1	100,4	103,0
growth (y-o-y)	108,1	110,8	104,6	108,1	103,4	108,6	106,0	113,1	106,2	107,9
dwelling price range	12 735	3 154	11 757	3 917	9 780	4 951	8 429	4 699	9 042	3 757
<=4 000 PLN/sq.m	0	0	0	0	0	0	0	0	0	0
( 4 001; 6 000] PLN/sq.m	26	6	13	8	9	1	6	3	11	19
( 6 001; 8 000] PLN/sq.m	1 889	609	1 608	609	889	514	785	419	573	173
(8 001; 10 000] PLN/sq.m	4 053	1 111	3 747	1 568	3 195	1 698	2 163	1 656	2 559	1 236
>10 001 PLN/sq.m	6 767	1 428	6 389	1 732	5 687	2 738	5 475	2 621	5 899	2 329
dwelling space range	12 735	3 154	11 757	3 917	9 780	4 951	8 429	4 699	9 042	3 757
<= 40 sq.m	2 084	636	1 801	864	1 524	1 154	1 359	851	1 771	894
(40,1; 60] sq.m	5 210	1 324	4 858	1 645	4 087	2 062	3 549	2 101	3 803	1 518
(60,1; 80] sq.m	3 840	855	3 588	1 001	2 864	1 286	2 397	1 239	2 465	965
> 80,1 sq.m	1 601	339	1 510	407	1 305	449	1 124	508	1 003	380
average price of 1 sq.m. of dwelling	10 735	10 183	10 750	10 240	10 969	10 666	11 359	10 671	11 406	10 992
<=4 000 sq.m	12 327	10 851	12 346	10 722	12 267	11 432	12 819	11 286	12 548	11 405
(40,1; 60] sq.m	10 635	10 097	10 603	10 099	10 845	10 623	11 212	10 738	11 241	11 007
(60,1; 80] sq.m	9 774	9 529	9 919	9 424	10 269	9 928	10 608	9 989	10 664	10 505
> 80,1 sq.m	11 297	10 912	11 299	11 789	11 380	11 010	11 663	11 031	11 834	11 196
average offer price deviation	5,4%	x	5,0%	x	2,8%	x	6,4%	x	3,8%	x
<= 40 sq.m	13,6%	x	15,1%	x	7,3%	x	13,6%	x	10,0%	x
(40,1; 60] sq.m	5,3%	x	5,0%	x	2,1%	x	4,4%	x	2,1%	x
(60,1; 80] sq.m	2,6%	x	5,3%	x	3,4%	x	6,2%	x	1,5%	x
> 80,1 sq.m	3,5%	x	-4,2%	x	3,4%	x	5,7%	x	5,7%	x

Source: NBP

**Table 17 Average prices per square metre of housing in the secondary market in Warsaw**

specification	III Q 2020		IV Q 2020		I Q 2021		II Q 2021		III Q 2021	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	11 713	10 470	11 893	10 671	12 217	10 838	12 473	10 576	12 950	10 905
growth (q-o-q)	101,7	101,8	101,5	101,9	102,7	101,6	102,1	97,6	103,8	103,1
growth (y-o-y)	108,3	110,7	106,3	108,8	104,8	108,3	108,3	102,8	110,6	104,2
dwelling price range	2 015	2 841	2 640	3 715	2 186	3 261	2 373	1 500	2 409	1 338
<=4 000 PLN/sq.m	0	0	0	0	0	0	0	0	0	0
( 4 001; 6 000] PLN/sq.m	8	6	12	8	3	3	3	3	1	1
( 6 001; 8 000] PLN/sq.m	169	360	172	409	115	342	79	141	63	91
(8 001; 10 000] PLN/sq.m	528	960	657	1 236	497	1 025	490	547	388	456
>10 001 PLN/sq.m	1 310	1 515	1 799	2 062	1 571	1 891	1 801	809	1 957	790
dwelling space range	2 158	2 841	2 640	3 715	2 186	3 261	2 373	1 500	2 409	1 338
<= 40 sq.m	405	901	425	1 125	357	928	432	459	480	406
(40,1; 60] sq.m	681	1 194	950	1 641	795	1 427	893	677	871	588
(60,1; 80] sq.m	514	462	651	629	538	561	554	249	576	228
> 80,1 sq.m	558	284	614	320	496	345	494	115	482	116
average price of 1 sq.m. of dwelling	11 806	10 470	11 893	10 671	12 217	10 838	12 473	10 576	12 950	10 905
<=4 000 sq.m	13 114	10 971	13 250	11 136	13 706	11 278	13 961	11 217	14 433	11 778
(40,1; 60] sq.m	11 529	10 123	11 610	10 305	11 857	10 472	12 012	10 302	12 483	10 435
(60,1; 80] sq.m	11 350	10 119	11 292	10 338	11 387	10 496	11 698	9 984	12 156	10 172
> 80,1 sq.m	11 614	10 911	12 028	11 573	12 622	11 731	12 876	10 906	13 263	11 667
average offer price deviation	11,9%	x	11,4%	x	12,7%	x	17,9%	x	18,8%	x
<= 40 sq.m	19,5%	x	19,0%	x	21,5%	x	24,5%	x	22,5%	x
(40,1; 60] sq.m	13,9%	x	12,7%	x	13,2%	x	16,6%	x	19,6%	x
(60,1; 80] sq.m	12,2%	x	9,2%	x	8,5%	x	17,2%	x	19,5%	x
> 80,1 sq.m	6,4%	x	3,9%	x	7,6%	x	18,1%	x	13,7%	x

Source: NBP

**Table 18 Average prices per square metre of housing in the primary market in Wrocław**

specification	III Q 2020		IV Q 2020		I Q 2021		II Q 2021		III Q 2021	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	8 670	8 109	8 630	8 233	9 062	8 423	9 387	8 578	9 965	8 891
growth (q-o-q)	100,2	100,9	99,5	101,5	105,0	102,3	103,6	101,8	106,2	103,7
growth (y-o-y)	109,6	105,8	108,2	107,8	106,8	100,8	108,5	106,7	114,9	109,6
dwelling price range	6 092	1 487	6 411	1 362	5 936	1 690	4 827	2 030	4 441	1 618
<=4 000 PLN/sq.m	0	1	0	0	0	5	0	0	0	0
( 4 001; 6 000] PLN/sq.m	375	106	267	80	143	106	27	113	8	21
( 6 001; 8 000] PLN/sq.m	2 180	708	2 478	623	1 996	721	1 347	743	929	550
(8 001; 10 000] PLN/sq.m	2 282	470	2 343	437	2 236	528	1 879	775	1 581	685
>10 001 PLN/sq.m	1 255	202	1 323	222	1 561	330	1 574	399	1 923	362
dwelling space range	6 092	1 487	6 411	1 362	5 936	1 690	4 827	2 030	4 441	1 618
<= 40 sq.m	1333	380	1248	323	1155	362	959	397	797	356
(40,1; 60] sq.m	2871	669	3085	648	2777	837	2244	982	2035	767
(60,1; 80] sq.m	1448	357	1630	295	1540	380	1241	511	1242	371
> 80,1 sq.m	440	81	448	96	464	111	383	140	367	124
average price of 1 sq.m. of dwelling	8 670	8 109	8 630	8 233	9 062	8 423	9 387	8 578	9 965	8 891
<=4 000 sq.m	9983	8952	9691	9389	10138	9748	10207	9587	11185	9398
(40,1; 60] sq.m	8496	7763	8562	7931	8926	8188	9340	8515	9840	8841
(60,1; 80] sq.m	7774	7748	7862	7626	8385	7651	8794	7819	9322	8328
> 80,1 sq.m	8781	8607	8946	8244	9446	8518	9536	8926	10182	9426
average offer price deviation	6,9%	x	4,8%	x	7,6%	x	9,4%	x	12,1%	x
<= 40 sq.m	11,5%	x	3,2%	x	4,0%	x	6,5%	x	19,0%	x
(40,1; 60] sq.m	9,4%	x	7,9%	x	9,0%	x	9,7%	x	11,3%	x
(60,1; 80] sq.m	0,3%	x	3,1%	x	9,6%	x	12,5%	x	11,9%	x
> 80,1 sq.m	2,0%	x	8,5%	x	10,9%	x	6,8%	x	8,0%	x

Source: NBP

**Table 19 Average prices per square metre of housing in the secondary market in Wrocław**

specification	III Q 2020		IV Q 2020		I Q 2021		II Q 2021		III Q 2021	
	offer	trans.	offer	trans.	offer	trans.	offer	trans.	offer	trans.
average price (PLN/sq.m.)	8 303	7 301	8 597	7 973	8 715	8 057	8 982	8 510	9 160	8 563
growth (q-o-q)	103,5	97,4	103,5	109,2	101,4	101,0	103,1	105,6	102,0	100,6
growth (y-o-y)	109,7	106,5	111,4	109,0	106,8	110,1	111,9	113,5	110,3	117,3
dwelling price range	2 252	139	1 920	449	2 038	421	2 623	796	2 071	827
<=4 000 PLN/sq.m	0	3	1	2	1	4	2	1	0	3
( 4 001; 6 000] PLN/sq.m	103	28	58	47	62	38	49	51	23	48
( 6 001; 8 000] PLN/sq.m	964	63	754	191	755	190	839	297	576	315
(8 001; 10 000] PLN/sq.m	925	33	779	159	836	141	1 144	291	948	290
>10 001 PLN/sq.m	260	12	328	50	384	48	589	156	524	171
dwelling space range	2 252	139	1 920	449	2 038	421	2 623	796	2 071	827
<= 40 sq.m	293	29	285	124	308	94	367	201	264	218
(40,1; 60] sq.m	964	68	799	203	856	217	1075	395	852	386
(60,1; 80] sq.m	656	30	559	95	578	82	797	142	621	163
> 80,1 sq.m	339	12	277	27	296	28	384	58	334	60
average price of 1 sq.m. of dwelling	8 303	7 301	8 597	7 973	8 715	8 057	8 982	8 510	9 160	8 563
<=4 000 sq.m	9 534	8 160	10 038	8 994	10 141	9 241	10 660	9 314	10 622	9 672
(40,1; 60] sq.m	8 395	7 240	8 610	7 886	8 747	7 746	9 022	8 307	9 357	8 432
(60,1; 80] sq.m	7 851	6 959	8 087	7 225	8 244	7 742	8 448	7 852	8 684	7 826
> 80,1 sq.m	7 854	6 422	8 104	6 577	8 062	7 420	8 373	8 714	8 386	7 380
average offer price deviation	13,7%	x	7,8%	x	8,2%	x	5,5%	x	7,0%	x
<= 40 sq.m	16,8%	x	11,6%	x	9,7%	x	14,4%	x	9,8%	x
(40,1; 60] sq.m	16,0%	x	9,2%	x	12,9%	x	8,6%	x	11,0%	x
(60,1; 80] sq.m	12,8%	x	11,9%	x	6,5%	x	7,6%	x	11,0%	x
> 80,1 sq.m	22,3%	x	23,2%	x	8,6%	x	-3,9%	x	13,6%	x

Source: NBP

## **7. Extended analysis of financial standing of real estate developers, construction companies involved in the construction of residential and non-residential building and related entities**

### **Analysis of financial standing of real estate developers<sup>30</sup>**

In 2021 Q3, the vast majority of developers and other groups of entities associated with housing production, including construction companies, wholesalers and manufacturers of construction materials continued to be in a good financial standing.

