

Jacek Łaszek, Hanna Augustyniak,
Krzysztof Olszewski, Krzysztof Gajewski,
Macroprudential Policy Bureau

29 May 2013

Information on home prices and the situation in the residential and commercial real estate market¹ in Poland² in 2013 Q1

Summary

The analysis of the situation in the Polish real estate market in 2013 Q1 leads to the following conclusions:

- For another consecutive quarter there was a slight fall in home prices (both offer and transaction prices) in the secondary market in the largest cities. The primary real estate market saw a rise in transaction prices. This resulted from the fact that high-net-worth individuals purchased higher quality housing.
- Although the government-subsidized housing scheme *Family on their own* (Rodzina na Swoim - RnS) was formally discontinued at the end of 2012, the applications submitted prior to the end of the programme continued to be granted and the 2013 Q1 payments accounted for approx. 70% of the record high payments made in 2012 Q4. Those loans were primarily used for primary market purchases.
- The number of housing units completed in 2013 Q1 was on a par with the level recorded in the corresponding period of the previous year. On the other hand, the number of newly commenced investment projects and issued building permits hit their lowest since 2006. The number of unsold housing units in 6 major cities decreased for the second consecutive quarter. The unsold new housing stock continues to exceed twice the level considered as balanced.
- The analysis shows that the aggregate profit margins on newly commenced real estate development projects have slightly risen and that housing construction is profitable.
- The situation of the majority of real estate development companies seems stable due to their business diversification (engagement in residential and commercial real estate) and a relatively low level of debt burden. Yet, the sector's need to finance a large stock of unsold housing is likely to generate problems: falling profitability, losses and bankruptcies of the weakest market players.
- Quarter-on-quarter growth in housing loan receivables from households hit its lowest level since 2004, yet the decline in gross loan disbursements was considerably less pronounced. For the past five quarters the decline in the value of loan receivables from households in FX adjusted terms has been getting more and more noticeable, which may be a sign that foreign currency denominated loans denominated are being either repaid or, to a lesser extent, converted into zloty.
- Both the volume of real estate loans to enterprises and their quality remain stable. A slight drop has been observed in lending to real estate developers for housing construction projects.

¹ Due to the data update frequency, information on rental payments, vacancy rate, new space in the commercial property market shall be published on a 6-month basis.

² The information was prepared by the Economic Institute for the needs of the authorities of the 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.

The study provides a synthetic description of key developments affecting the housing market in Poland's largest cities in 2013 Q1 . It also contains an appendix with charts and figures presenting:

- 1) home prices (Figures 1-15),
- 2) housing availability, loan availability, availability of loan-financed housing, loan limits and loan disbursements under the government-subsidized housing scheme *Family on their own* (Rodzina na Swoim - RnS) (Figure 16–21),
- 3) loan disbursements and real interest rates (Figures 22–32),
- 4) operating profitability of housing and real estate development projects, costs of construction and assembly output and economic situation of real estate developers in Poland (Figures 33–69),
- 5) housing construction and the residential market in Poland (Figures 70–79).

This study was based on the data from the Real Estate Market Database BaRN³, the database of offer prices of housing provided by PONT Info Nieruchomości, databases SARFIN and AMRON of the Polish Banks' Association (ZBP), collective data of the Credit Information Bureau (Biuro Informacji Kredytowej), data presented by Sekocenbud, Real Estate Advisory Service (hereinafter REAS) and information supplied by the Central Statistical Office (GUS) – F01 and F02.

