

May 2014

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# **Information on home prices and the situation in the residential and commercial real estate market in Poland in 2014 Q1.**

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## Summary

The analysis of the situation in the Polish real estate market in 2014 Q1 leads to the following conclusions:

- In 2014 Q1, offer prices of both new housing put on the market as well as housing already on offer in the primary markets of all cities were stable. Developers do increasingly better at adjusting the sizes and prices of offered homes to clients' financial possibilities. Stabilization of transaction prices was observed in the primary markets of 7 and 9 cities. On the other hand, Warsaw noted a slight decline in transaction prices in both the primary and secondary market.
- 2014 Q1 recorded a slight increase in interest rates on new mortgage loans in PLN. Combined with slowly growing wages this contributed to a slight improvement of the availability of loan-financed housing.
- The estimated value of disbursed mortgage loans exceeded the level recorded in the previous quarter and in the corresponding period of the previous year. Home sales in the primary and secondary market were supported by cash purchases, and in the primary market also by a new government-subsidized program of home purchases Housing for the Young (Mieszkanie dla Młodych, MDM).
- Home sales in the primary market of the major cities have been rising rapidly for the last five quarters, and the supply of unsold dwellings may be considered to have reached the equilibrium level. In the secondary market of Warsaw and of the 7 major cities, the home selling time extended considerably.
- In 2014 Q1, the number of completed dwellings was by 1.5 thousand lower than in the corresponding quarter of the previous year, but historically speaking, this figure is still high. The number of issued building permits and commenced investments was higher than in 2013. Should the upward trend in construction continue, then, in approximately two years' time, more housing will be put on the market than currently.
- Housing production is profitable for real estate developers, and the number of bankruptcies among construction companies and developers declined as compared to 2013 Q1.
- Lending to corporates for real estate financing increased slightly. On the other hand, the amount of real estate developer loans for home construction diminished slightly, while their quality remained stable.
- The commercial real estate market saw a continued upward trend in the volume of investment transactions. Yet, as a result of growing supply of completed office space, the vacancy rate in this segment continued on an upward trend.

The study provides a synthetic description of key developments affecting the housing market in Poland's largest cities in 2014 Q1.<sup>1</sup> It also contains an appendix with charts and figures presenting:

- 1) home prices (Figures 1–18),
- 2) housing availability, loan availability and availability of loan-financed housing (Figures 19–22),
- 3) mortgage loan disbursements and interest rates (Figures 23–33),
- 4) operating profitability of housing and real estate development projects, costs of construction and assembly output and economic situation of real estate developers in Poland (Figures 34–59),
- 5) housing construction and the residential market in Poland (Figures 60–72).

The analysis of housing prices, offer prices, transaction prices and hedonic prices<sup>2</sup> in the primary and secondary markets relies on the data from the housing market survey of the Real Estate Market Database (BaRN)<sup>3</sup>. As part of the survey of the commercial real estate market, Commercial Real Estate Market Database (BaNK) data on rent, offer prices and transaction prices of commercial real estate are collected and analyzed.

Also data from PONT Info Nieruchomości (PONT), AMRON, SARFIN Polish Banks' Association and Comparables.pl were used in the analyses. We also relied on the analyses and reports of the Polish Financial Supervision Authority (KNF) and REAS, and the aggregate credit data from the Credit Information Bureau (BIK). For the structural market analysis, data published by the Central Statistical Office (GUS) and many studies containing sector data were used.

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1 The information was prepared by the Economic Institute for the needs of the authorities of NBP and it presents the authors' opinions. This document should not be read as an advisory material, nor should it be the basis for any investment decisions.

2 The hedonic price of housing reflects the "pure" price, that is the price that results from other factors than the quality of housing. In this study, the hedonic price is an average price from the base period multiplied by the hedonic index. The price reflects an average level of prices of a specific housing sample from the base period (fixed housing basket), after inclusion of the "pure" change in the price of homes sold in consecutive periods. The hedonic price stated in the report says what the average price of the fixed home sample from a specific reference period would be, considering the real "pure" change in transaction prices. The difference between the hedonic index used to determine the hedonic price and the average or the median price growth is that the index does not react strongly to any change in the quality of homes sold over a certain period, (for instance the hedonic index should respond less to a larger number of small apartments with a higher price per square meter than the average or median price index). For more information, see article by M. Wiślak (2010) entitled „Metody wyznaczania hedonicznych indeksów cen jako sposób kontroli zmian jakości dóbr”, in *Wiadomości Statystyczne* no. 9.

3 See Programme for Surveys in Public Statistics for 2014. Annex to the Decree of the Council of Ministers of 9 August 2013 on the Programme for Surveys in Public Statistics for 2014 (*Journal of Laws* of 2013, item 1159), symbol 1.26.09 (078). The survey of residential and commercial real estate prices in Poland's selected cities is run by the President of Narodowy Bank Polski. The reporting forms were announced in the Decree of the Prime Minister of 5 February 2014 on reporting forms, completion instructions and statistical questionnaires and survey forms used in surveys of public statistics for 2013 (*Journal of Laws* of 2013 item 1223). Since the survey is carried out by NBP, the Bank publishes the surveys on its website.

In 2014 Q1, the major trends observed in the previous quarter continued. 2014 Q1 also saw developments indicative of quality changes in the sector. The sector analysis<sup>4</sup> and the measures below suggest that the developers' housing market reached the equilibrium level:

- changes in household balance of receivables resulting from mortgage loans are minor and stable (Figure 22),
- as regards availability of loan-financed housing, the size of the adopted loan-financed housing unit in the major markets exceeded 55 square meters (Figure 21),
- the supply of usable area of housing in the primary market approached the demand (Figures 67 and 68),
- the estimated rate of return on developer's project is approx. 15% (Figure 36),
- the average selling time of the entire offer of primary market in Poland's 6 major cities is approximately one year<sup>5</sup>,
- home construction costs are stable (Figure 44),
- concentration of real estate developers' production, as measured by the share of home sales by the five largest real estate development companies in the total home sales by large real estate development companies, is approx. 50% (Figure 45).

Transaction prices of housing in almost all major markets remained stable, with the exception of Warsaw where prices fell somewhat (Figures 1-4). The observed price level ensured profitability of housing production (Figure 37-43). A minor increase in nominal interest rates on PLN mortgage loans (Figure 31) combined with stable prices and a slight growth in income resulted in a slight rise in loan availability and availability of loan-financed housing (Figure 21-22). As a result, balance of receivables from households resulting from mortgage loan were slightly up, which supported housing demand (Figure 23-24).

The long-term decline in nominal and real prices encourages individuals to invest in rental housing. There is no official data on this phenomenon, however, market data suggests that housing bought for cash is often used for rental purposes. Also rental rates remained stable. However, the costs of entry into/exit from<sup>6</sup> this type of investment are still considerable. Moreover, interest on household deposits with banks continued to run at a low and falling level. Consequently, the rate of return on home rental was competitive as compared with

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4 See: "Report on the situation in the residential and commercial real estate market in Poland in 2012, part 3.2 Conditions of the sector equilibrium and the real economic processes", NBP 2013

5 These markets are Cracow, Łódź, Poznań, Gdańsk-Sopot-Gdynia conglomeration, Warsaw and Wrocław whose data are monitored by the company REAS. In 2013, the share of those markets in the total number of developer's housing units completed in entire Poland was 52% and 80% in relation to 16 voivodeship cities (85% in value terms). Thus, these markets may be considered a reliable benchmark for entire Poland.

6 The costs include notary fees, stamp duty and the cost of time needed to complete the entire transaction; in case you need to sell housing quickly, there is also a risk you may not get the expected price.

interest on bank deposits (Figure 17). Also quotations of stock exchange listed companies or participation units of commercial real estate funds show stagnation or even decline (Figure 34 and 18). There was a further rise in the number of housing transactions in the primary market (Figure 65, Table 1). As a result, the housing offer in the primary market continued to diminish (Figure 65).

A new quality as compared to the previous quarters is the achievement of the equilibrium level in the real estate development market, as, on the basis of the analysis of historical data, the market equilibrium may be defined as a situation in which the average selling time of the entire market offer is approximately 4 quarters (Figure 13). Home prices in the primary market, although historically showing a positive elasticity associated with rising demand, remained stable, and declined slightly in Warsaw after the 2013 increases.

This situation is the result of both greater experience of buyers who lived through the property market cycle in the recent years and are less susceptible to marketing arguments of home sellers declaring rapid price increases, and possibly also the government-subsidized housing scheme *Housing for the Young* (Mieszkanie dla Młodych, MDM). Price limits set in the program, especially for the largest market - Warsaw - are relatively low and serve as a benchmark in negotiations for home buyers in the average housing sector. It should be mentioned that home prices in the Warsaw primary market in the last three quarters increased as compared with prices in the secondary market by approx. 5-7%, thus discounting the basic subsidies paid under the *Housing for the Young Scheme* (MDM)<sup>7</sup>. Experience with the government-subsidized housing scheme *Family on Their Own* (Rodzina na Swoim, RNS) shows that developers have adjusted their average price of housing to the limits set in the scheme. The market data suggest that the same is true of the *Housing for the Young* programme. If the price of average housing units, which account for the largest part of the market grows, the average home price in the entire market also increases, although the price of higher standard and better location housing does not necessarily have to change. As suggested by the international experience and the experience with the Polish government-subsidized housing scheme RMS, price limits in subsidy programs should be set conservatively<sup>8</sup>.

We assume that if the MDM housing scheme was dedicated to both markets, like the previous RNS housing programme, rising home prices in the primary market would automatically shift demand to the secondary market, ensuring greater price stability. Lower interest rates resulted in a delayed response of demand, whereas the additional fiscal stimulus proved to be a short-term price stabilization factor. It should be emphasized that the MDM

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<sup>7</sup> The basic subsidy paid for housing meeting the requirements of the MDM housing scheme was fixed at 5% of its value. Child subsidies are higher.

<sup>8</sup> The years 2010-2011 saw a significant rise in the prices of housing admitted to the RNS housing scheme as compared to the market price, which resulted in accelerated disbursement of subsidies, prices stabilization at a high level and increased volume of construction. See "Report on the situation in the residential and commercial real estate market in Poland in 2012", p. 29

housing scheme is at its implementation stage and the effects of its impact on the market can only be assessed at the end of 2014.

A more in-depth analysis of real estate markets and agents provides more detailed information. As regards the housing market, apart from the already discussed processes, such as price stability and decline in new housing supply down to the equilibrium level, attention should be paid to higher appraisal of sold dwellings as compared to 2013 Q1 (Table 1). While home selling time in the primary market shortened (Figure 13), it extended further in the secondary market, despite lower prices (Figure 72). A shorter home selling time in the primary market could have resulted, besides the MDM housing scheme, from real estate developers having better tailored their offer to clients' financial possibilities. Since 2011 housing offer in the primary market has been better suited to the financial capacity of home buyers - more smaller dwellings (Figure 67 and 68), while the secondary market is still marked by a significant discrepancy - oversupply of large housing as compared to housing demand (Figures 70-71). This is quite understandable as real estate developers are able to change the structure of housing production within 3-5 years' time, whereas the supply of homes in the secondary market is determined by the structure of the existing stock. Also the number of newly started housing projects is picking up (Figure 62). As a result, investment under construction (Figure 64) is on the rise, which means the beginning of a new production cycle. It should be noted, however, that the cycles of investment under construction does not fully correspond with demand cycles, which may lead to a further increase in the number of unsold housing.