In 2021 Q3, the sales performance of residential developers was lower than in the previous two record quarters, but still historically high. The sales performance of several major residential developers listed on the Catalyst market confirms the decline in sales of home construction contracts in 2021 Q3, with 5,186 dwellings sold between July and September 2021, 16% less than in 2021 Q2 (6,190 dwellings). The weakening demand in the housing market in 2021 Q3 resulted, to a large extent, from a lower supply (fewer offers and construction starts of fewer dwellings) and the tightening of residential mortgage loans granting criteria. The lower availability of housing offers and the escalation of cost factors on the supply side (increases in the prices of building materials, labour and land) resulted in further rises in housing prices in all local markets.

According to developers interviewed in November 2021, the difficult-to-predict scale of rises in development costs prompted developers to increase reserves in the budgets of the projects commenced, which enforces a more prudent approach to the pricing of the dwellings sold, i.e. mainly raising housing prices in projects launched on the market. As a result of the uncertainty surrounding the total cost of development project execution, some developers offer new dwellings at an advanced stage of construction only. The growth in project execution prices raises the risk of unprofitable contracts which were already concluded and adopted underestimated budgets, deterioration of investors' and their contractors' standing and increasing payment bottlenecks.

According to the Statistics Poland data, in 2021 Q3, the construction of 40,346 premises for sale or rent was commenced, which represented a 15% decline compared to the previous quarter and a 5% decline in relation to the corresponding quarter of 2020. The number of dwellings started in the analysed period, although lower than the record high recorded in the previous quarter (47,552), was one of the highest among those recorded by Statistics Poland to date. The trend of a slight decline in housing production was confirmed by financial data reported by larger developers, according to which the value of projects under development decreased by 4% compared to the previous quarter and by 10% compared to 2020 Q3.

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<sup>30</sup> The calculations and conclusions in this issue of the Information are based on data resulting from F01 reports submitted to Statistics Poland, with the breakdown into two groups of entities: small companies - employing from 9 to 49 persons (data available until the first half of 2021 in semi-annual periods) and larger-sized companies employing above 49 persons (data available until 2021 Q3 in quarterly periods), engaged in the execution of building construction projects (PKD 41.10). The analysis of accounting entries in the financial statements of real estate developers listed on the Warsaw Stock Exchange was based on the data covering the period up to 2021 Q2. The analysis of accounting entries was supplemented with information concerning over a dozen residential real estate developers from the Catalyst market (a report on "Standing of the largest residential real estate developers of the Catalyst market after 2020 Q3", Nawigator Brokerage House, Warsaw, October 2020).

After the declines recorded in the first two quarters of 2021, the stock of completed dwellings in delivered buildings increased slightly in 2021 Q3 (to more than 5% in the structure of liabilities), however, still remaining at a very low level.

For the third consecutive quarter, despite a slight increase, the average value of the stock of land reported by larger developers remained almost 50% lower than the values reported in 2020 and several times lower than the values reported in the years 2007-2019 analysed. One of the lowest stocks of construction land amid strong demand for new housing confirms the problems in the construction land market and contributes to rising land prices.

The number of building permits issued for dwellings for sale or rent in 2021 Q3 (48,108 dwellings) declined from the previous three historically high quarters, however, it remained among the highest recorded before 2020 Q2 which, given the perceived shortage of land, may indicate a declining potential of developers to replenish their offer.

The number of dwellings completed and put on the sale or rental market in 2021 Q3 (36,580) increased by 21% compared to the previous quarter, consequently, it was 5% lower in y/y terms, indicating that development projects are implemented despite the difficulties on the contractor side (delivery delays, shortage of labour). The number of dwellings completed is the result of the number of dwellings whose construction had started almost two years earlier. The vast majority of those dwellings were sold at the production stage and did not have a major impact on the developments in the housing supply market in the period analysed. The decline in the value of sales revenues reported in the F01 reports, alongside an increase in the number of dwellings completed, may indicate administrative delays in assigning the home ownership rights to home buyers. As a result of lower value of sales revenues in relation to the previous quarter the developers' basic economic ratios fell in this period (by 8% of the total revenue and by 5% of the total costs). The more pronounced decrease in revenues compared to costs, despite the developers' prudent policy, slightly undermined the net financial result, profitability and deteriorated the operating expenses ratio.

The structure of expenses from operating activities is dominated by costs of third-party services whose share in 2021 Q3 (approximately 61%) was lower than reported in the previous four quarters. For more than a year, the decline in the share of third-party services, accompanied by rising costs of materials and energy consumed indicated that some projects have been carried out without subcontracting in order to reduce costs.

At the same time, averaged labour productivity increased in the analysed group of developers in 2021 Q3 compared to the previous quarter, with similar wage and employment levels.

Following the strengthening of the financial position of larger developers in the previous three quarters, 2021 Q3 saw a slight deterioration in the return on sales (ROS) (12.2% vs. 14.5% in the previous quarter), a significant downturn in the return on equity (ROE) (3.9% vs. 7.4% in 2021 Q2) and return on assets (ROA) (1.9% vs. 2.5% in the previous quarter) in this group of companies. Profitability remained at a much more favourable level than in the corresponding quarter of the previous year (3.6% ROS, 1.2% ROE and 0.5% ROA). Considering the period from January to September 2021, the share of developers with a positive financial result was relatively high, reaching 80%. The share of larger developers with a positive financial result in the corresponding period in the previous three years was several percent lower (from 65% in 2018 to 77% in 2020).

The main source of financing for larger developers is equity. Its share in the structure of liabilities in 2021 Q3 increased to approx. 48%, i.e. approx. 8 p.p. higher compared to individual quarters of 2020. Consequently, the assets-to-equity ratio strengthened, which improved the creditworthiness of the companies analysed.

Larger real estate developers are less likely to get bank financing owing to their good financial standing. For the second consecutive quarter, the downward trend in bank loan debt continued (only approx. 5% in the structure of liabilities in 2021 Q3, compared to almost over 9% in several previous years). Debt due to debt securities had remained at a similar level for the past two quarters and was slightly higher (more than 7% in the structure of liabilities) than bank loan debt.

For the past two quarters, the value of bonds of developers listed on the Catalyst market had remained at a similar, however, significantly higher level than in 2020, despite a decline in the number of bond issuers and with the average interest rate on coupons above 4%. Good business climate in the housing market has encouraged some developers with stable foundations to expand their activity and increase their financial leverage by issuing bonds.

Buyers' down payments remain an important source of project financing, with an average share of 20% in the structure of liabilities of larger developers for more than two years.

The direction of the pandemic situation development in Poland and worldwide, which is difficult to predict, prompted developers to adopt a prudent financial policy aimed at reducing costs. In 2021 Q3, the value of capital expenditure fell alongside the decrease in bank loan debt.

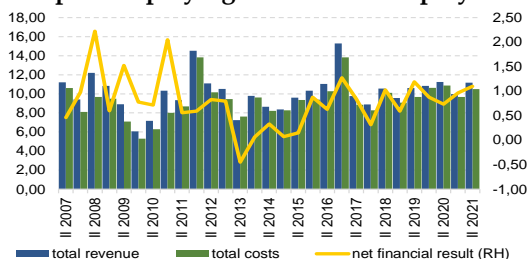
In 2021 Q3, the share of accounts payable decreased significantly (to more than 20% in the structure of liabilities) compared to their increase in the previous two quarters (over 33% in 2021 Q2), which may indicate an improvement in the timeliness of settlement of accounts payable. On the other hand, in relation to the previous quarter, the share of accounts receivable and the share of accumulated cash (over 15% and approx. 15% in the structure of assets, respectively) remained at a similar level, which significantly improved the liquidity level of the analysed developers.

According to the financial data of more than a dozen of the largest real estate developers listed on the Warsaw Stock Exchange, positive cash flows from operating activities increased markedly in 2021 Q2, which indicates a positive financial position of these companies. Negative cash flows from investment activities for the past four quarters may indicate expenditure on new investments, both tangible and financial ones. On the other hand, negative cash flows from financing activities result from the repayment of liabilities or repurchase of own securities and the distribution of profits. Among three groups of analysed developers, in the first two quarters of 2021, WSE-listed companies generated the highest return on sales (more than 16%), stable and high equity (approx. 42% in the structure of liabilities), a high and increasing share of down payments from home buyers (more than 22% in the structure of liabilities), stable and relatively low debt due to bank loans (more than 11% in the structure of liabilities) and a decline in debt due to issue of debt securities to approx. 9% share.

The analysis of financial data of the group of smaller developers confirmed their good liquidity and financial position in the first half of 2021 and an increase in the value of projects under development, with a significant rise in financing with bank loans (to over 26% of the share in the structure of liabilities). The increase in bank indebtedness confirms an improvement in the reliability of those entities when assessing their

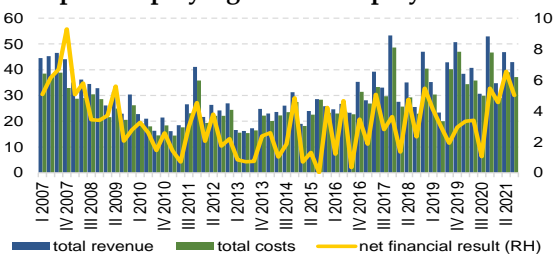
creditworthiness. In this group of developers, the value of down payments made by home purchases in project financing increased (a growth to over 16% in the structure of liabilities at the end of June 2021, compared to over 14% a year ago). The share of accounts payable and accounts payable decreased. However, the profitability of sales (10.4%) and the ratio of operating expenses (0.91) deteriorated. In the first half of 2021, the share of smaller developers with a positive financial result decreased (63% share compared to 75% in the previous six months and 65% in the corresponding period of 2020).

**Figure 76 Economic indicators of real estate developers employing from 9 to 49 employees**



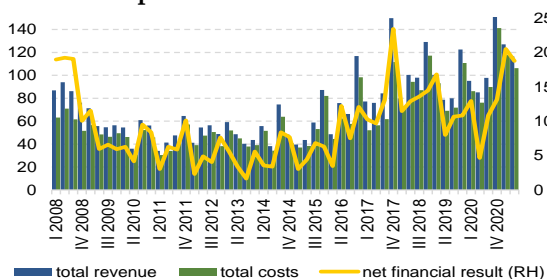
Source: NBP based on Statistics Poland (F01)

**Figure 77 Economic indicators of real estate developers employing over 49 employees**



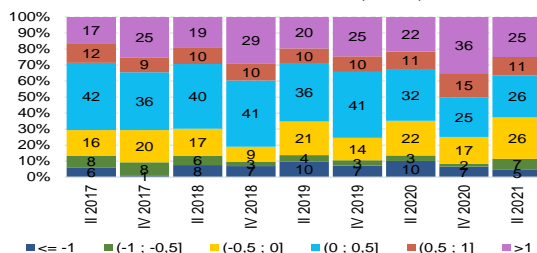
Source: NBP based on Statistics Poland (F01)

**Figure 78 Economic indicators of WSE-listed real estate developers**



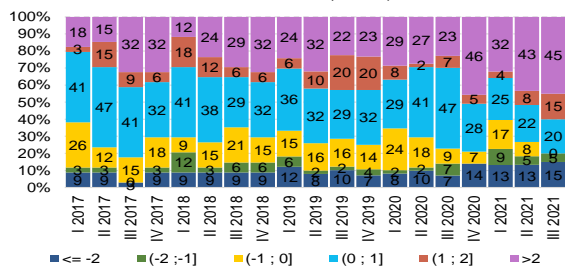
Source: NBP based on Quant Research sp. z o.o.