An in-depth analysis of the residential property market developments in 2013 Q1 points to structural changes, being the consequence of regulatory changes and new market mechanisms. At a first glance the following developments may seem paradoxical: growing home prices in the primary market (see Figure 1 and 3) amidst a falling number of transactions (see Figure 75) or the launch of new investments (see Figure 72) despite the high supply of unsold housing, including many ready-to-occupy housing units (see Figure 75). Yet, a more insightful analysis shows that the actual changes observed in Q1 are not very significant and are a logical consequence of the residential sector slowly gaining balance. The sector's situation in the analysed period was affected by the termination of the government-subsidized housing scheme *Family on their own* (Rodzina na Swoim - RnS), falling interest rates on housing loans and growth in the (theoretical) housing loan availability. Other factors having impact on the sector included the decline in bank lending, rising prices of real estate developer housing in Warsaw and in certain other markets and a diminishing stock of unsold real estate developer housing.

In line with the expectations, as a result of the termination of the government-subsidized housing scheme *Family on their own* (Rodzina na Swoim - RnS) at the end of 2012, housing demand receded slightly (see Figure 75) and related demand for housing loans, as measured with the growth in loan value (see Figure 22 and 23) declined. BGK data shows that loan

³ The BaRN database of the National Bank of Poland is created thanks to voluntary provision of data by the real estate agents and real estate developers with the participation of regional branches of the NBP. The study analyses both home sale offers and transactions as well as home rentals within city limits of 16 voivodship cities, where the majority of real estate deals are closed. In 2013 Q1, district branches of the NBP collected in 16 capitals of voivodships a total of 61 767 records on home sales (including 52 234 offers and 9533 transactions), and a total of 4592 records on home rentals (including 4125 offers and 467 transactions).

disbursements under the RnS housing scheme, despite its termination, remained at a high level (see Figure 21). Also real-term increases in housing loans were higher than suggested by the previously used measure of housing loan growth⁴ (Table 1).

Sales of real estate developer housing in 6 cities dropped only slightly in figure terms, whereas it remained at the 2012 Q4 level in value terms (see Table 1). This was driven by the boosting effect of the RnS housing scheme and rising share of cash transactions in home acquisitions. Considering the fact that the number of new home construction contracts put on sale by real estate developer companies fell considerably, it may be concluded that the oversupply of unsold housing has been on the decline for the second consecutive quarter.

Home prices continue to be considerably higher than before the lending boom, yet their prices in real terms, accounting for growing consumer income observed in this period, are closer to their 2002-2003 level (see Figure 7 and 8).

The improvement in (theoretical) housing loan availability, seen for the first time in 2009, failed to boost lending (see Figure 18 and Table 1). The reason behind it is the persistently tight bank lending policy (see Figure 18). Banks fear to increase their credit exposure as they already hold large housing loan portfolios, often with low loan margins. Given the currently observed decline in home price, the loan portfolio created during the boom is particularly disadvantageous for banks. The slowing down lending had an adverse effect on the number of transactions.

The findings of the market analysis suggest that the stable volume of cash purchases by private investors was a factor preventing a decline in housing demand in 2013 Q1. Given the diminishing volume of housing loans, the purchase structure had changed. The estimated share of cash transaction in the primary market of the 6 largest cities went up to approx. 66% as compared to 58% in the previous quarter (see Table 1). Cash transactions involved higher quality housing (in terms of home finishing, architecture and location). This was one of the factors behind rising average price of home transactions in primary markets of the largest cities. In Warsaw, for example, prices in the primary market exceeded those in the secondary market for the first time since 2006 (when BaRN transaction prices started to be published, see Figure 5). Investors may be supposed to assume that better quality housing will generate higher rents, will maintain its value better and will be relatively easily marketable in the long-term.