Basic indicators<sup>9</sup> of the real estate development sector, according to the GUS data (ROE and ROA, Figure 49) continue to be low, but a more detailed analysis of real estate development enterprises (Figures 36-55) gives no cause for concern. Developers are highly capitalized (Figure 52), have good liquidity (Figure 55), and housing production is profitable (Figure 37). Home prices have stabilized, while production costs are on the decline (Figure 44 and 45). Although profitability of construction of housing meeting the requirements of the MDM housing scheme is lower than in the case of a standard project, it is still satisfactory<sup>10</sup>. It is worth noting that bank debt of real estate developers (Figure 57) and the share of doubtful loans remains stable. It should be noted that during the period under analysis, the number of bankruptcies among construction companies and real estate developers (Figure 35) fell to 41

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9 Indicators of real estate development companies (i.e. investment under construction, often shown in the profit and loss account of pure costs of the company financed with the entire project only), due to their specific nature fail to accurately reflect the actual condition of the sector.

10 Profitability estimated on the basis of an average residential project in Warsaw, with maximum prices at the MDM limit, was 7% (see: detailed analysis in the article: "Real estate development company in the Polish market and the problems connected with its analysis" in: "Report on the situation in the residential and commercial real estate market in Poland in 2011", NBP 2012).

as compared to 49 in 2013 Q1. The ratio of real estate developers' debt classified by banks as bad debt (Figure 58) in the said quarter was stable.

The estimated volume of mortgage loan disbursements, adjusted for repayment, indicates a gradual increase since 2013 (Figure 23). As a result, household debt resulting from mortgage loans continued to rise (Figure 23). The steadily declining share of loans denominated in foreign currencies, which has already fallen below 50% of the total debt, is a positive sign for the stability of the banking sector. On the other hand, loan quality is gradually deteriorating. Yet, this is a natural process and its scale does not raise any concerns yet (Figure 25). Also the geographical structure of new contracts is relatively stable (Figure 29 and 30). Despite a minor increase, interest rates remain low (Figure 31). A slight rise in the margin, observed in 2013, improved profitability of bank lending. The yield on bank lending is now around 20%, ensuring profitability of mortgage loans (Figures 31, 32 and 33). A close-to-zero real interest rate, calculated with respect to the growth rate of households' nominal income (Figure 20) is a factor driving short-term demand for lending.

The commercial real estate market (office, retail, warehouse and other space) in 2014 Q1, saw further upward trend in the volume of transactions, observed since 2010. In the analyzed quarter, the value of commercial transactions exceeded EUR 900 million (as compared to EUR 500 million in 2013 Q1, see Figure 59). Yet, it should be emphasized that a significant part of transactions relate to a change of ownership of the already operating and rented commercial building. According to the Comparables.pl data, investments in office space (approximately 60%) and retail space (37% share) accounted for the largest part of investment transactions. As in the previous years and quarters, international investors dominate the market. Capitalization rates on investment in the office and retail space market in prime locations dropped slightly and stood at approx. 6% as compared with 7% in the previous quarter. The decline in capitalization rates amidst relatively stable rents means that transaction prices are rising, so investors accept higher investment risk (accept lower risk premium). Lending to enterprises for office real estate extended by Polish banks has been on the decline since the beginning of 2013 and in 2014 Q1 its volume stood at nearly PLN 8 billion. At the same time, the share of doubtful loans since the end of 2012 has been below 5%, which is a positive sign. Yet, considering, that along with rising affluence of the society, Polish investors' interest in the real estate sector is likely to grow, bank debt resulting from commercial real estate purchases is also likely to increase.

In Poland, at the end of 2014 Q1 there were 6.48 million square meters of office space, most of which (4.2 million sq. m) was located in Warsaw<sup>11</sup>. According to the data provided by the consulting company JLL there are approximately 1.2 million square meters of office space under construction, including more than 0.6 million square meters in Warsaw. The vacancy rate for the most important office markets in 2014 Q1 remained at 12%, which is close to the end of 2013 level and significantly higher than the end of 2012 level, when they amounted to 9.1%<sup>12</sup>. The Warsaw market had seen a continuing upward trend in the office space vacancy rate, observed since 2012, which at the end of 2014 Q1 reached 12.2%<sup>13</sup>. At the same time, transaction rents for Class A office space in Warsaw remain stable and stood at approx. EUR 19 per sq. m per month<sup>14</sup>. This shows that office buildings in prime location are still in demand. In contrast, the data on large office space under construction, in view of the economic situation in Poland and abroad suggest that the vacancy rate will continue to rise, especially in the case of older properties in worse locations. This may be a problem for their owners whose incomes will fall. Owners can encourage customers offering lower rents or revitalize building, yet this entails additional costs.

The area of retail space in Poland, after completion of approx. 164 thousand sq. m<sup>15</sup>, totaled almost 10 million square meters at the end of 2014 Q1. It follows from the data released by Colliers International, that the vacancy rate in the 8 largest cities was low and amounted to 3.3%, while in the cities with a population of 200 - 400 thousand was slightly over 5%. According to the market data a significant part of new retail space was completed in smaller cities and this trend is likely to continue until the end of 2014. Approximately 0.55 million square meters of retail space, primarily in the form of shopping malls, are under construction<sup>16</sup>. A report by the consulting company JLL suggests that tenants are interested in retail space in good location in big cities, while owners of buildings located in cities with a large supply of retail space are likely to be forced to cut rent. International experience shows that it is difficult to manage oversupply of retail space, and the most common and effective response is rent reduction. Growing vacancy rates combined with falling rents mean that owners of retail space earn less income.

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11 See Colliers International Report "Przegląd Rynku Nieruchomości - I kwartał 2014." ["Real Estate Market Report - 2014 Q1"].

12 See Colliers International Report "Przegląd Rynku Nieruchomości - I kwartał 2014" ["Real Estate Market Report - 2014 Q1"] and Colliers International Report „Przegląd Rynku Nieruchomości – Podsumowanie 2013 r.” [Real Estate Market Report – 2013 Summary]

13 See JLL Report "Warszawski Rynek Nieruchomości w IV kwartale 2013 r." [Warsaw Real Estate Market in 2013 Q4] and JLL press release of 25.04.2014.

14 Data from the Commercial Real Estate Data Base of NBP.

15 See Colliers International Report „Przegląd Rynku Nieruchomości - I kwartał 2014”. ["Real Estate Market Report - 2014 Q1"].

16 See JLL Report „Rynek handlowy w Polsce, I kw. 2014 r.” [„Commercial real estate market in Poland, 2014 Q1”]



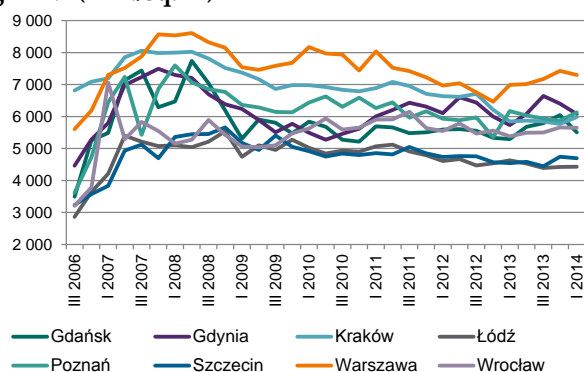
Possible rent reductions and growing vacancy rates in the retail and office space market may translate into declining income of commercial real estate's owners. If the owners took out loans for the purchase of their property they may face problems with loan repayment. However, if property owners are investment funds to whom individuals entrusted their money, they may have a problem with dividend distribution or timely closing of the fund, as they will not be willing to sell the property below the originally assumed price.

Possible declines in the effective income may not only result in falling appraisal of the property but are also likely to negatively affect the price of other properties on the market. The situation in the commercial real estate market seems to be stable, yet, taking into account other countries' negative and costly experience in this segment, the central bank constantly monitors the market.

# Statistical annex

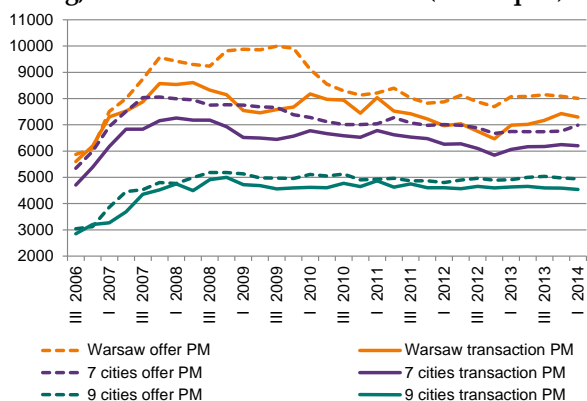
## 1. Transaction, hedonic<sup>17</sup>, and offer prices of housing, the primary market (PM), and the secondary market (SM)

**Figure 1 Transaction prices per square meter of housing – PM (PLN/sq. m)**



Source: NBP.

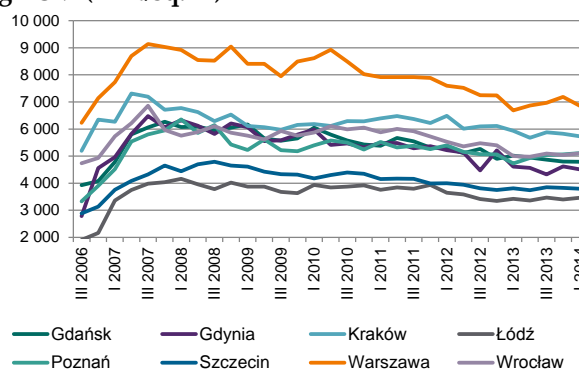
**Figure 3 Weighted average price per square meter of housing, offers and transactions – PM (PLN/sq. m)**



Note to figures 3–13: the price weighted with the share of housing in the market stock, the average price for Warsaw. Prices collected from developers and real estate agents and included in the BaRN database; description of the database in the 2012 annual report; 7 cities: Gdańsk, Gdynia, Kraków, Łódź, Poznań, Szczecin, Wrocław; 9 cities: Białystok, Bydgoszcz, Katowice, Kielce, Lublin, Olsztyn, Opole, Rzeszów, Zielona Góra.

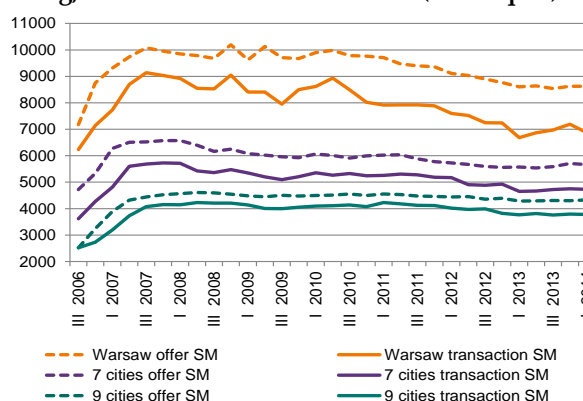
Source: NBP.

**Figure 2 Transaction prices per square meter of housing – SM (PLN/sq. m)**



Source: NBP.

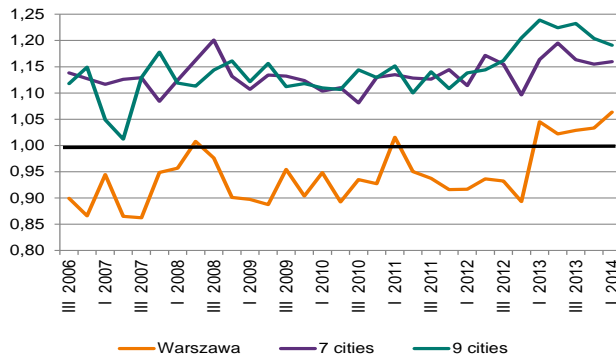
**Figure 4 Weighted average price per square meter of housing, offers and transactions – SM (PLN/sq. m)**



Source: NBP.