**Figure 79 Structure of real estate developers employing from 9 to 49 employees, depending on the value of net financial result (in %)**



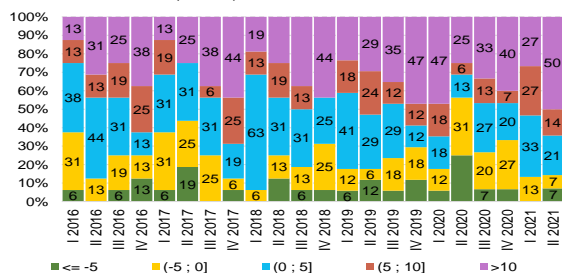
Source: NBP based on Statistics Poland (F01)

**Figure 80 Structure of real estate developers employing over 49 employees, depending on the value of net financial result (in %)**



Source: NBP based on Statistics Poland (F01)

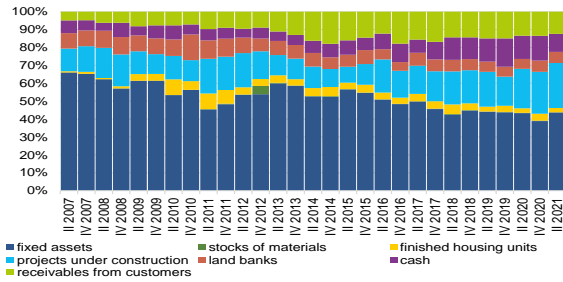
**Figure 81 Structure of WSE-listed real estate developers, depending on the value of net financial result (in %)**



Source: NBP based on Quant Research sp. z o.o.

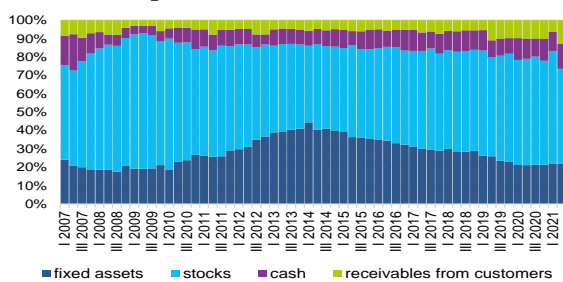


**Figure 82 Structure of assets of real estate developers employing from 9 to 49 employees**



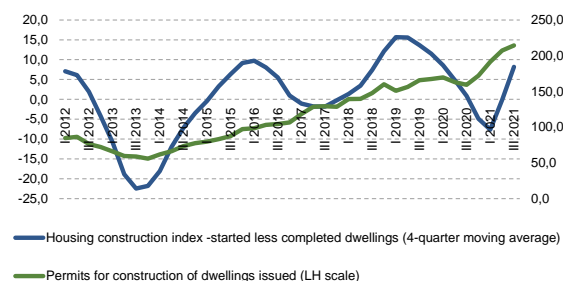
Source: NBP based on Statistics Poland (F01)

**Figure 84 Structure of assets of WSE-listed real estate developers**



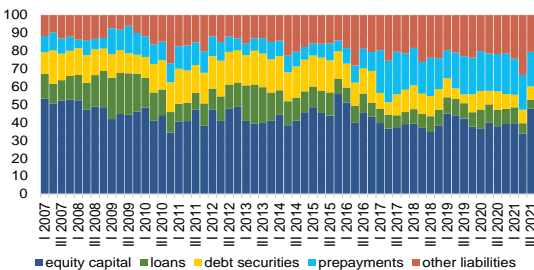
Source: NBP based on Quant Research sp. z o.o.

**Figure 86 Housing production index and building permits issued for the construction of dwellings for sale or rent**



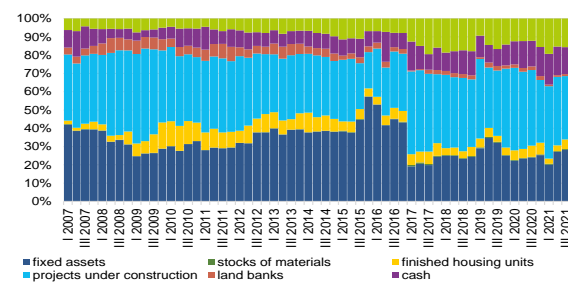
Source: NBP based on Statistics Poland

**Figure 88 Structure of liabilities of real estate developers employing over 49 employees**



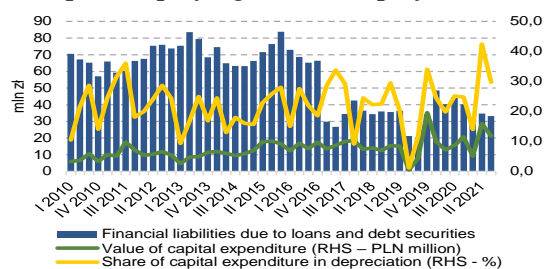
Source: NBP based on Statistics Poland (F01)

**Figure 83 Structure of assets of real estate developers employing over 49 employees**



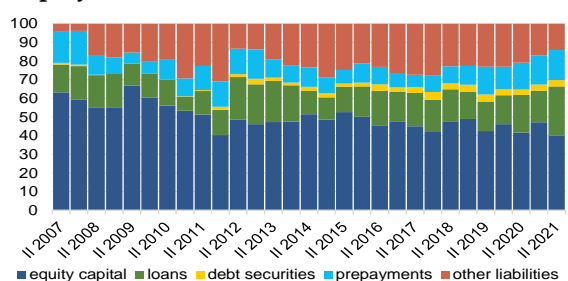
Source: NBP based on Statistics Poland (F01)

**Figure 85 Investment activity of real estate developers employing over 49 employees**



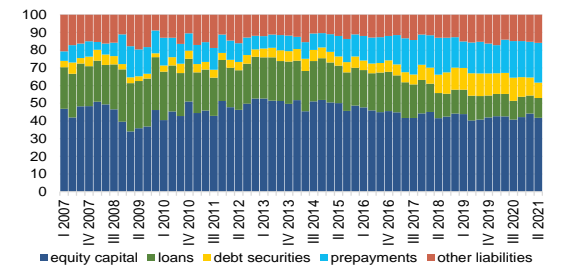
Source: NBP based on Statistics Poland (F01)

**Figure 87 Structure of liabilities of real estate developers employing from 9 to 49 employees**



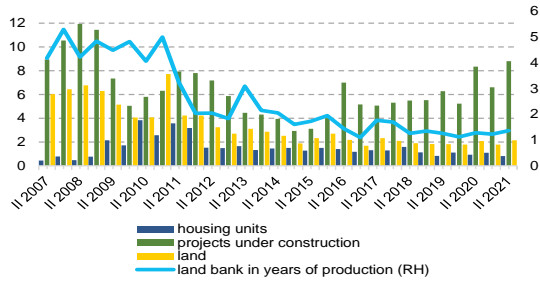
Source: NBP based on Statistics Poland (F01)

**Figure 89 Structure of liabilities of WSE-listed real estate developers**



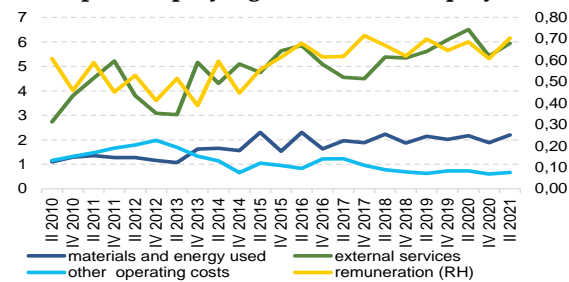
Source: NBP based on Statistics Poland (F01)

**Figure 90 Situation of real estate developers employing from 9 to 49 employees**



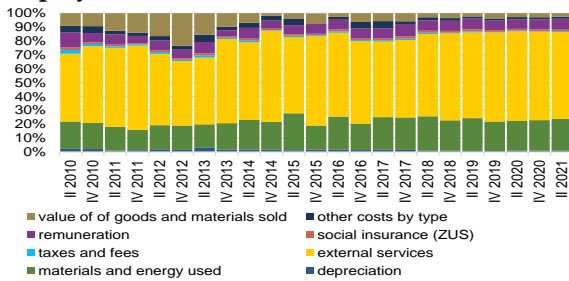
Source: NBP based on Statistics Poland (F01)

**Figure 92 Operating expenses of real estate developers employing from 9 to 49 employees**



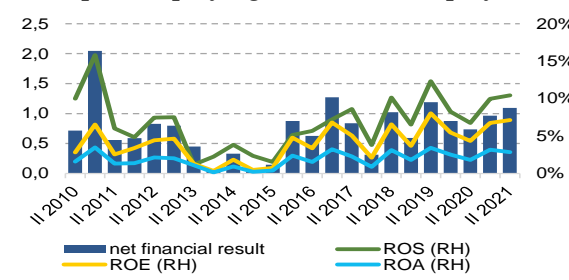
Source: NBP based on Statistics Poland (F01)

**Figure 94 Structure of operating expenses of real estate developers employing from 9 to 49 employees**



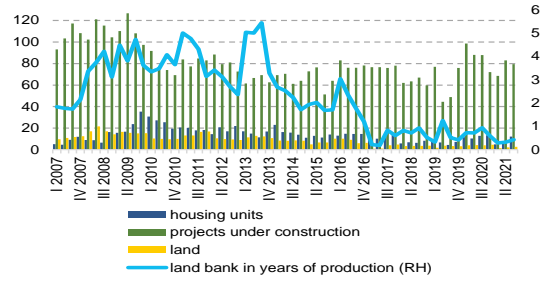
Source: NBP based on Statistics Poland (F01) and financial statements

**Figure 96 Profitability of activities of real estate developers employing from 9 to 49 employees**



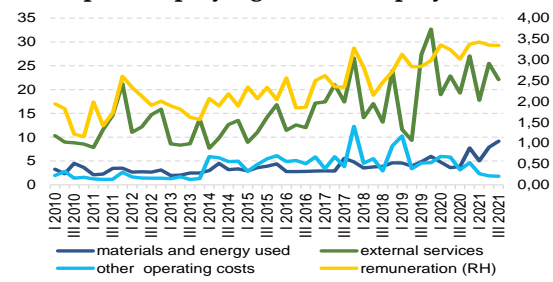
Source: NBP based on Statistics Poland (F01)

**Figure 91 Situation of real estate developers employing over 49 employees**



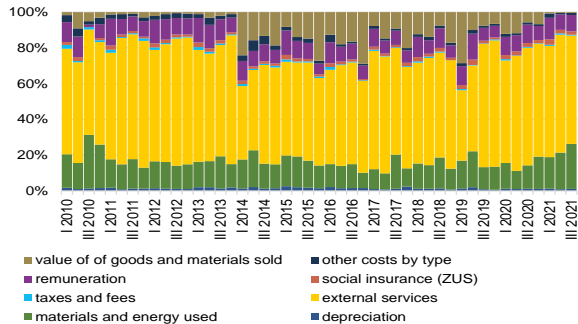
Source: NBP based on Statistics Poland (F01)

**Figure 93 Operating expenses of real estate developers employing over 49 employees**



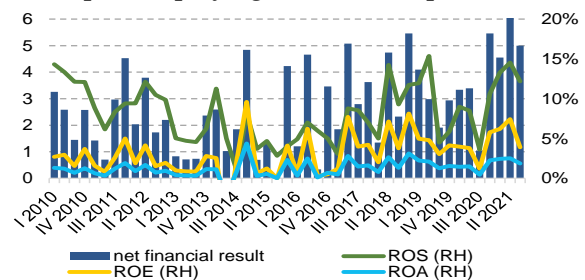
Source: NBP based on Statistics Poland (F01)