Value of housing purchased in cash transactions was mainly supported by NBP interest rate cuts, reducing, in the first place interest on bank deposits and other saving financial instruments. As a result, considering practically an unchanged market level of rents (see Figure 13), housing investment starts to generate a higher yield than bank deposits, exceeding even yields on Treasury Bonds (see Figure 15). Yet, it should be borne in mind that housing investment in Poland is subject to a considerable risk – rent risk (vacancy risk, risk of contract breach) and an additional risk arising from the non-regulated issue of eviction of defaulting tenants. Additionally, the cost of entry and exit from housing investment (including the uncertainty about future changes

⁴ It is necessary to estimate real growth in housing loans when the value of loan repayment begins to be significant as compared to the value of new loans. This happens with increasing depreciation of the aging and growing portfolio. Another factor blurring the picture is the decline in the volume of foreign currency denominated loans, observed for the past five quarters. Currently, disbursements of new loans in PLN (only) are relatively small in relation to the amortization of the PLN loan portfolio. In this case, only the analysis of changes in the loan volume can lead to erroneous conclusions.

in real estate prices) and own costs related to real estate management are higher than in the case of investment in financial instruments.

It should be mentioned that in 2013 Q1, the interest costs of real estate loans and the estimated income on rent equalised, which usually constitutes an incentive to make investment purchases and improves the situation in the sector (see Figure 14). This leads to large scale speculations involving bank loans in the developed markets. As this situation may only be temporary (amidst falling interest and shortage of rental housing) in the following period, after interest rate increases, bank can be burdened with non-performing loans. In Poland, this demand-boosting factor will be strongly limited by the already mentioned rent risk and banking sector's concerns about financing of residential real estate, including rental housing.

It is difficult to assess to what extent the developments observed in 2013 Q1 will be a long-term phenomenon as the analysis of investment demand for housing in Poland is subject to a considerably higher risk than the analysis of the fundamental, consumer demand for housing. The investment analysis should take into account the attractiveness of alternative investment in financial instruments in Poland and abroad and investment in tangible assets (works of art, gold, etc.). On the other hand, the Polish investment property market may compete for investors with the Spanish, Bulgarian and Romanian market where prices are lower but the risk considerably higher. Therefore, it is difficult to predict how investment demand is going to evolve and how it will affect the entire market.

Rates of return on investment in commercial real estate continue to be higher than those on investment in residential property (see Figure 15). The Polish market still lacks simple investment products, available to less wealthy investors. Such products include participation in small investment funds engaged in the construction and operation of single properties of various size. Yet, it should be remembered that the existing real estate funds have faced for some time difficulties with selling their projects, which, in turn, results in extending the funds' life over the scheduled life (the fund liquidation assumed upon fund establishment is delayed). For investors who have purchased their participation units this means an additional liquidity risk and/or (in the case of funds whose participation units are traded in the secondary market) an additional price risk (higher liquidity premium).

The described developments are reflected in the indicators analysed in the report. In 2013 Q1 prices in the secondary markets in all the analysed cities posted a decline in both real and nominal terms, whereas transaction prices dropped faster than offer prices. This usually means that there is a surplus of housing in the market and sellers are unwilling to lower prices, yet become flexible when concluding transactions. In the primary market in Warsaw we observed a rise in both transaction and offer prices. In the 6 major cities transaction prices also edged up slightly whereas offer prices remained stable (see Figure 1-12). Prices of housing put on sale in Warsaw by real estate developers for the first time increased, which is largely due to their better location and quality (see Figure 11). As a result, real estate developer housing in all the analysed markets is more expensive than housing in the secondary market which is likely to lead to adjustments involving a shift of demand to the secondary market. Prices of developer housing rising above the level of secondary market prices may be a sign that real estate developers are taking advantage of the new government-subsidized housing scheme Housing for the Young (Mieszkanie dla Młodych) to be launched in 2014. This housing scheme will include developer housing only, thus real estate developers do not have to fear any competition on the part of the

secondary market which, together with single-family houses, accounted for the major part of the RNS government-subsidized housing scheme (with the total share of approx. 75%).

Housing availability continued to rise. In the previous periods this was the result of falling prices in the primary market and growing income, whereas in the analysed period this was largely driven by falling prices in the secondary market (the index includes prices in both markets, see Figure 16).