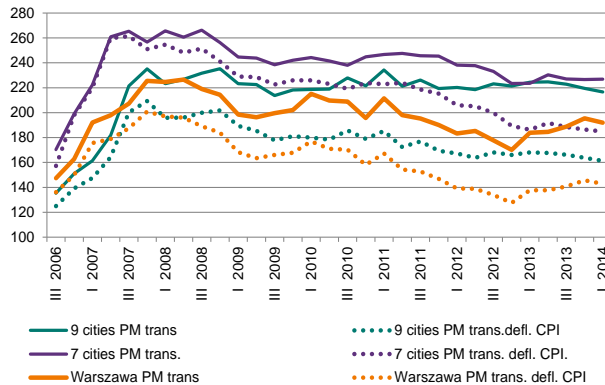
17 The hedonic price of housing reflects the "pure" price, that is the price that results from other factors than the quality of housing. The analysis always pertains to the price of a standardized apartment constructed on the basis of the econometric model. It adjusts the average price from the sample taking into account the change in the quality of housing from a given sample in each quarter. It is different from the average or the median price growth, which would react strongly to any change in the sample's composition, for instance a larger number of small apartments with a higher price per square meter. For more information, see M. Wiślak's (2010) article entitled "Metody wyznaczania hedonicznych indeksów cen jako sposób kontroli zmian jakości dóbr", in Wiadomości Statystyczne no. 9.

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



Source: NBP.

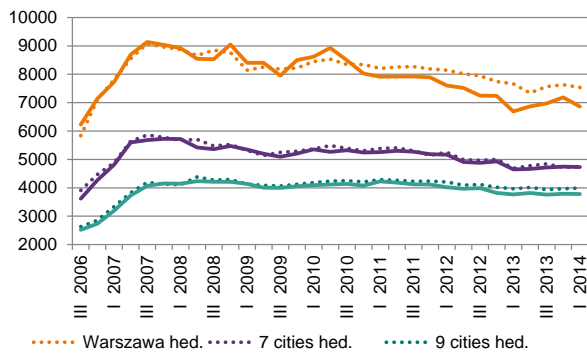
**Figure 7 Weighted average price per square meter of housing and CPI-deflated price (2002 Q4 = 100) – PM, transactions**



Note: the home price database of NBP (BaRN) has existed since 2006 Q3;

Source: NBP, PONT Info, AMRON, CSO.

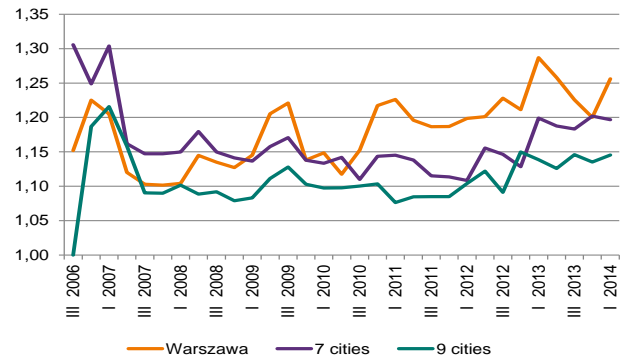
**Figure 9 Weighted average price per square meter of housing adjusted by the hedonic price index\*/ – SM, transactions (PLN/sq. m)**



\*/ price of one square meter of housing in the reference period adjusted for the price growth index accounting for changes in housing quality in subsequent quarters.

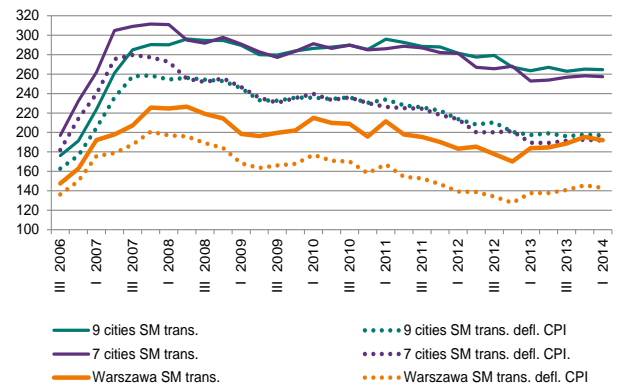
Source: NBP.

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



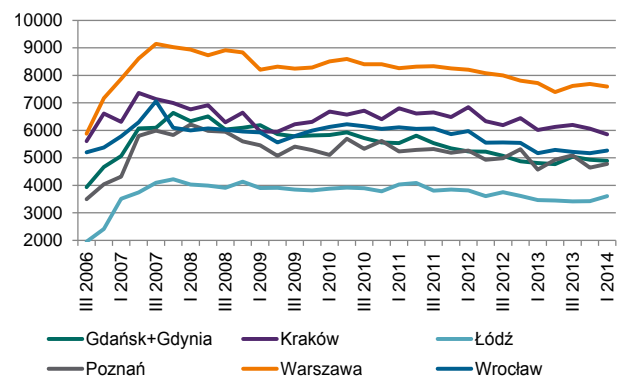
Source: NBP.

**Figure 8 Weighted average price per square meter of housing and CPI-deflated price (2002 Q4 = 100) – SM, transactions**



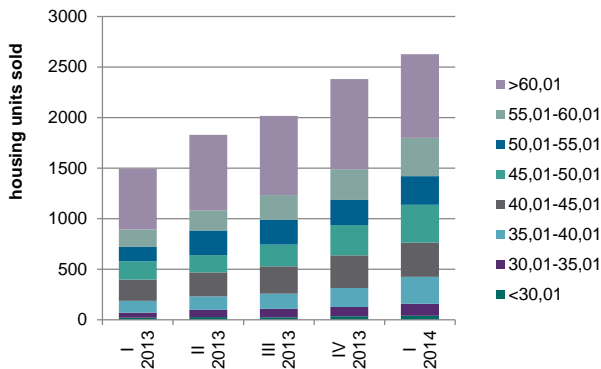
Source: NBP, PONT Info, AMRON, CSO.

**Figure 10 Housing transaction price per square meter in SM, adjusted by the hedonic price index\*/, in 8 cities (PLN/sq. m)**



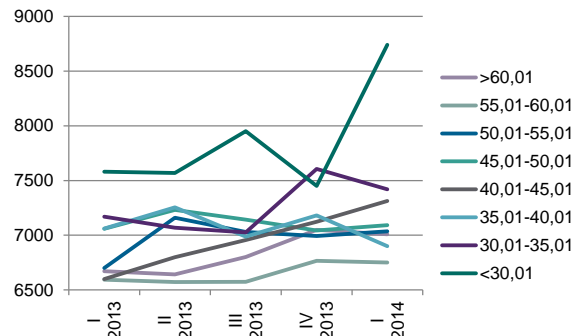
Source: NBP.

**Figure 11** Number of housing transactions in PM by usable area in Warsaw, in NBP database



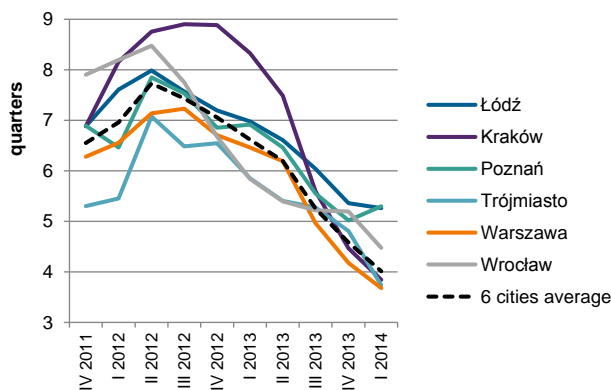
Source: NBP

**Figure 12** Average transaction prices per square meter of housing in PM by usable area in Warsaw, in NBP database (PLN/sq. m)



Source: NBP.

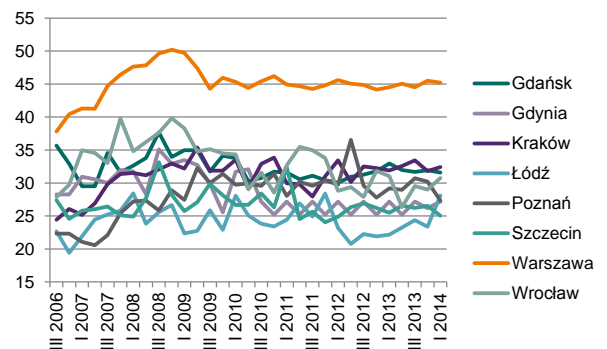
**Figure 13** Home selling time in PM in 7 cities



Note: selling time calculated in quarters as the number of housing on offer as of the end of the quarter in relation to average sales in the previous year.

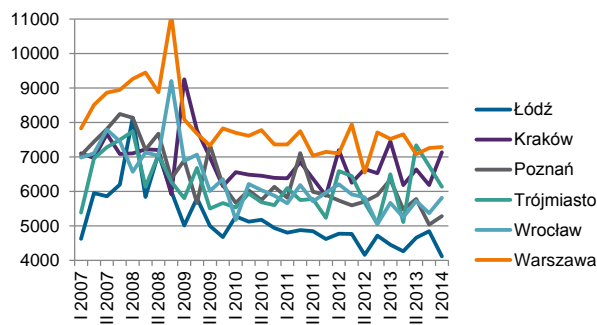
Source: NBP based on REAS.

**Figure 14** Average rent rates per square meter of housing in 8 cities (PLN/sq. m)



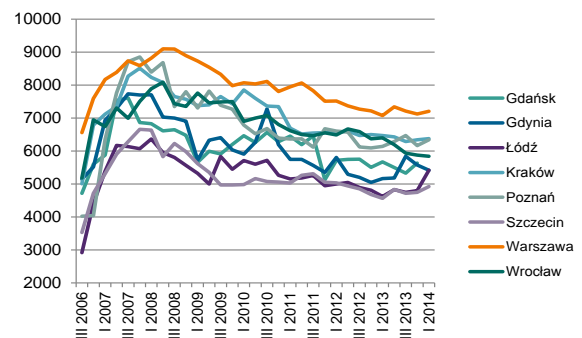
Source: NBP.

**Figure 15** Average offer prices per square meter, new launched housing contracts – PM, selected markets (PLN/sq. m)



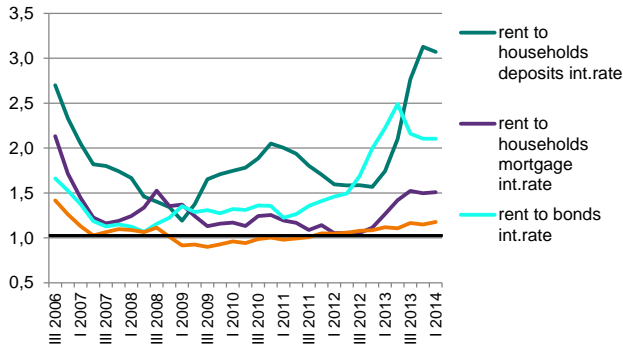
Note: prices refer only to new contracts put on the market for the first time. Source: REAS.

**Figure 16** Average offer prices per square meter, new housing contracts – PM in 8 cities (PLN/sq. m)



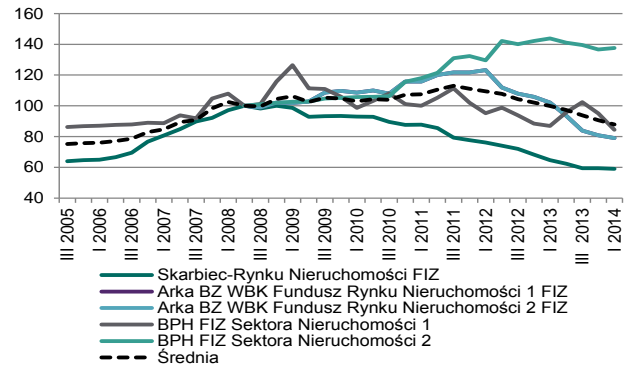
Note: prices are collected from all available sources. Source: PONT Info Nieruchomości.