**Figure 95 Structure of operating expenses of real estate developers employing over 49 employees**



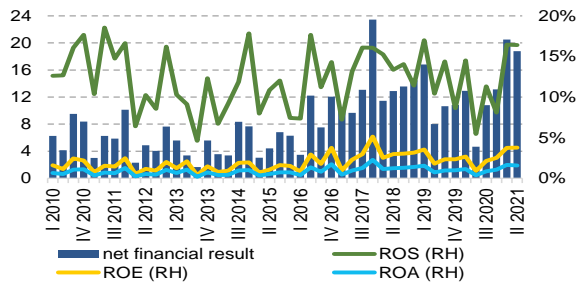
Source: NBP based on Statistics Poland (F01) and financial statements

**Figure 97 Profitability of activities of real estate developers employing more than 49 persons**



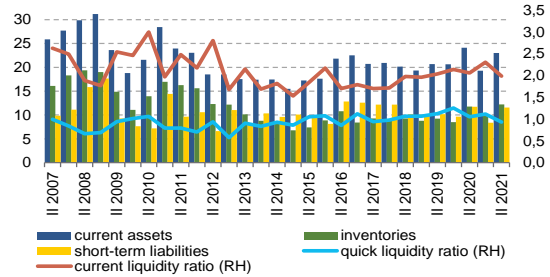
Source: NBP based on Statistics Poland (F01)

**Figure 98 Profitability of activities of WSE-listed real estate developers**



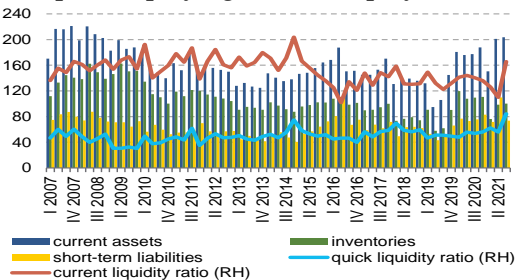
Source: NBP based on Quant Research sp. z o.o.

**Figure 99 Liquidity ratios of real estate developers employing from 9 to 49 employees**



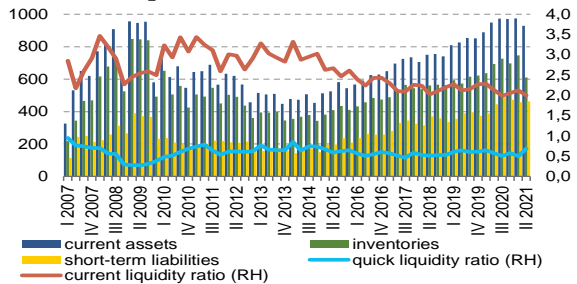
Source: NBP based on Statistics Poland (F01)

**Figure 100 Liquidity ratios of real estate developers employing over 49 employees**



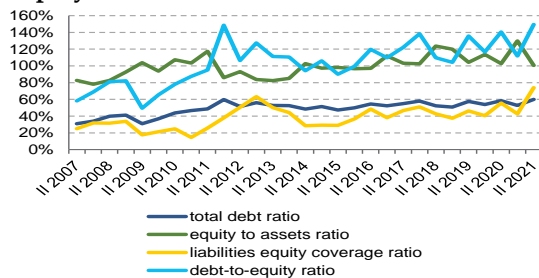
Source: NBP based on Statistics Poland (F01)

**Figure 101 Liquidity ratios of WSE-listed real estate developers**



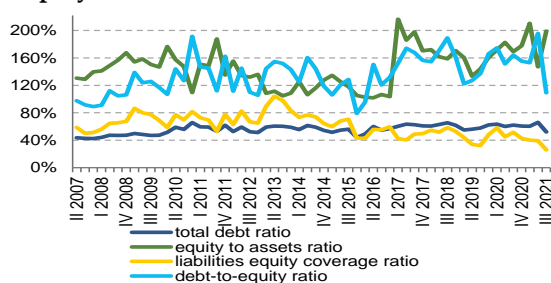
Source: NBP based on Quant Research sp. z o.o.

**Figure 102 Debt ratios and indicators of securing liabilities of developers employing from 9 to 49 employees**



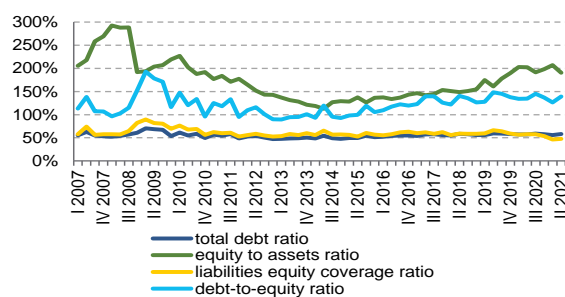
Source: NBP based on Statistics Poland (F01)

**Figure 103 Debt ratios and indicators of securing liabilities of developers employing over 49 employees**



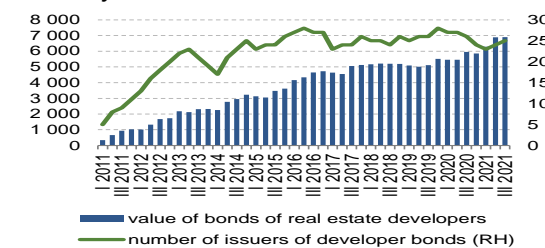
Source: NBP based on Statistics Poland (F01)

**Figure 104 Debt ratios and indicators of securing liabilities of WSE-listed real estate developers**



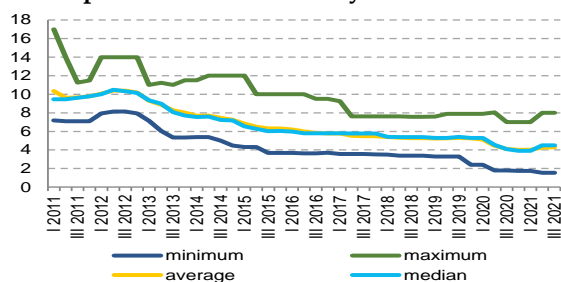
Source: NBP based on Quant Research sp. z o.o.

**Figure 105 Value of bonds of real estate developers and the number of issuers of developer bonds in the Catalyst market**



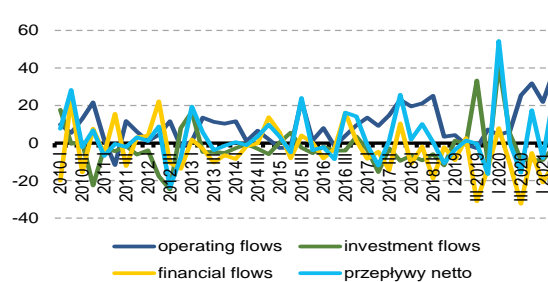
Source: NBP based on Catalyst data

**Figure 106 Interest on bond coupons of real estate developers listed on the Catalyst market**



Source: NBP based on Catalyst data

**Figure 107 Flows of real estate developers listed on the WSE**



Source: NBP based on Quant Research sp. z o.o.

### Analysis of financial standing of construction companies involved in the construction of residential and non-residential buildings<sup>31</sup>

The financial data of the larger companies involved in the construction of residential and non-residential buildings available up to 2021 Q3 confirmed the highest quarterly demand for construction services since 2017, the escalation of problems related to several quarters of cost rises, and the slightly weaker but stable financial situation of the companies in the period from January to September 2021. In 2021 Q3, compared to 2020 Q3, the group of larger companies saw a significant increase in total revenues (by 39%), including sales revenues (by 40%) as well as total costs (by 41%) and the net financial result (by 18%).

According to the representatives of companies involved in the construction of residential and non-residential buildings, a slightly faster growth in costs compared to revenues is a negative effect of rising prices of labour, services and materials and consequently higher costs of contract execution and persisting shortages of materials and components. Despite the difficulties driven by rising costs and slightly subdued profitability in 2021 Q3, profitability indicators in the first three quarters of 2021 were at higher levels than in the corresponding periods of the previous few years. This shows that the financial condition of larger construction companies improved. However, the situation of individual entities differs. In particular, some of the construction companies that signed contracts before cost increases started to accelerate are concerned about the deterioration of their standing due to underestimated budgets. In 2021 Q3, the percentage of profitable entities accounted for approx. 82% of entities compared to approx. 84% in the previous year. Amid concern about declining contract profitability, rising material and labour costs prompted enterprises to raise prices for their services.

Along with a 7% increase in the value of projects under development in relation to 2020 Q3, consumption of materials and energy increased by several per cent, while the value of third-party services fell by several per cent, which confirms the rising prices of materials and may indicate a trend towards reducing costs by executing projects without subcontracting.

<sup>31</sup> The calculations and conclusions in this issue of the Information are based on the data resulting from F01 reports submitted to Statistics Poland, with the breakdown into two groups of companies: small companies - employing from 9 to 49 employees (data available until the first half of 2021 in semi-annual periods) and larger-sized companies employing more than 49 employees (data available until 2021 Q3 in quarterly periods) performing construction works related to the construction of residential and non-residential buildings (PKD 41.20).

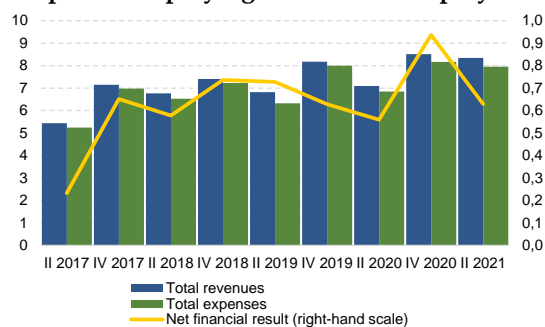
The liquidity of larger construction companies deteriorated slightly, remaining at a safe level for creditors. In order to maintain liquidity, the settlement of liabilities to suppliers was delayed while a buffer of funds was accumulated. Since the outbreak of the pandemic crisis, the cash buffer has exceeded 20% of the structure of assets compared to 13%-15% in 2017-2019. There was a significant increase in outstanding accounts payable, with a relatively stable level of accounts receivable. In the structure of liabilities, the share of other liabilities reached 46% in 2021 Q3 against 40% in 2020 Q3 and 37% in 2019 Q3. The level of accounts receivable in the structure of assets represented a 33% share in 2021 Q3 against 30% in 2020 Q3 and 31% in 2019 Q3).

For the first time since the beginning of 2017, for two consecutive quarters, the share of liabilities to subcontractors and supplier was higher than the share of equity (43% in 2021 Q3 compared to nearly 50% in previous years). The decline in the share of equity slightly deteriorated the total debt ratio, the assets-to-equity ratio and the debt-to-equity ratio, which, despite the downturn, remained at favourable levels for creditors.

Liabilities due to bank loans remained relatively stable at a slightly lower level (9% in the structure of liabilities in 2021 Q3 against 10% in 2020 Q3 and 12% in 2019 Q3). The limited reliance on bank funds, despite high sales revenues, indicates a prudent approach of financial sector institutions to project financing in the construction industry. This is particularly affected by the dynamic, hardly predictable level of costs in investment budgets.