**Figure 17 Profitability of home rental (average in 8 cities) as compared with bank deposits and loans, 5-year Treasury bonds and rate of capitalization of commercial property (offices and retail space)**



Note: values exceeding 1 denote higher profitability of purchasing property for rental than other capital investment. This analysis does not take into account high transaction costs in the housing market and potentially long payback periods.  
Source: NBP, CSO.

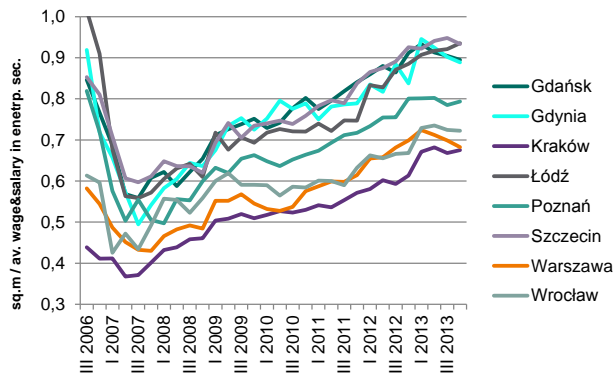
**Figure 18 Performance indicators of closed ended real estate investment funds operating on the commercial real estate market (Q2 2008 = 100)**



Note: for the investment funds Arka BZ WBK and Skarbiec the valuation is for the end of January, April, July and October, while for the remaining ones the valuation as for the end of the quarter.  
Source: internet pages of the investment funds.

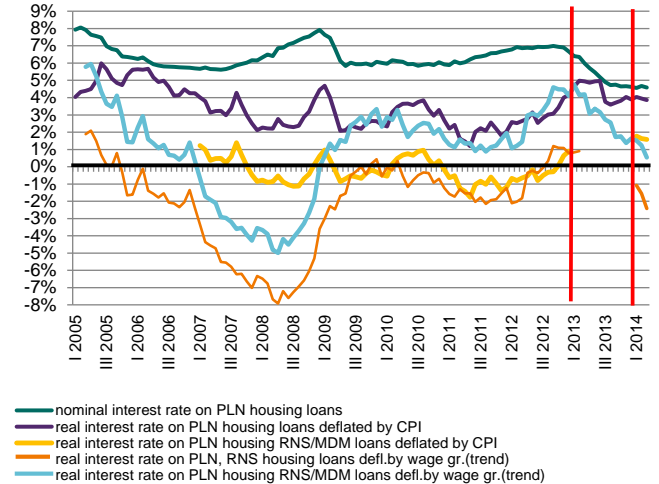
## 2. Housing availability, loan availability, availability of loan-financed housing

**Figure 19 Housing availability in terms of one square meter of housing for an average wage in the enterprise sector**



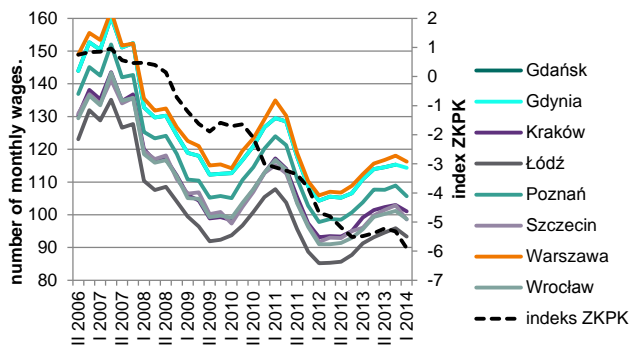
**Housing availability** – a measure of potential availability to purchase housing space at the offer price for an average wage. It expresses the number of square meters of housing that can be purchased for an average wage in the enterprise sector in a particular city (GUS), at an average transaction price in a particular market (40% in the PM and 60% in the SM) (NBP). Note: The red line separates the termination of the government subsidy scheme (RNS till Dec. 2012, MDM since Jan.2014).  
Source: NBP, CSO.

**Figure 20 Costs of PLN housing loans for consumer as deflated with CPI or wage growth in the enterprise sector**

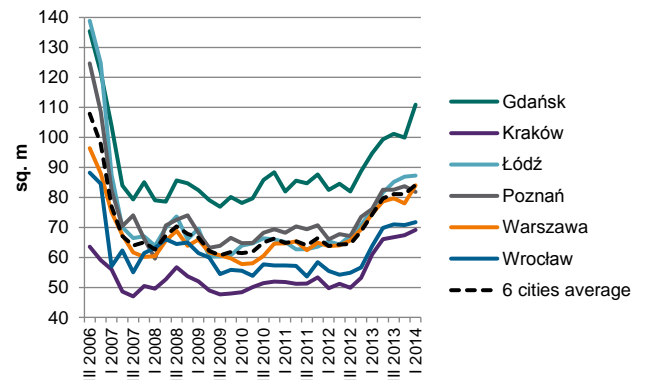


Note: The red line separates the termination of the government subsidy scheme (RNS till Dec. 2012, MDM since Jan.2014).  
Source: NBP, CSO.

**Figure 21 Available weighted\* mortgage loans and accumulated index of banks' housing loan policy (ZKPK)**



**Figure 22 Availability of loan-financed housing per one square meter (weighted loans\*)**



**Available housing loan** – a measure specifying the potential maximum housing loan; expressed as multiplication of the monthly wage in the enterprise sector in a particular market, taking into account banks' lending requirements and loan parameters (interest rate, amortization period, minimum wage, as the minimum income after payment of loan instalments).

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

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

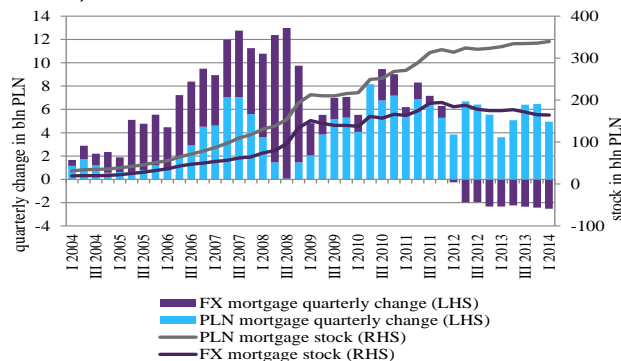
Note: weighting with the currency structure of the quarterly housing loan increase.

Source: NBP, CSO.

Source: NBP, CSO.

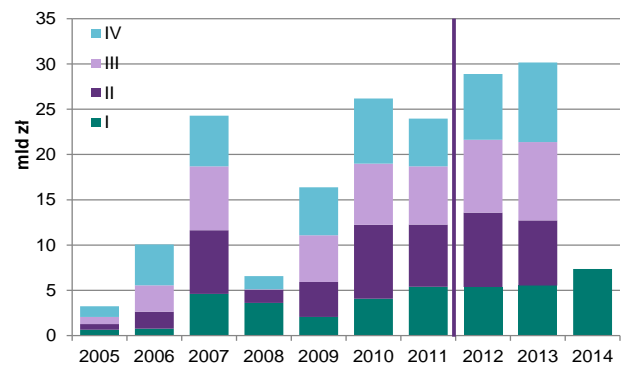
### 3. Disbursement of housing loans, interest rates

**Figure 23 Balance and quarter-on-quarter changes in housing loan receivables from households after adjustments and the currency structure of quarter-on-quarter increases in housing loan receivables (in PLN billion)**



Source: NBP.

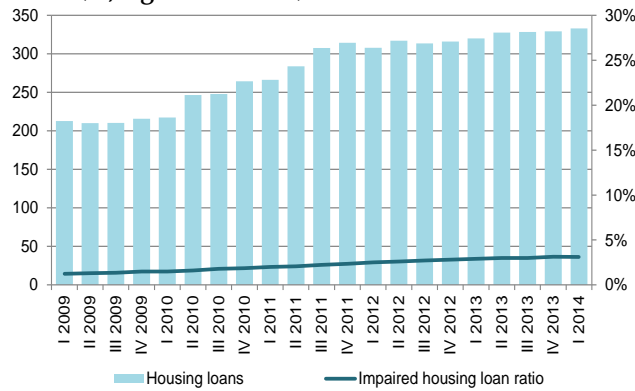
**Figure 24 Estimation of quarterly disbursements of housing loans in PLN (in PLN billion)**



Note: estimation of disbursements of newly granted loans in Poland in particular quarters is based on increases in the volume of housing loans to households. Since 2012 it has been adjusted for loan amortization and flows between the foreign currency loan portfolio and the zloty loan portfolio, available in the NBP reports. The entire banking system was taken into account, including credit unions (SKOK).

Source: NBP.

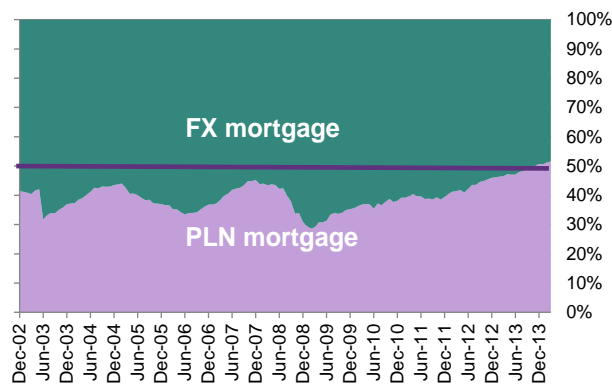
**Figure 25 Housing loans to households (in PLN billion, left-hand axis) and the indicator of doubtful loans (% , right-hand axis)**



Note to figure 25 and 58: receivables (loans) with determined loss of value – receivables from portfolio B, in relation to which objective premises of loss in value were observed and a decrease in the expected value of future cash flows (in banks using the IFRS) or which were deemed as doubtful 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 Polish Accounting Standards)

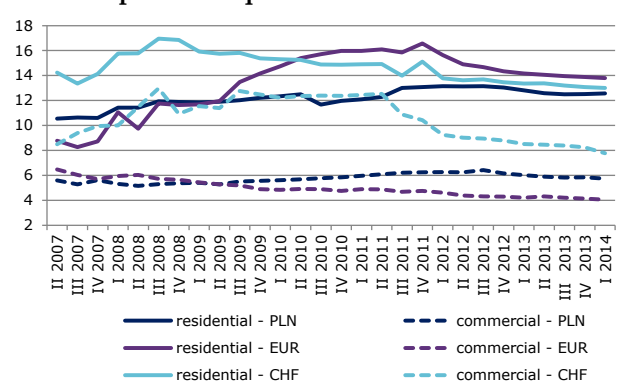
Source: NBP.

**Figure 27 Structure of housing loan receivables from households (in %)**



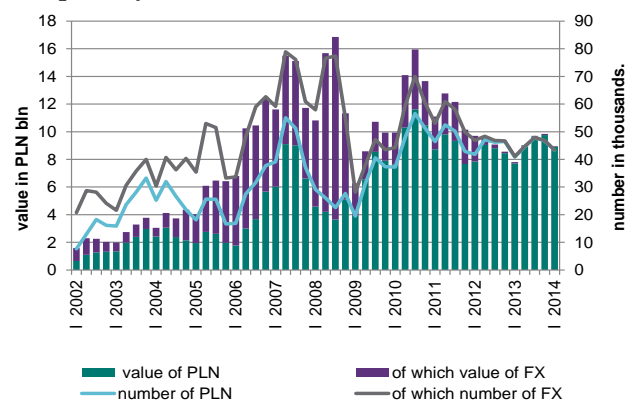
Source: NBP.