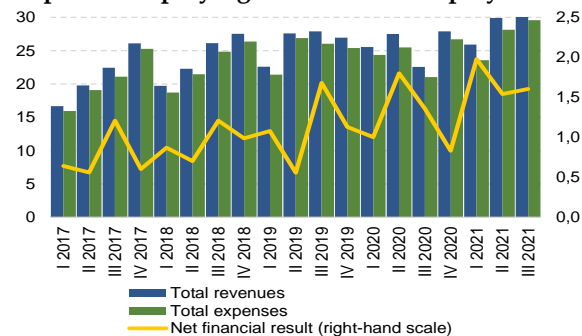
The analysis of the financial data of smaller companies involved in the construction of residential and non-residential buildings, available up to the first half of 2021, indicated a slightly better condition for these companies than larger companies (more favourable profitability and operating expense ratios, a higher share of equity, an increase in the value of debt due to bank loans and a lower share of outstanding liabilities to subcontractors and suppliers). Since the beginning of 2020, smaller companies had twice lower share of the stock of materials (18%) in their assets than larger construction companies (33%), which may indicate more acute replenishment problems. In the first half of 2021, in relation to the first half of 2020, along the increase in work in progress, an increased value of all components of operating costs was recorded, including the highest due to costs of goods sold (23% increase in the consumption of materials and energy and 14% increase in payroll expenses). Third-party expenses increased by 13%.

**Figure 108 Economic indicators of construction companies employing from 9 to 49 employees**



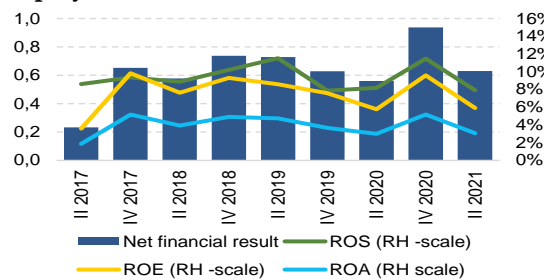
Source: NBP based on Statistics Poland (F01)

**Figure 109 Economic indicators of construction companies employing more than 49 employees**



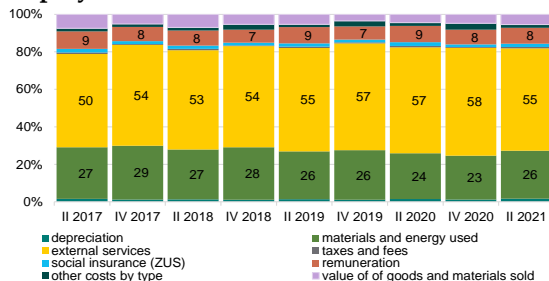
Source: NBP based on Statistics Poland (F01)

**Figure 110 Profitability of operations of construction companies employing from 9 to 49 employees**



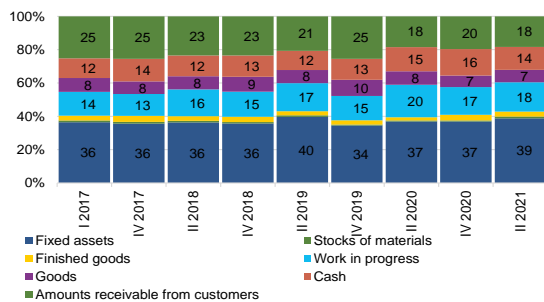
Source: NBP based on Statistics Poland (F01)

**Figure 112 Structure of operating expenses of construction companies employing from 9 to 49 employees**



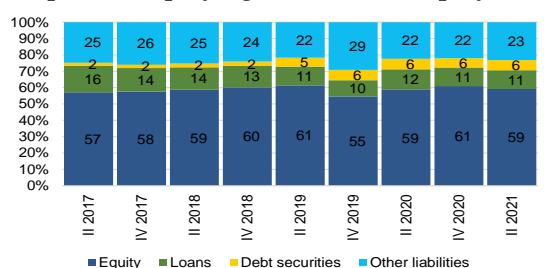
Source: NBP based on Statistics Poland (F01)

**Figure 114 Structure of assets of construction companies employing from 9 to 49 employees**



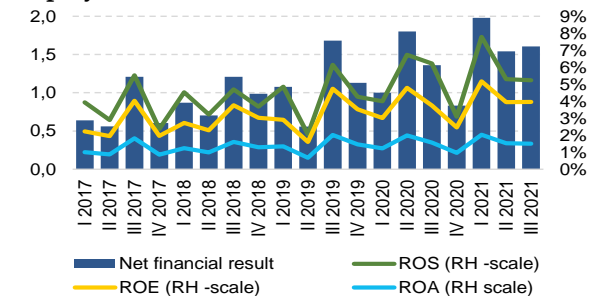
Source: NBP based on Statistics Poland (F01)

**Figure 116 Structure of liabilities of construction companies employing from 9 to 49 employees**



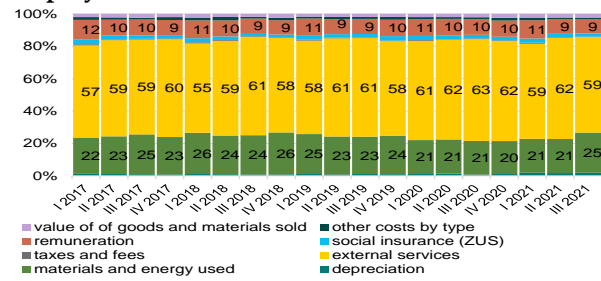
Source: NBP based on Statistics Poland (F01)

**Figure 111 Profitability of operations of construction companies employing more than 49 employees**



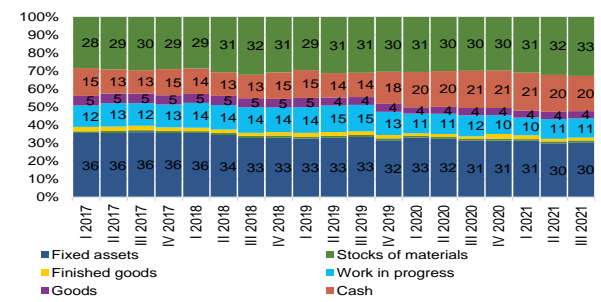
Source: NBP based on Statistics Poland (F01)

**Figure 113 Structure of operating expenses of construction companies employing more than 49 employees**



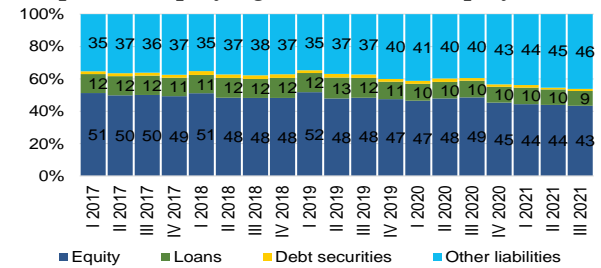
Source: NBP based on Statistics Poland (F01)

**Figure 115 Structure of assets of construction companies employing more than 49 employees**



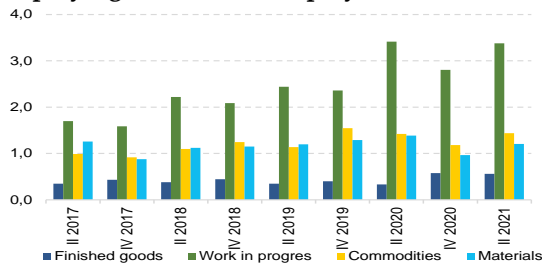
Source: NBP based on Statistics Poland (F01)

**Figure 117 Structure of liabilities of construction companies employing more than 49 employees**



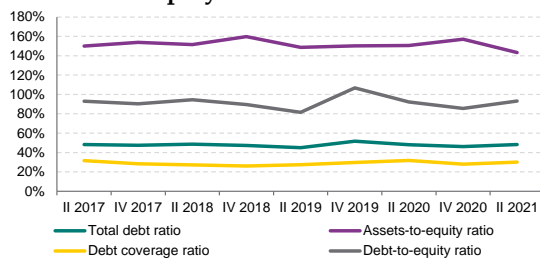
Source: NBP based on Statistics Poland (F01)

**Figure 118 Standing of real estate developers employing from 9 to 49 employees**



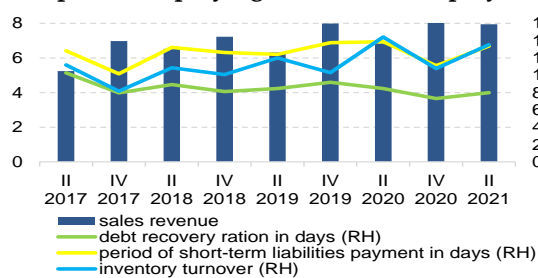
Source: NBP based on Statistics Poland (F01)

**Figure 120 Debt ratios and indicators of securing liabilities of construction companies employing from 9 to 49 employees**



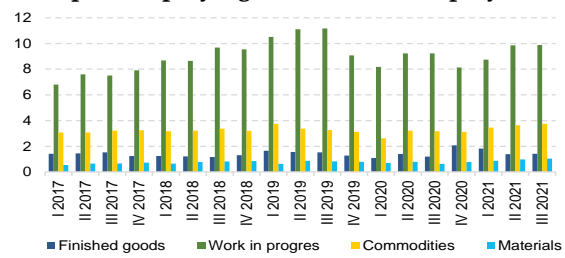
Source: NBP based on Statistics Poland (F01)

**Figure 122 Turnover of inventory, accounts receivable and accounts payable of construction companies employing from 9 to 49 employees**



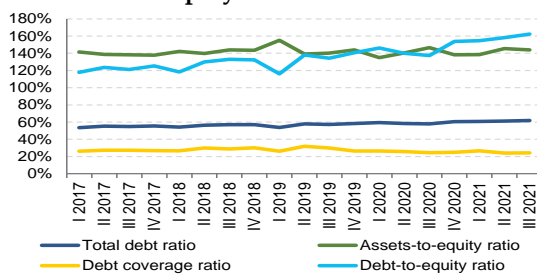
Source: NBP based on Statistics Poland (F01)

**Figure 119 Standing of real estate developers employing more than 49 employees**



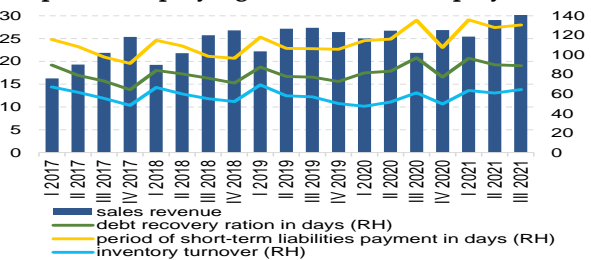
Source: NBP based on Statistics Poland (F01)

**Figure 121 Debt ratios and indicators of securing liabilities of construction companies employing more than 49 employees**

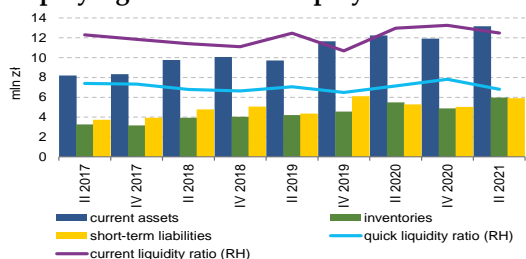


Source: NBP based on Statistics Poland (F01)

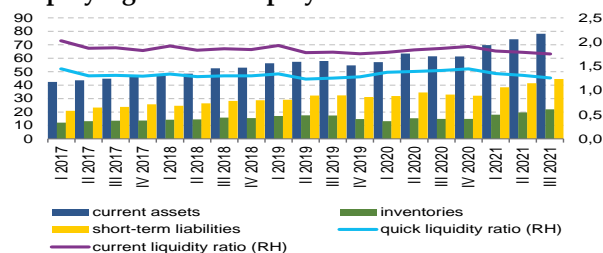
**Figure 123 Turnover of inventory, accounts receivable and accounts payable of construction companies employing more than 49 employees**



Source: NBP based on Statistics Poland (F01)

**Figure 124 Liquidity of construction companies employing from 9 to 49 employees**

Source: NBP based on Statistics Poland (F01)

**Figure 125 Liquidity of construction companies employing over 49 employees**

Source: NBP based on Statistics Poland (F01)

**Analysis of financial standing of companies dealing with sales of construction materials<sup>32</sup>**

The significant demand for construction materials and the increase in their prices have become major factors shaping the profitability and liquidity of intermediary entities in the trade of construction materials.

According to the data of the Polskie Składy Budowlane Group, in the period from January to October 2021, prices of materials increased on average by 10.6%, compared to the corresponding period of 2020. Growth was recorded in 20 groups: OSB (+55%), thermal insulation (+28%), drywall (+27%), roofs, gutters (+13%), fixtures, heating (+11%), lighting, electrical installations (+9%), tools (+7%), waterproofing (+7%), garden and hobbies (+7%), finishes (+6%), joinery (+6%), home environment (+6%), tiles, bathrooms, kitchens (+6%), automotive (+5%), furnishings, household appliances (+5%), construction chemicals (+5%), cement, lime (+5%), paints, varnishes (+4%), decoration (+3%) and walls, chimneys (+1%). The growth in prices of construction materials in October 2021 compared to October 2020 amounted to 20.5%, on average.

A year ago, i.e. in the period from January to September 2020, compared to the corresponding period in 2019, the increase in prices of construction materials was significantly lower and reached 1.4%. Price increases were recorded in 16 product groups and price decreases in four groups. The analysis of the entries in the F01 reports sent to Statistics Poland by larger wholesalers of construction materials (employing more than 49 employees) shows a significant increase in turnover and an improvement in their overall economic situation between January and September 2021, despite a slight downturn in the profitability of trading in construction materials in 2021 Q3.

In the case of larger wholesalers, in 2021 Q3 compared to 2020 Q3, total revenue increased by 22%, total costs by 21% and net income by 37%. The first three quarters of 2021, compared to the corresponding quarters of 2020, saw a systematic acceleration of the growth in revenues and costs, with a simultaneous decline in the growth of net income. The high and increasing level of turnover of construction material wholesalers and accelerating growth in construction material prices confirm the wide range of works carried out in the construction sector and growing demand for construction materials. The analysis of the financial data of small

<sup>32</sup> The calculations and conclusions in this edition of the Information were based on data resulting from F01 reports submitted to Statistics Poland, broken down into two groups of companies: companies employing from 9 to 49 persons (data available until the first half of 2021, in half-year intervals) and those with staff exceeding 49 persons (data available until 2021 Q3, in quarterly intervals), which are manufacturers of constructions materials (PKD 4613) and deal with the wholesale of construction materials and sanitary equipment (PKD 4673). The accounting records were supplemented with information on the change in prices of building materials ("Change in prices of materials for construction, home and garden - PSB analysis" in November 2019 and in November 2020, Grupa PSB Handel S.A.).



wholesalers also indicated a significant increase in turnover and net income in the first half of 2021, compared to less significant changes in these economic indicators observed in the earlier half-year periods since 2017.

The share of profitable entities increased in the group of larger wholesale companies (95% of companies with a positive net financial result in 2021 Q3 against 92% of companies in 2021 Q2 and 93% in the same period of the previous year). Among small wholesalers, the percentage of profitable companies was lower, decreasing in the first half of 2021 to 87% compared to 90% in the second half of 2020, but yet showing an increase compared to the percentage recorded in the first half of 2020 (84%). Among larger wholesalers, profitability ratios deteriorated slightly in 2021 Q3 compared to the previous quarter, although they reached significantly higher levels than in individual quarters of the previous four years. In the period analysed, among the larger companies, return on sales (ROS) reached 5.8%, return on equity (ROE) 6.5% and return on assets (ROA) 3.3%.

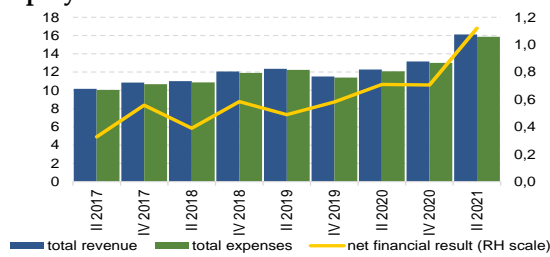
In the first half of 2021, smaller companies demonstrated better return on sales of goods (7.1% ROS) and a significantly higher return on invested equity (17.3% ROE) and return on assets (7.7% ROA), which indicates an increased level of their financial security and growth opportunities. However, the relatively high ROE largely results from rising external financing. In the first half of 2021, smaller wholesalers reported a significant increase in the share of loans (17% in the structure of liabilities compared to 12%-13% in the past few half-year periods) and non-bank liabilities, mainly payables to building material manufacturers (37% in the structure of liabilities compared to 30% in the previous half-year period). The increase in bank debt confirms good liquidity and creditworthiness. Equity, which is the main source of financing, accounted for 46% in the structure of liabilities. In the group of smaller wholesalers, in the first half of 2021, the balance of accounts receivable increased in line with the increase in the stock of goods (36% share in the structure of assets against 31%-32% in 2020).

The structure of funding sources of larger construction material wholesalers remained similar in three consecutive quarters of 2021. The past five years saw a trend of a slight, systematic decrease in the share of bank loan debt (12% in the structure of liabilities in 2021 Q3 against 17% in 2017) and an increase in equity (52% in the structure of liabilities in 2021 Q3 against 45% share in 2017).

In the three quarters of 2021, the share of accounts payable accounted for 36-37% and was similar to the level recorded by smaller entities. Accounts receivable (mainly from purchasers of goods) amounted to a 34% in the structure of liabilities in both 2021 Q3 and 2021 Q2. Despite the slight volatility, liquidity in both groups remained at a safe level for creditors. The total debt ratio, the debt coverage ratio and the assets-to-equity ratio and the debt-to-equity ratio remained at a favourable level, ensuring creditworthiness and the ability to settle accounts payable.

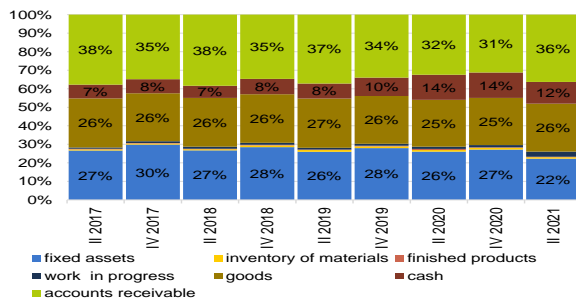
In both analysed groups of wholesalers, the share of individual costs in the structure of operating expenses remained at a similar level. The analysis of the change in values showed a significant increase in annual terms in all components of operating expenses. In 2021 Q3, compared to 2020 Q3, the group of larger wholesalers saw the highest increases in costs due to energy consumption (a rise of 53%), followed by payroll expenses and social security contributions (an increase by 21% and 23%, respectively), as well as third-party services (a 23% growth) and costs of goods sold (a rise of 20%).

**Figure 126 Economic indicators of construction material suppliers employing from 9 to 49 employees**



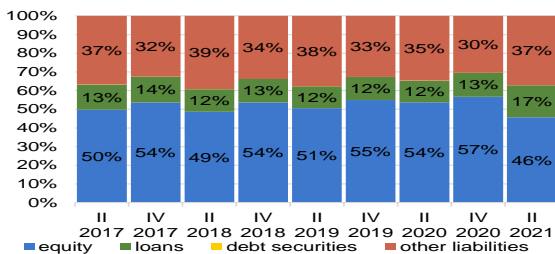
Source: NBP based on Statistics Poland (F01)

**Figure 128 Structure of assets of construction material suppliers employing from 9 to 49 employees**



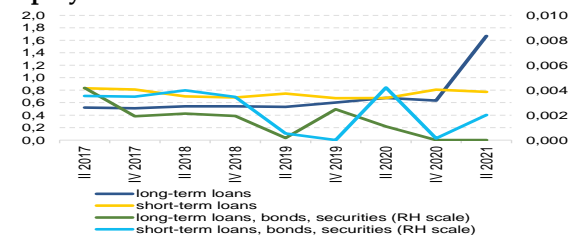
Source: NBP based on Statistics Poland (F01)

**Figure 130 Structure of liabilities of construction material suppliers employing from 9 to 49 employees**



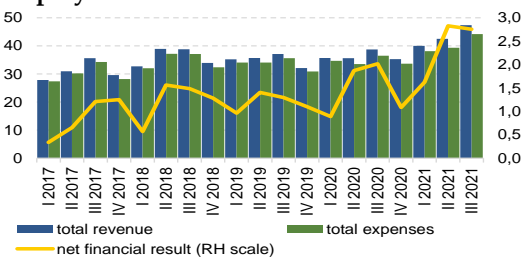
Source: NBP based on Statistics Poland (F01)

**Figure 132 Sources of financing of construction material suppliers employing from 9 to 49 employees**



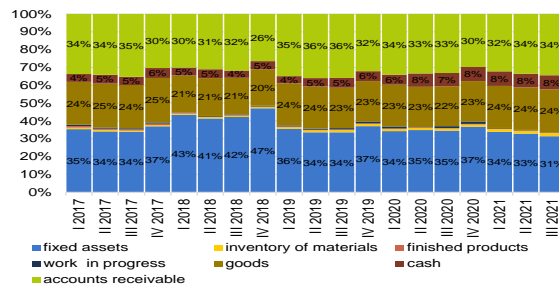
Source: NBP based on Statistics Poland (F01)

**Figure 127 Economic indicators of construction material suppliers employing more than 49 employees**



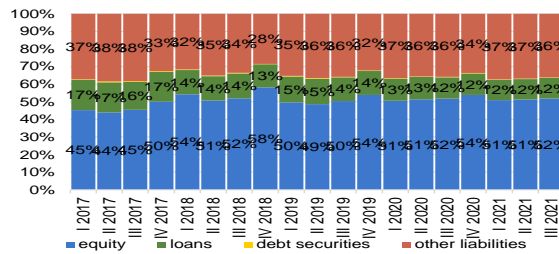
Source: NBP based on Statistics Poland (F01)

**Figure 129 Structure of assets of construction material suppliers employing more than 49 employees**



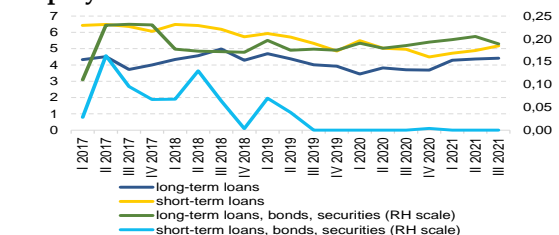
Source: NBP based on Statistics Poland (F01)

**Figure 131 Structure of liabilities of construction material suppliers employing more than 49 employees**



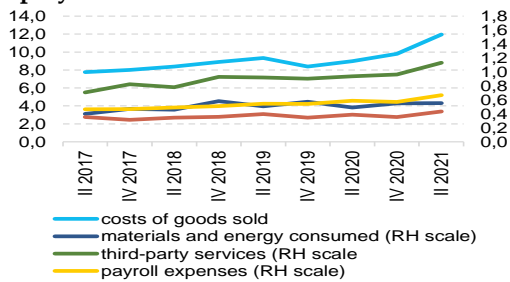
Source: NBP based on Statistics Poland (F01)