**Figure 26 Average maturity of residential and commercial real estate loans weighted by the total value of loans in a particular quarter**



Source: NBP.

**Figure 28 New housing loan contracts: quarterly value and quantity**



Note: the data inform about signed housing loan contracts and not the actual disbursement of housing loans.

Source: ZBP.

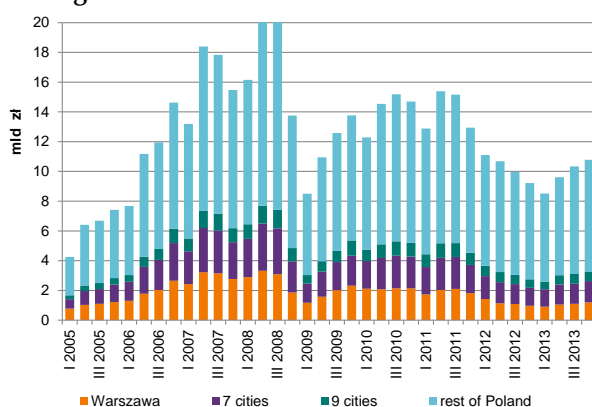
**Table 1** Estimated gross mortgage loan disbursements to households in Poland and estimated value of cash and loan-financed purchase transactions involving real estate developer housing in the 7 largest markets (in PLN million)

Date	Estimated amount of disbursed housing loan in Poland	Estimated value of housing transactions in the PM in 7 cities	Estimated amount of disbursed housing loans with client's down-payment for home purchase in the PM in 7 cities	Estimated amount of cash home purchases in the PM in 7 cities	Estimated share of cash home purchases in the PM in 7 cities
2012 Q1	5 354	2 726	917	1 809	0.66
2012 Q2	8 231	2 783	1 409	1 374	0.49
2012 Q3	8 036	2 510	1 376	1 134	0.45
2012 Q4	7 268	2.839	1 244	1 595	0.56
2013 Q1	5 530	2 610	985	1 624	0.62
2013 Q2	7 191	2 899	1 305	1 594	0.55
2013 Q3	8 645	3 438	1 599	1 839	0.53
2013 Q4	8 838	3 947	1 725	2 221	0.56
2014 Q1	7 360	3 971	1 437	2 535	0,64

Note: The estimates are based on the following assumptions: the estimated value of newly granted loans in Poland in particular quarters was based on increases in the volume of loans to households adjusted for loan amortization and flows between the foreign currency loan portfolio and the zloty loan portfolio, available in the NBP reporting. The entire banking system was taken into account, including credit unions SKOK. In order to calculate the estimated value of the primary market in 7 cities (Gdańsk, Gdynia, Cracow, Łódź, Poznań, Warsaw, Wrocław), the average home price was multiplied by the average home size in square meters and the number of housing units sold (based on REAS data). Based on BIK data it was assumed that in 2012 50% and at the end of 2013 57% of the volume of housing loans for home purchases in 7 cities were granted for primary market transactions. The estimated value of cash transactions was calculated as the differences between transactions in 7 markets and disbursements of loan with down-payment. 7 cities: Gdańsk, Gdynia, Cracow, Łódź, Poznań, Warsaw, Wrocław.

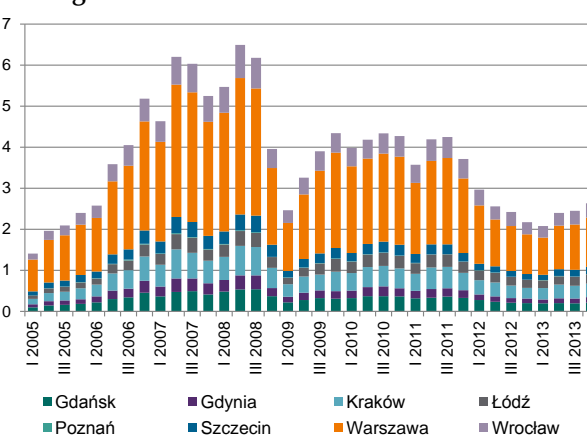
Source: NBP.

**Figure 29** Geographical breakdown of value by new housing loan contracts in Poland



Source: NBP based on BIK data.

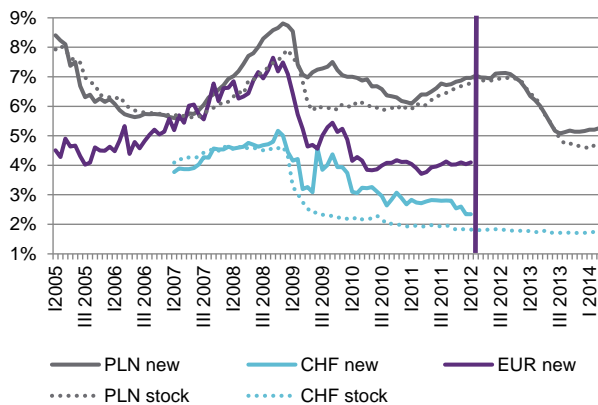
**Figure 30** Geographical breakdown of value by new housing loan contracts in Poland's 8 cities



Source: NBP based on BIK data.

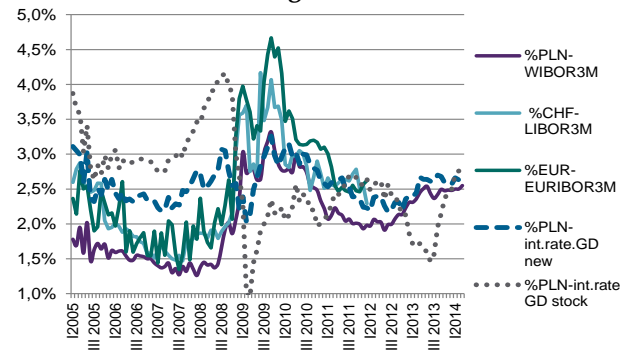


**Figure 31 Interest rates on housing loans for households in Poland**



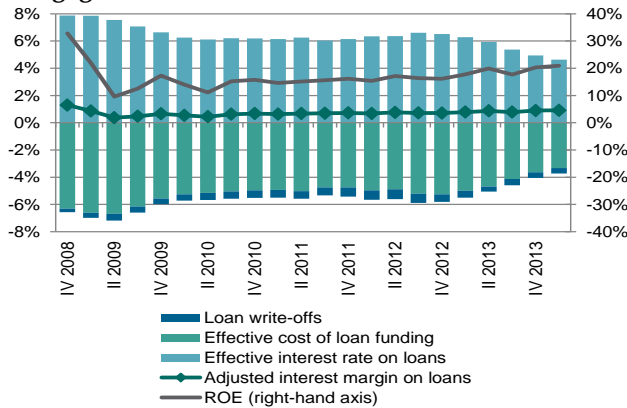
Note: Foreign currency loans ceased to be granted in 2012.  
Source: NBP.

**Figure 32 Bank margins (to WIBOR, LIBOR, EURIBOR 3M) on new housing loans.**



Note: Bank margin is the difference between housing loan rate (NBP data) and the LIBORCHF3M rate, the EURIBOR3M rate or WIBOR3M rate.  
Source: NBP.

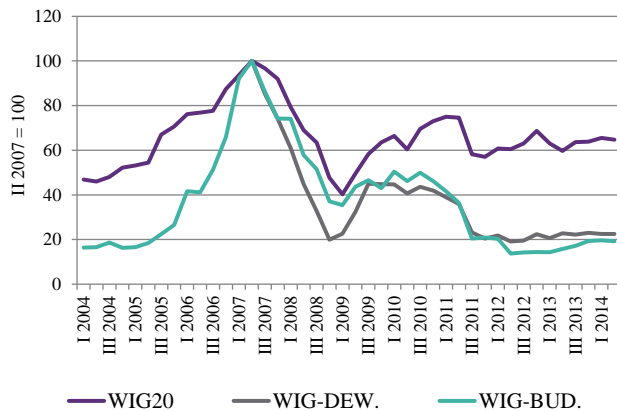
**Figure 33 Estimated banks' yield on zloty denominated mortgage loans in Poland**



Note to figure 32: Income and costs related to the mortgage loan portfolio. Estimated ROE (Return on Equity) is calculated as the adjusted interest margin on mortgage loans with respect to the minimum required down-payment. The minimum down-payment requirement is assessed on the basis of LTV estimate derived from the AMRON data and capital requirement for mortgage loans as set by the Polish Financial Supervision Authority (KNF). The adjusted interest margin is the result of all income being added and all costs being deducted. The effective cost of financing was computed based on the WIBOR rates by adding estimative costs related to bank's own financing.  
Source: NBP, AMRON.

**5. Operating rate of return on housing and real estate development projects, costs of construction and assembly production and economic situation of real estate developers in Poland**

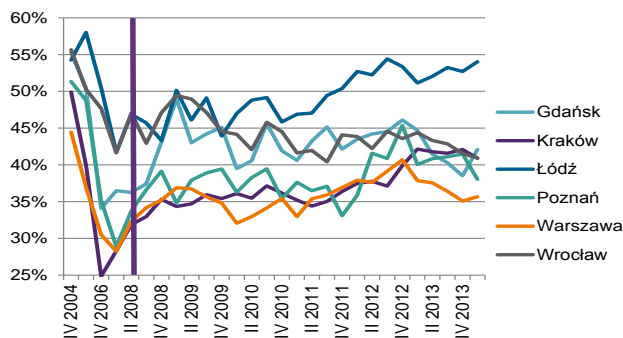
**Figure 34 Stock exchange indices: WIG20 and for real estate developers (WIG-DEW) and construction companies (WIG-BUD) (2007 Q2 =100)**



Note: harmonized data, 2007 Q2 = 100. The WIG index for real estate developers has been recorded since 2007 Q2.

Source: Warsaw Stock Exchange.

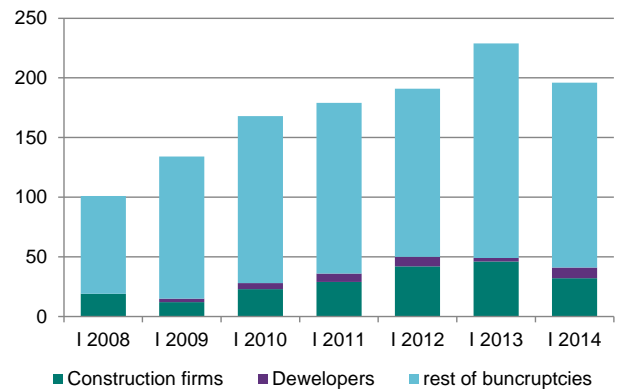
**Figure 36 Share of direct construction costs per square meter of the residential building's usable area (type 1121<sup>18</sup>) in the transaction price**



Note: up to 2008 Q2 - annual data

Source: NBP based on Sekocenbud.

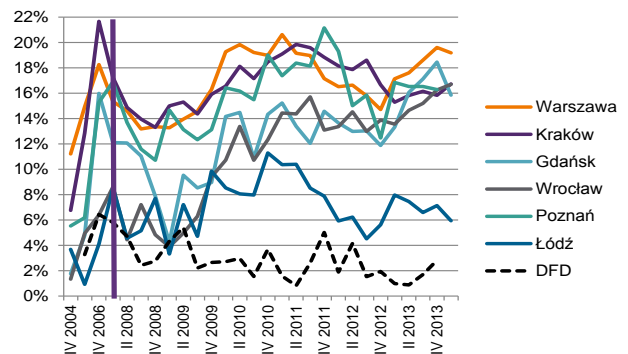
**Figure 35 Number of bankruptcies in the sectors**



Note: Breakdown according to the first entry into the National Court Register (KRS).

Source: Coface Poland.

**Figure 37 Rate of return on equity in investment projects in 6 cities and the actual rate of return of real estate developers (DFD)**

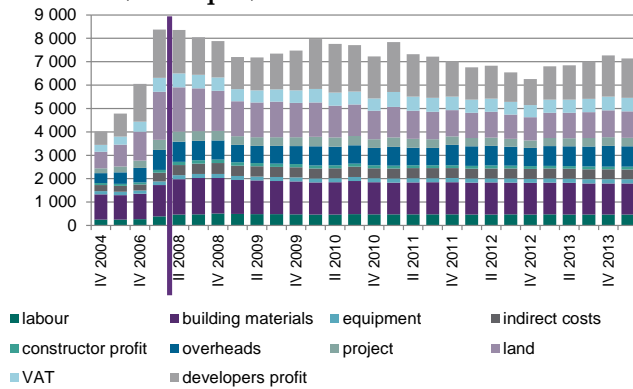


Note: The rate of return on equity from typical new investment projects assuming the currently applicable interest rates, banks' requirements and production costs; calculated on the basis of the diagram included in Annex 3 of the "Report on the situation of the Polish market of residential and commercial real estate in 2011" LD – ROE of an average large real estate developer (CSO).

Source: NBP based on Sekocenbud, CSO (F01).

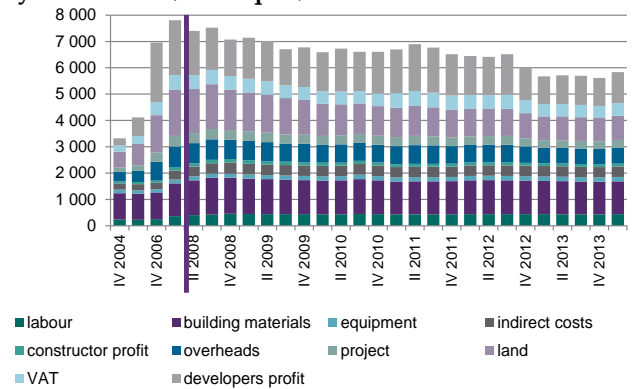
**18** Building (type 1121) monitored by NBP since the second half of 2004 as an average residential multi-family five-storey building with an underground parking space and retail premises on the ground-floor; traditional construction (overground part made from ceramic bricks). For the sake of convenience, it has been assumed that construction costs of one square meter of parking space and retail space are close to the costs of housing sold in shell condition; Real price of 1 square meter of housing, based on construction costs, depends on the share of outer space [building's common area], different for various buildings; when calculating the price of 1 square meter of usable housing area to be paid by consumer, we have assumed 20% share of outer space [building's common area] with respect to housing area and by this figure we have adjusted upward the price of 1 square meter of housing. Data adapted to the new developer's model of the construction process described further in Article 3 of the "Report on the situation of the Polish market of residential and commercial real estate in 2011".

**Figure 38 Warszawa – structure of price per one square meter of housing usable area (type 1121<sup>18/</sup>) to be paid by consumers (PLN/sq. m)**



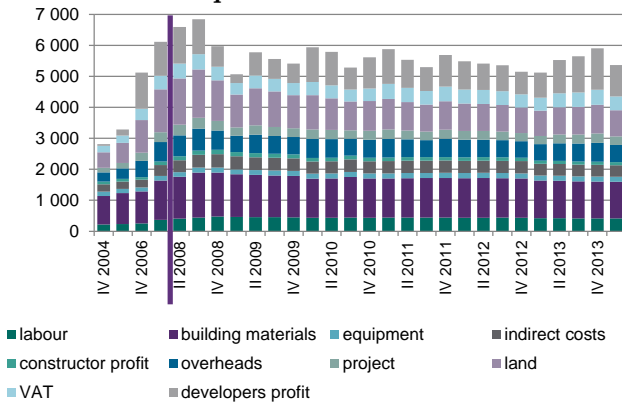
Note: data in figures 38-43 since 2008 Q2 in quarter-on-quarter terms, previously annual data.  
Source: NBP based on Sekocenbud, REAS.

**Figure 39 Kraków - structure of price per one square meter of housing usable area (type 1121<sup>18/</sup>) to be paid by consumers (PLN/sq. m)**



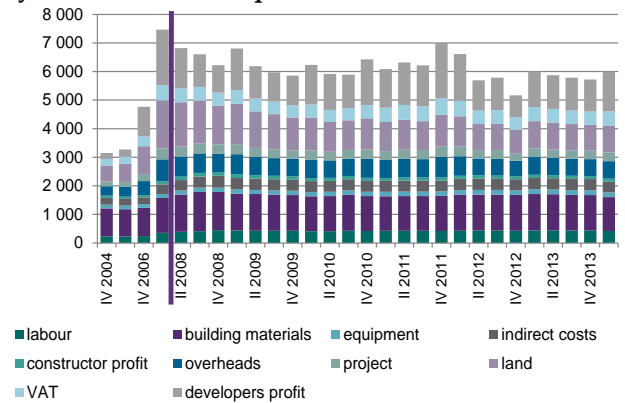
Source: NBP based on Sekocenbud, REAS.

**Figure 40 Gdańsk – structure of price per one square meter of housing usable area (type 1121<sup>18/</sup>) to be paid by consumers (PLN/sq. m)**



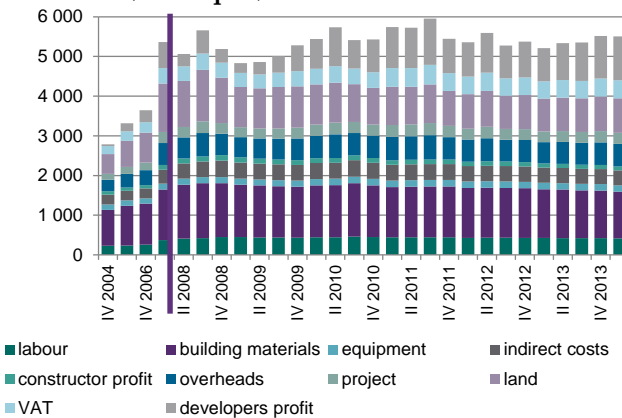
Source: NBP based on Sekocenbud, REAS.

**Figure 41 Poznań – structure of price per one square meter of housing usable area (type 1121<sup>18/</sup>) to be paid by consumers (PLN/sq. m)**



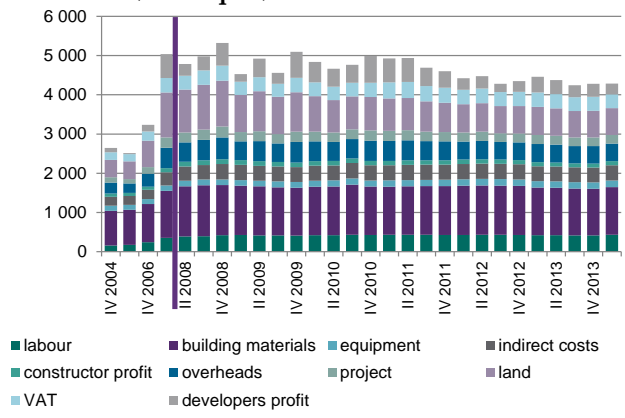
Source: NBP based on Sekocenbud, REAS.

**Figure 42 Wrocław – structure of price per one square meter of housing usable area (type 1121<sup>18/</sup>) to be paid by consumers (PLN/sq. m)**



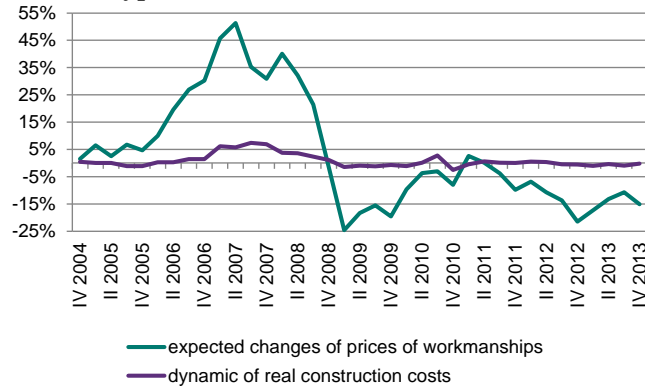
Source: NBP based on Sekocenbud, REAS.

**Figure 43 Łódź – structure of price per one square meter of housing usable area (type 1121<sup>18/</sup>) to be paid by consumers (PLN/sq. m)**



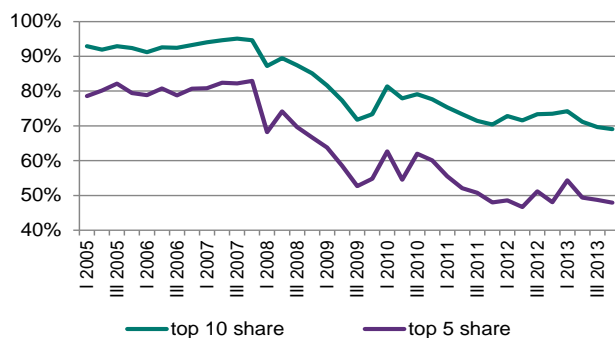
Source: NBP based on Sekocenbud, REAS.

**Figure 44 Anticipated changes in the price of construction and assembly production (+M3) and growth in the costs of construction of the residential building's usable area (type 1121<sup>18/</sup>)**



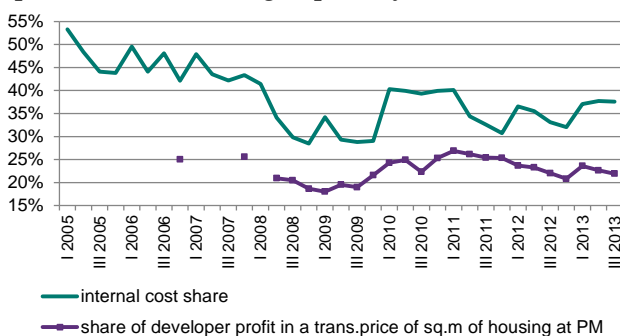
Source: NBP based on CSO data (business conditions survey), Sekocenbud.

**Figure 46 Share of sales of 5 and 10 largest real estate development companies in total sales (calculations based on financial reports)**



Source: NBP.

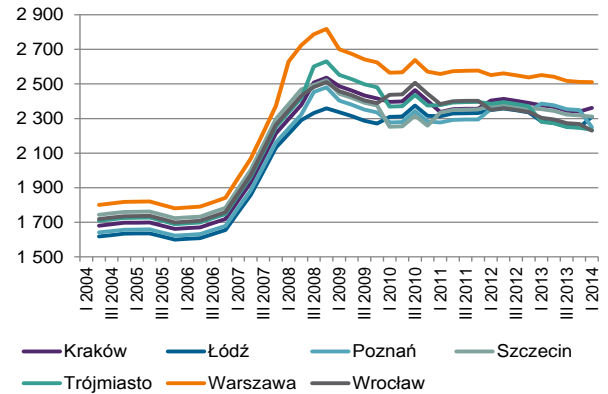
**Figure 48 Share of own costs in the costs incurred by a large real estate development company (LD) and the share of real estate developer's return in the price per square meter of housing in primary market (PM)**



Note: share of the real estate developer's return until 2007, in relation to the fourth quarters only.