**Figure 133 Sources of financing of construction material suppliers employing more than 49 employees**



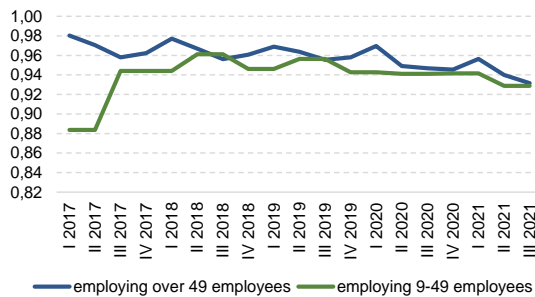
Source: NBP based on Statistics Poland (F01)

**Figure 134 Operating expenses of construction material suppliers employing from 9 to 49 employees**



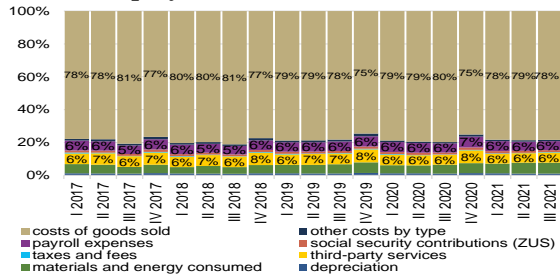
Source: NBP based on Statistics Poland (F01)

**Figure 136 Level of operating expenses according to groups of construction material suppliers**



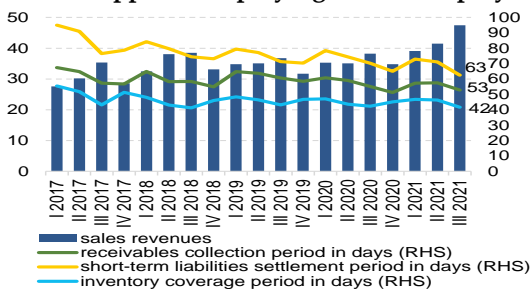
Source: NBP based on Statistics Poland (F01)

**Figure 138 Structure of operating expenses of construction material suppliers employing more than 49 employees**



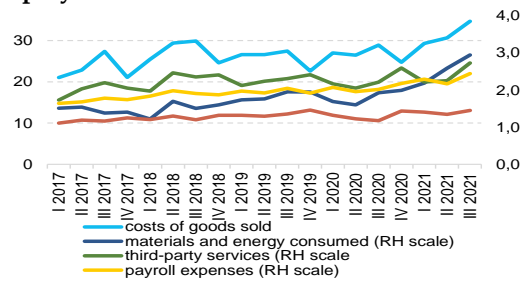
Source: NBP based on Statistics Poland (F01)

**Figure 140 Turnover of inventory, accounts receivable and accounts payable of construction material suppliers employing over 49 employees**



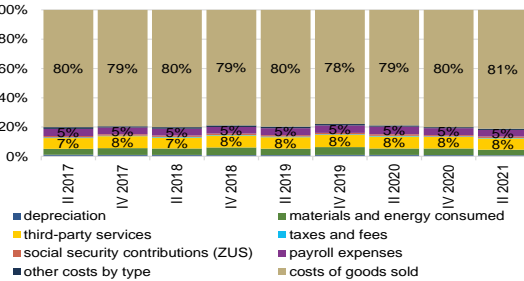
Source: NBP based on Statistics Poland (F01)

**Figure 135 Operating expenses of construction material suppliers employing more than 49 employees**



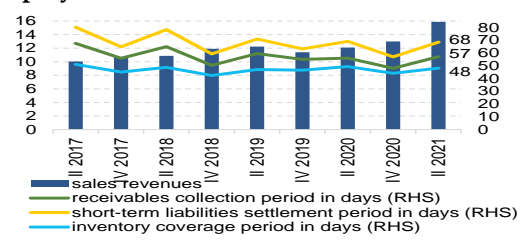
Source: NBP based on Statistics Poland (F01)

**Figure 137 Structure of operating expenses of construction material suppliers employing from 9 to 49 employees**



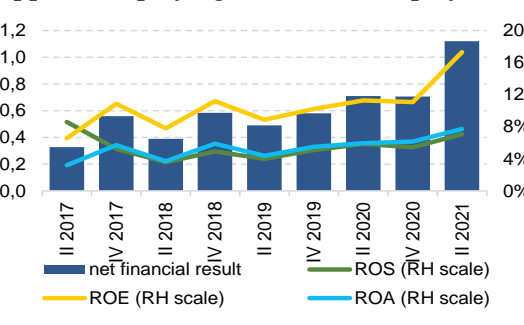
Source: NBP based on Statistics Poland (F01)

**Figure 139 Turnover of inventory, accounts receivable and accounts payable of construction material suppliers employing from 9 to 49 employees**



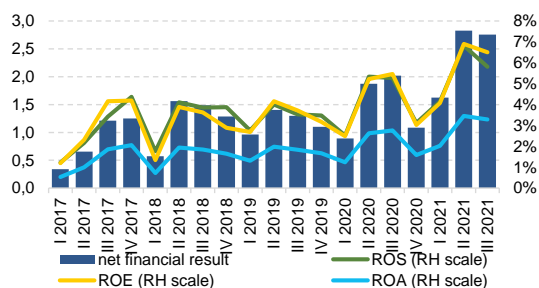
Source: NBP based on Statistics Poland (F01)

**Figure 141 Profitability of construction material suppliers employing from 9 to 49 employees**



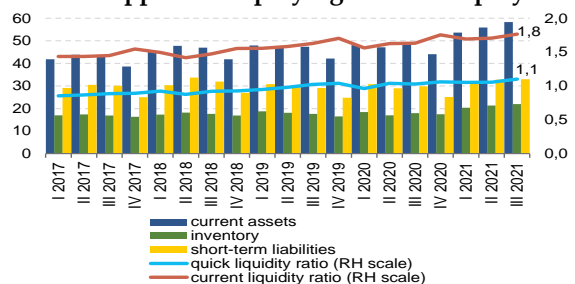
Source: NBP based on Statistics Poland (F01)

**Figure 142 Profitability of construction material suppliers employing more than 49 employees**



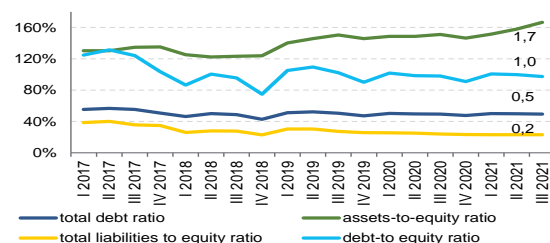
Source: NBP based on Statistics Poland (F01)

**Figure 144 Liquidity ratios of construction material suppliers employing over 49 employees**



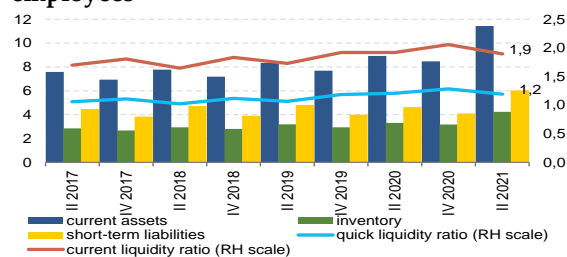
Source: NBP based on Statistics Poland (F01)

**Figure 146 Debt ratio and debt coverage ratio of construction material suppliers employing over 49 employees**



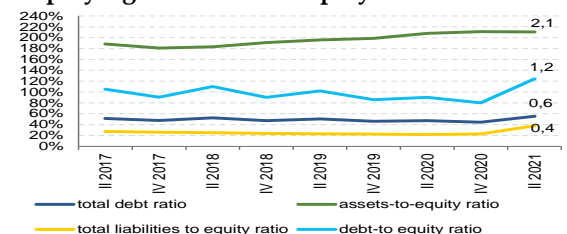
Source: NBP based on Statistics Poland (F01)

**Figure 143 Liquidity ratios of construction material suppliers employing from 9 to 49 employees**



Source: NBP based on Statistics Poland (F01)

**Figure 145 Debt ratios and indicators of securing liabilities of construction material suppliers employing from 9 to 49 employees**



Source: NBP based on Statistics Poland (F01)

### Analysis of financial standing of companies manufacturing construction materials<sup>33</sup>

The disrupted supply chain of construction materials and the increase in their prices affect the willingness to undertake and execute investment projects, their costs and the relationship between investors and contractors. Shortages of building materials result largely from shortage of raw materials and components.

The increased demand for building materials was confirmed by improvements in the basic economic ratios mainly in the case larger companied producing construction materials (employing more than 49 employees). According to the financial data reported by such entities in their F01 reports for 2021 Q3, compared to the corresponding quarter of 2020, the total revenue increased by 14%, including 15% in sales revenue, and total

<sup>33</sup> The calculations and conclusions in this edition of the Information were based on data resulting from F01 reports submitted to the Statistics Poland broken down into two groups of companies: those employing from 9 to 49 persons (data available until the first half of 2021, in half-year intervals) and those with staff exceeding 49 persons (data available until 2021 Q3, in quarterly intervals), being producers of constructions materials (PKD 1623, 2223, 2320, 2332, 2351, 2352, 2361, 2362, 2363, 2364)

expenses increased by approx. 15%, which enabled the companies to generate a 12% higher net income than in the previous year. The percentage of profitable larger producers in both quarters was comparable (approx. 86% of entities). On an annual basis, return on sales (ROS) (11.5%), return on assets (ROA) (3.4%) and return on equity (ROE) (5.5%) were at a similar level.

Small construction material producers in the first half of 2021 posted a lower turnover growth than the group of larger companies and a weakening of the return on sales (ROS) (6.7% compared to 8.8% in the first half of 2020) due to weaker net income. Small producers, on the other hand, perform better in terms of return on equity (ROE) (8.1%) and return on assets (ROA) (4.6%), which means that they are slightly more reliable in the opinion of banks and other creditors.

Both the group of larger and smaller construction material producers had high level of equity (64% and 60%, respectively), in the structure of liabilities. For larger companies this high level of equity was recorded at the end of September 2021 and for smaller companies at the end of June 2021. Both groups also recorded a stable share of accounts payable to suppliers of raw materials and subcontractors (25% in the structure of liabilities of larger producers and 27% in the group of small entities) and a stable share of bank loan debt (11% and 13% share, respectively). The general debt ratios which continue to run at a favourable level, confirm that the assets and activities of enterprises are financed rather with equity than with debt, which protects them against the loss of liquidity and bankruptcy in the event of economic downturns.

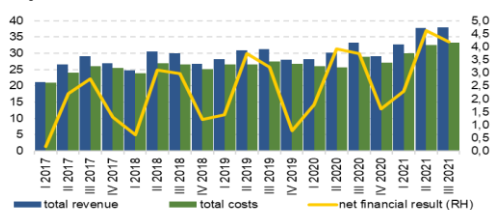
The substantial demand for construction materials and the high competition in obtaining them from construction material companies translated into low level of outstanding accounts receivable in the group of large producers (18% share in the structure of assets at the end of September 2021), resulting in a better receivables collection management (51 days) than liabilities settlement (71 days). As at the end of the first half of 2021, small producers face a significantly higher outstanding balance of accounts receivable (27% in the structure of assets) and a longer period of receivables collection (69 days on average) and receivables settlement (76 days on average).

Liquidity deteriorated slightly in both groups of construction material manufacturers analysed. Yet, it still remained at a safe level making it possible for them to settle current liabilities.