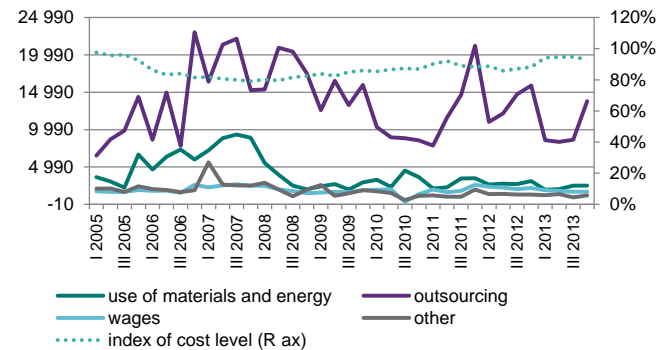
Source: NBP based on CSO (F01) and Sekocenbud.

**Figure 45 Cost of construction of one square meter of the residential building's usable area (type 1121<sup>18/</sup>) (PLN/sq. m)**



Source: NBP based on Sekocenbud.

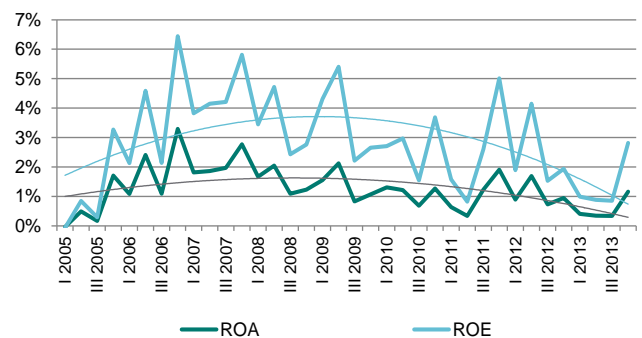
**Figure 47 Costs incurred by a standard, large real estate development company (LD)**



Note: according to the CSO, a large company employs an average of more than 50 persons; related to Figures 47–54.

Source: NBP based on CSO (F01).

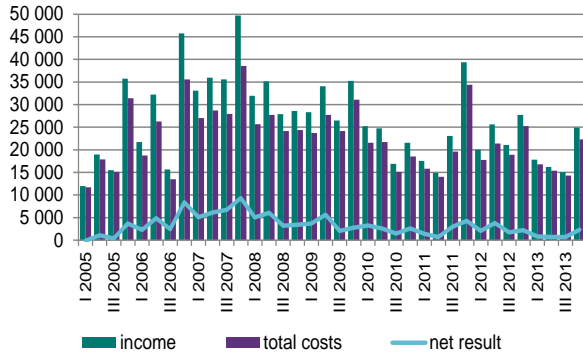
**Figure 49 ROE and ROA (with trend lines) of large real estate developers**



Note: net result in a given quarter as compared to assets (equity) at the end of a given quarter.

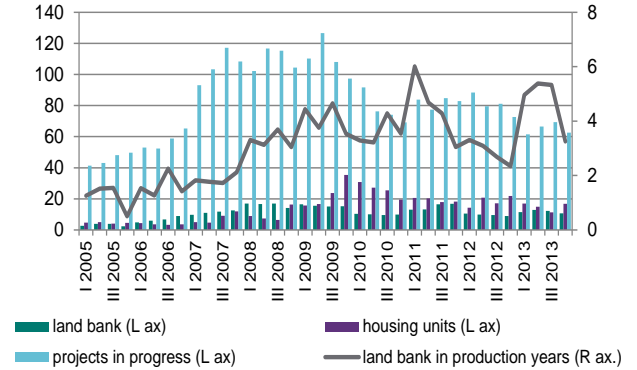
Source: NBP based on CSO (F01).

**Figure 50 Economic indicators of LDs**



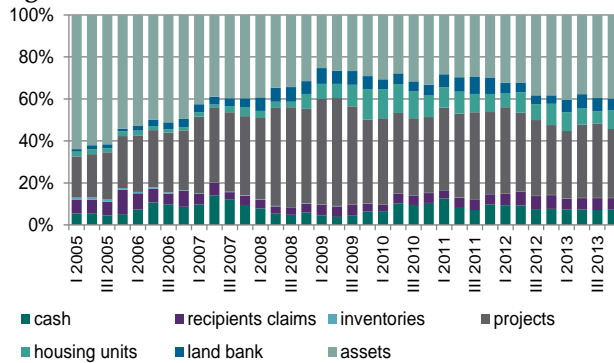
Source: NBP based on CSO (F01).

**Figure 51 Situation of LDs**



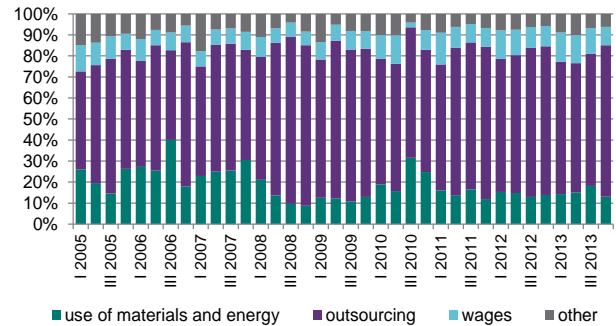
Source: NBP based on CSO (F01).

**Figure 52 Structure of LD assets**



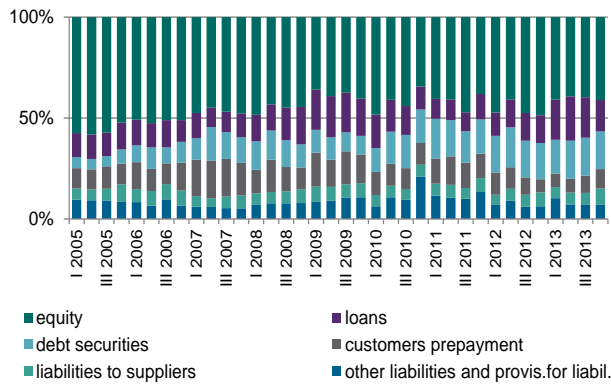
Source: NBP based on CSO (F01).

**Figure 53 Structure of LD costs**



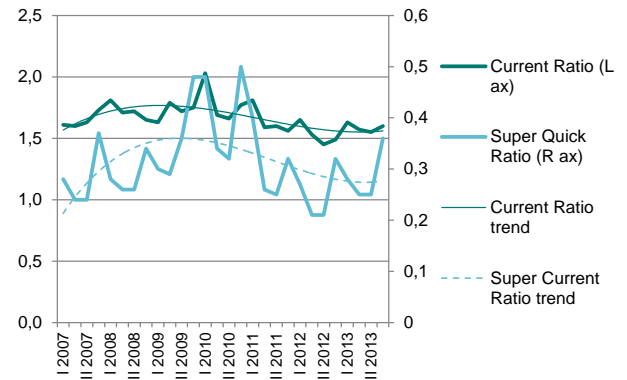
Source: NBP based on CSO (F01).

**Figure 54 Structure of LD financing**



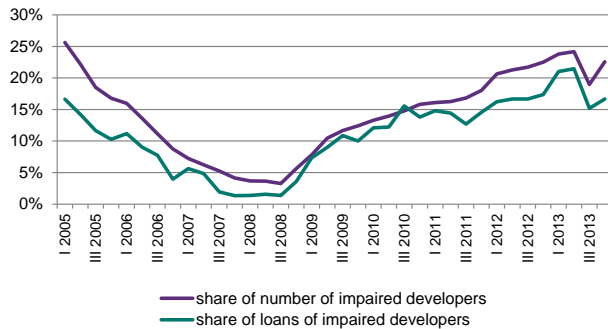
Source: NBP based on CSO (F01).

**Figure 55 Liquidity of real estate development companies**



Source: NBP based on CSO (F01).

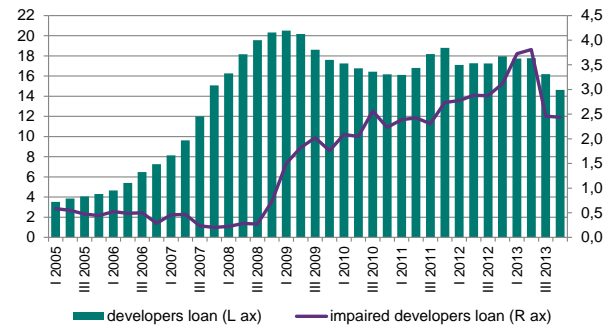
**Figure 56 Real estate development companies facing financial problems**



Note: companies whose debt has been classified by banks as doubtful debt (this refers to large-scale exposure, exceeding the value of PLN 500 thousand); starting from 2013 Q3, apart from slight decline in the exposure of indebted companies, the data may differ from the previous ones due to changes in large exposure reporting.

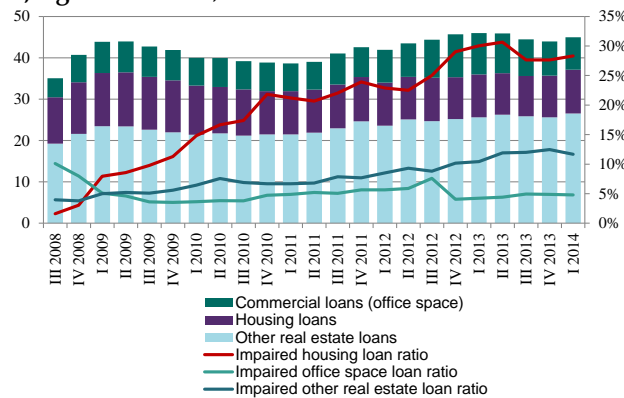
Source: B300; only large loans exceeding PLN 500

**Figure 57 Value of real estate developers' debt (commercial banks) and debt of real estate developers facing financial problems (bln PLN)**



Source: B300; only large loans exceeding PLN 500

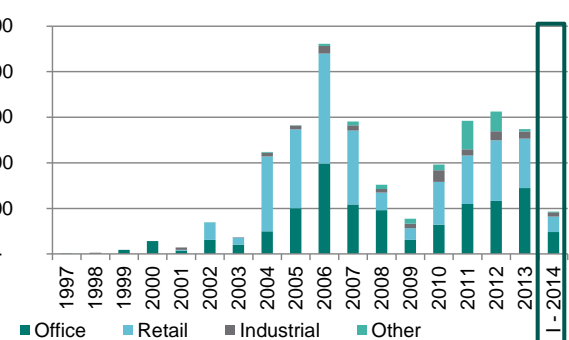
**Figure 58 Real estate loans to corporations (in PLN billion, left-hand axis) and share of doubtful loans (in %, right-hand axis)**



Note: data exclusive of BGK.

Source: NBP.

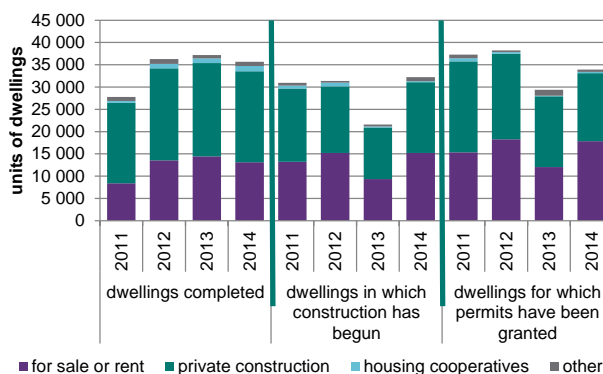
**Figure 59 Value of investment transactions (EUR billion)**



Source: Comparables.pl.

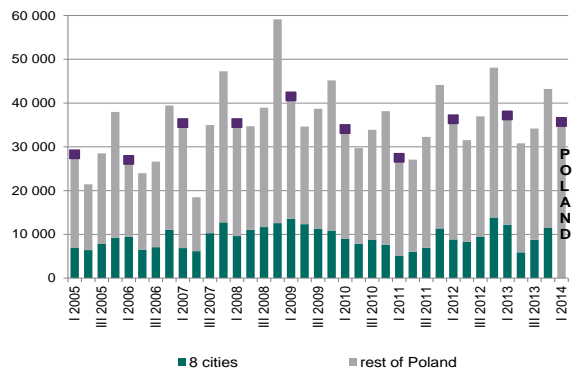
## 6. Residential construction and housing market in Poland in selected cities

**Figure 60 Poland – structure of residential construction investors in I quarters in 2011–2014 (housing units)**



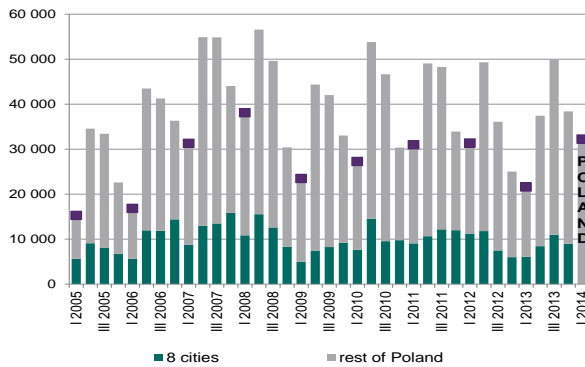
Source: CSO.

**Figure 61 Poland – completed housing, in quarter-on-quarter terms (housing units)**



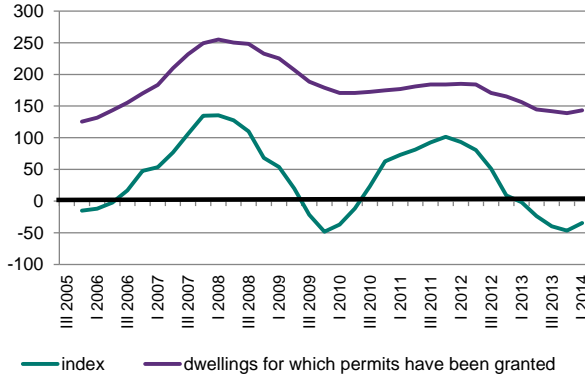
Note to figures 61-63: in violet color only first quarters have been marked; Source: CSO.

**Figure 62 Poland –housing under construction , in quarter-on-quarter terms (housing units)**



Source: CSO.

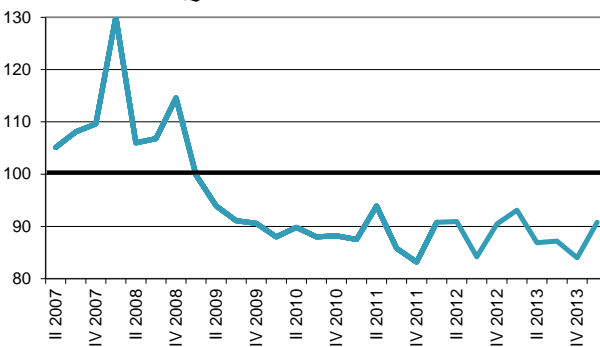
**Figure Housing market indicator in Poland (housing under construction minus completed housing, in housing units)**



Note: The index is a 12-month rolling figure.

Source: NBP based on PABB and CSO.

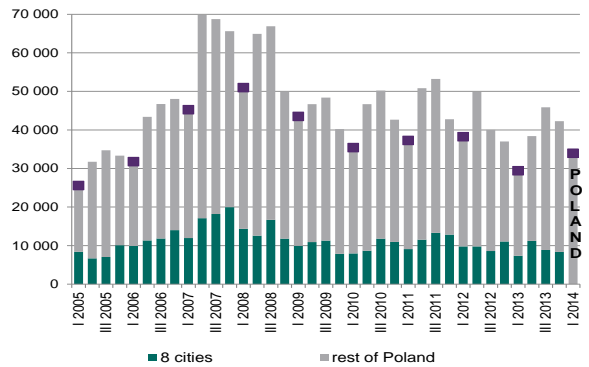
**Figure 65 Growth in the average price per one square meter of housing put on sale in PM in Poland's 6 largest cities \* (2007 Q1 = 100)**



\* Warszawa, Kraków, Gdańsk-Sopot-Gdynia, Wrocław, Poznań, Łódź.

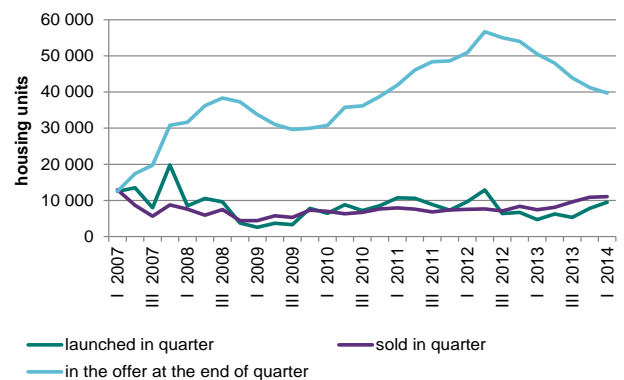
Source: REAS.

**Figure 63 Poland – issued building permits, in quarter-on-quarter terms (housing units)**



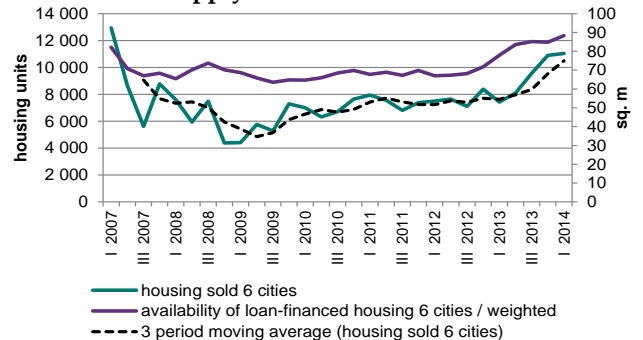
Source: CSO.

**Figure 64 Number of housing units put on the market, both sold and offered for sale in Poland's 6 largest markets\***



\*Warszawa, Kraków, Gdańsk-Sopot-Gdynia, Wrocław, Poznań, Łódź. Source: REAS.

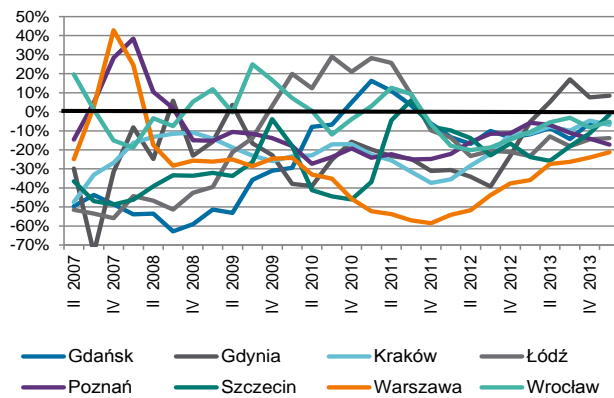
**Figure 66 Availability of loan-financed housing versus housing units sold in Poland's 8 largest cities \* (demand and supply estimates)**



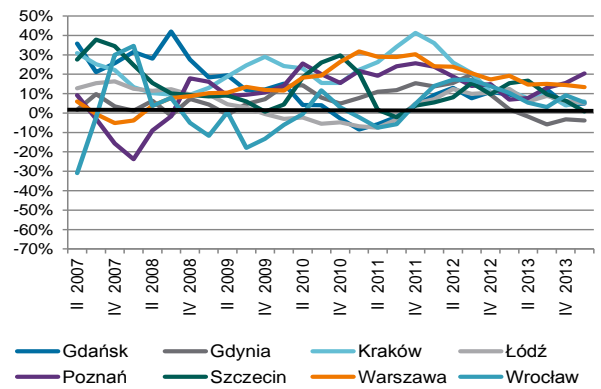
\* Gdańsk, Gdynia, Łódź, Kraków, Poznań, Szczecin, Warszawa, Wrocław. Availability of loan-financed housing weighted with the currency structure of the quarterly rise in mortgage loan.

Source: NBP based on REAS, CSO.

**Figure 67 Structure of supply and demand \* for housing with an area ≤ 50 sq. m, PM in selected cities in Poland**



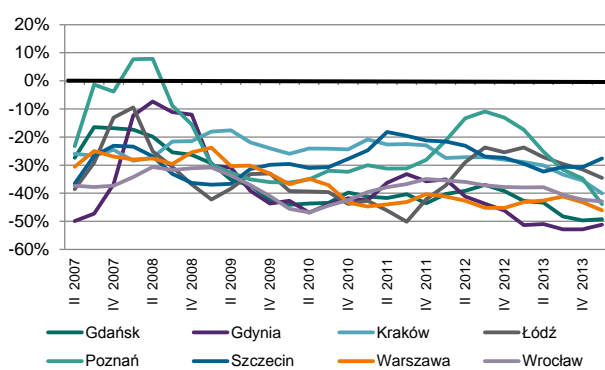
**Figure 68 Structure of supply and demand \* for housing with an area >50 sq. m, PM in selected cities in Poland**



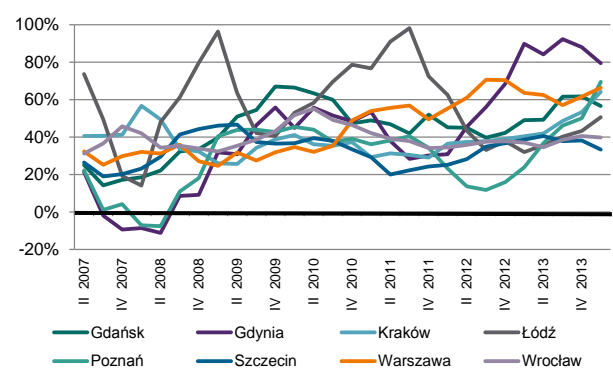
Note: Figure 67 presents a short-term mismatch in primary market between supply (developers' housing offer) and the estimated demand (housing transactions) in terms of the dwelling's size, according to the data from the BaRN database. The mismatch is calculated as the ratio of the share of housing units with usable area of up to 50 square meters offered for sale to the number of transactions involving housing units with a total area of up to 50 square meters (the average figure for the last four quarters). The positive result (above the black line) indicates a surplus of housing of this particular size, whereas the negative result indicates a shortage thereof. Figure 68 is parallel. Figures 69-71 are parallel, only for secondary market.

Source: NBP.

**Figure 69 Structure of supply and demand \* for housing with an area ≤ 50 sq. m, SM in selected cities in Poland**



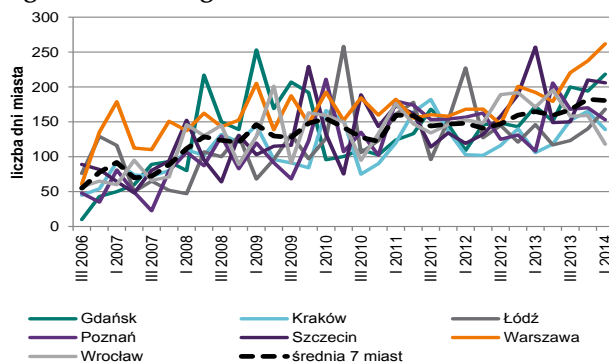
**Figure 70 Structure of supply and demand \* for housing with an area >50 sq. m, SM in selected cities in Poland**



Source: NBP.

Source: NBP.

**Figure 71 Housing sale time in SM in 7 cities**



Source: NBP.



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