Among larger producers, the operating expense ratio decreased significantly in two consecutive quarters, which indicates that reasonable measures are taken to reduce operating expenses.

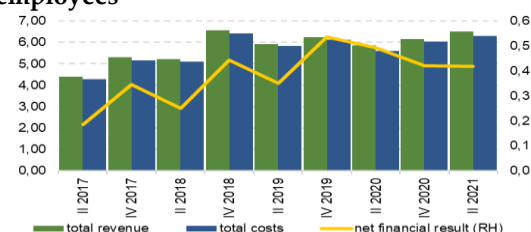
Compared to the corresponding period in 2020, mainly the share of costs of materials and electricity consumed increased in the structure of operating expenses in the group of larger producers (to 51% from 55%). When analysing the change in costs, an increase was recorded in all components of operating expenses, most notably in the consumption of materials and energy (by 26%), costs of goods sold (by 17%) and payroll (by 8%).

**Figure 147 Economic indicators of construction material producers employing more than 49 employees**



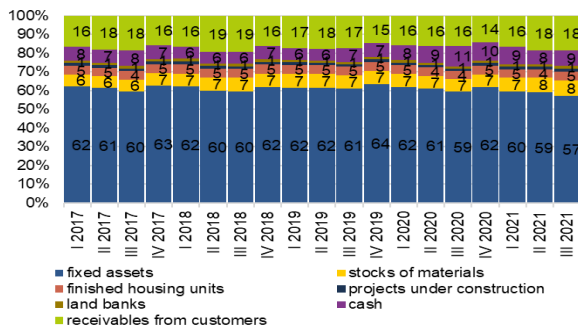
Source: NBP based on Statistics Poland (F01)

**Figure 148 Economic indicators of construction material producers employing from 9 to 49 employees**



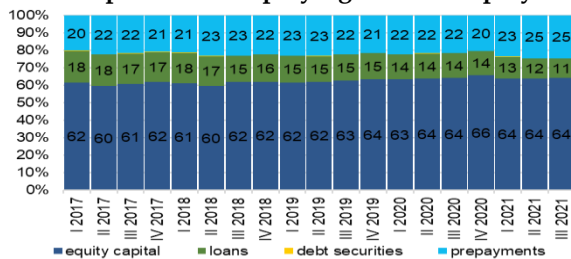
Source: NBP based on Statistics Poland (F01)

**Figure 149 Structure of assets of construction material producers employing more than 49 employees**



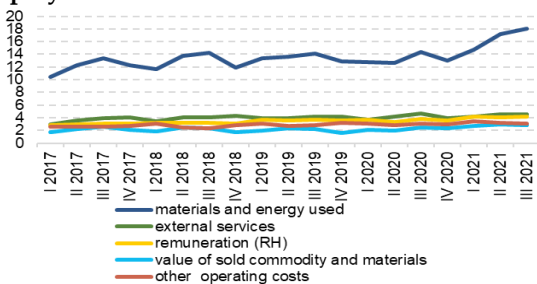
Source: NBP based on Statistics Poland (F01)

**Figure 151 Structure of liabilities of construction material producers employing over 49 employees**



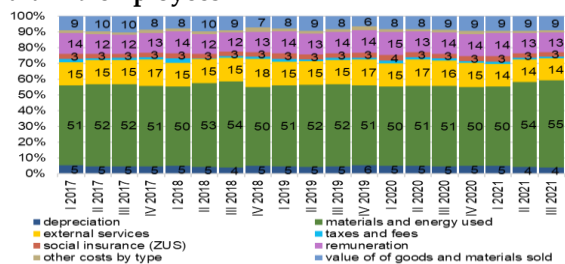
Source: NBP based on Statistics Poland (F01)

**Figure 153 Operating expenses of construction material producers employing more than 49 employees**



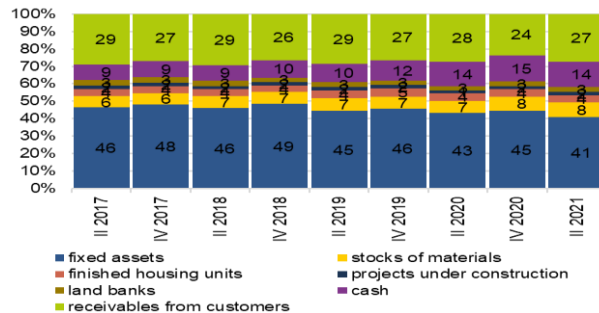
Source: NBP based on Statistics Poland (F01)

**Figure 155 Structure of operating expenses of construction material producers employing more than 49 employees**



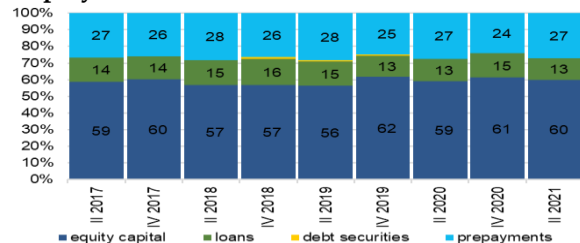
Source: NBP based on Statistics Poland (F01)

**Figure 150 Structure of assets of construction materials producers employing from 9 to 49 employees**



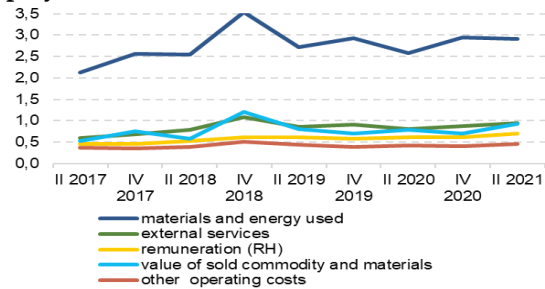
Source: NBP based on Statistics Poland (F01)

**Figure 152 Structure of liabilities of construction material producers employing from 9 to 49 employees**



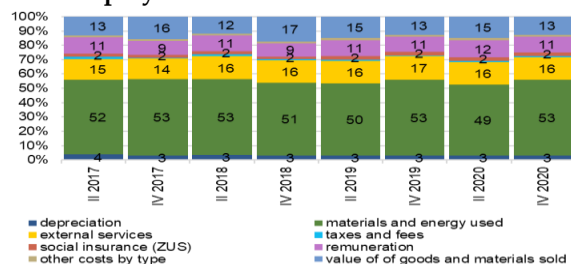
Source: NBP based on Statistics Poland (F01)

**Figure 154 Operating expenses of construction material producers employing from 9 to 49 employees**



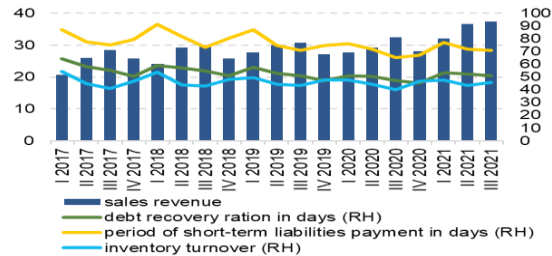
Source: NBP based on Statistics Poland (F01)

**Figure 156 Structure of operating expenses of construction material producers employing from 9 to 49 employees**



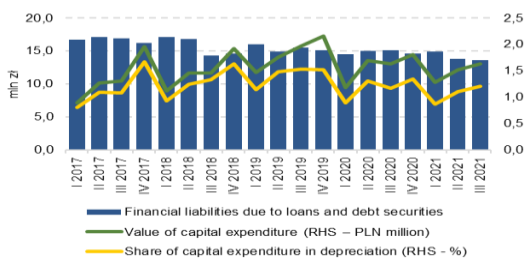
Source: NBP based on Statistics Poland (F01)

**Figure 157 Turnover of inventory, accounts receivable and accounts payable of construction material producers employing more than 49 employees**



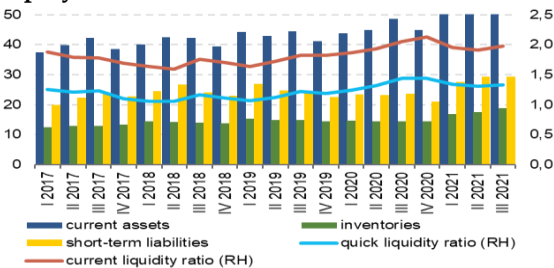
Source: NBP based on Statistics Poland (F01)

**Figure 159 Profitability of activities of construction material producers employing more than 49 employees**



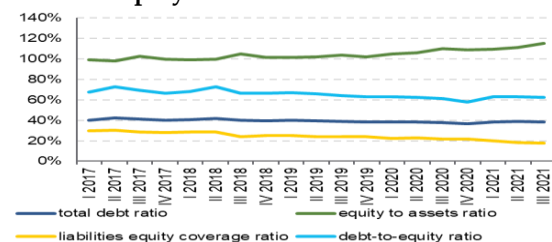
Source: NBP based on Statistics Poland (F01)

**Figure 161 Liquidity ratios of construction material producers employing more than 49 employees**



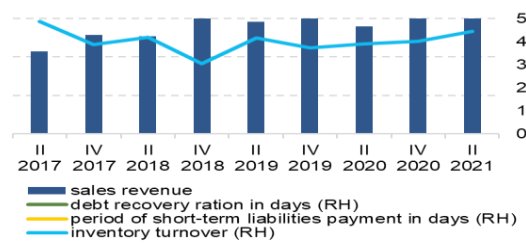
Source: NBP based on Statistics Poland (F01)

**Figure 163 Debt ratio and debt coverage ratio of construction material producers employing more than 49 employees**



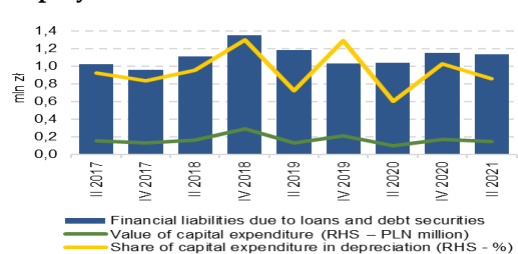
Source: NBP based on Statistics Poland (F01)

**Figure 158 Turnover of inventory, accounts receivable and accounts payable of construction material producers employing from 9 to 49 employees**



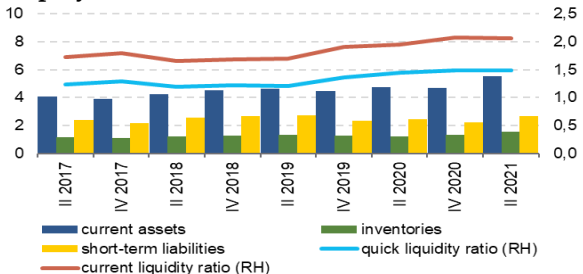
Source: NBP based on Statistics Poland (F01)

**Figure 160 Profitability of activity of construction material producers employing from 9 to 49 employees**



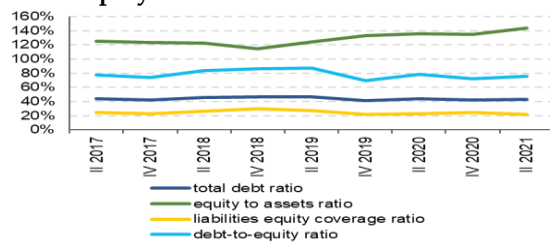
Source: NBP based on Statistics Poland (F01)

**Figure 162 Liquidity ratios of construction material producers employing from 9 to 49 employees**



Source: NBP based on Statistics Poland (F01)

**Figure 164 Debt ratio and debt coverage ratio of construction material producers employing from 9 to 49 employees**



Source: NBP based on Statistics Poland (F01)

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