Also mortgage availability continued to improve (see Figure 18). Yet, this was accompanied by a banks' lending policy tightening observed since 2006. In 2013 Q1, banks' lending policy stabilised, albeit at the record low level. Another factor dampening demand were rising real interest rates on loans, driven by a sharp decline in inflation (see Figure 17). In 2013 Q1 they reached 5%, the highest level since 2005. The loan availability is perceived by households as the maximum amount of loan it could afford, based on their income.

Yet, the growth in the real interest rate cannot be analysed without having in mind banks' lending policy. The margin in relation to the WIBOR rate and new deposits, bearing less interest, increased by approx. 1 percentage point. Yet, the margin in relation to all deposits did not change. Amidst low inflation this boosted real interest rates.

In 2013 Q1, growth in the volume of housing loans was similar to the one observed in 2003-2004 (see Figure 22). Yet, the estimated gross value of mortgage loan disbursements to households did not see any major changes as compared to the previous quarter (see Table 1). Differences between loan disbursements and a rise in the volume of loans result mainly from loan repayments and flows from the foreign currency portfolio to the zloty portfolio. A slight drop in debt was observed in the case of foreign currency denominated loans, which is a positive development from the point of view of the systemic risk. As there were no major changes in the growth rate of the whole loan portfolio, the geographical breakdown of the portfolio changed only slightly. Yet, in the long-term, the share of loans in the Warsaw market is on the decline, with a growing share of loans in other cities. Similarly, the share of loans in large cities is falling, with a growing share in the rest of the country (see Figure 24 and 25).

The profitability of mortgage loans for banks did not change. Zloty denominated loans continue to generate rates of return of approx. 15% (taking into account financial costs and income only, see Figure 31). The quality of housing loans in the long-term is deteriorating. For the first two years this is a slight deterioration only, gaining momentum during the subsequent three years (see Figure 30 and 31).

Despite a slight rise in the prices of housing constructed by real estate developers, no major changes were seen in the sector. Consequently, the WIG Index of Real Estate Developers levelled off, albeit at a very low level (see Figure 33). In Q1, similarly to the previous periods, real estate developers streamlined costs, which was reflected in a rising share of direct costs in home prices and a falling share of real estate developers' own funds (see Figure 35 and Figure 47). The 2012 growth in costs and income of those companies is the result of completion and sale of the surplus of housing units whose construction started 2-3 years ago (see Figure 49). Growth in transaction prices led to a rise in the share of real estate developer's margin in home prices and a rise in the annual rate of return on real estate developer projections in the 6 largest cities to the level of 18% (see Figure 36). Yet, it did not affect the real, accounting rates of return of real estate developers, which were running below 5%. On the other hand, the net financial result posted a

slight growth (see Figure 49). Costs of construction and assembly production remained stable, yet their growth rate differed across regions (see Figure 43 and 44). Growth in the number of housing units completed in 2012 halted the downward trend in ROE and ROA rates (see Figure 48).

No significant change was seen in production concentration, which is relatively high as far as this market is concerned, and explains rigid prices (5 largest companies hold 50% share in the value of sold housing, and 10 largest companies hold 70%, see Figure 45).

Fixed assets and projects under construction continue to hold the largest share in the asset structure (see Figure 51). 2012 Q4 saw a slight decline in real estate development projects under construction and a rise in the share of completed housing stock (no fresher data have been released by the Central Statistical Office – GUS). Equity is the largest item of liabilities, and the share of debt securities does not exceed 20% (including loans – 30%, see Figure 53). Both the structure of assets and the structure of liabilities may be considered safe. The problem faced by the real estate development sector is, apart from the stock of unsold contracts, its internal diversity. As we had written in the previous editions of the report, the share of large companies with negative financial results (approx. 20%) and negative equity (approx. 5%, see Figure 65) is on the rise. As a result, the share of real estate developer companies facing problems with loan servicing is growing (see Figure 54). In 2013 Q1 this process accelerated.

Financing obtained by real estate developers through the issue of debt securities should be analyzed against the background of the entire bond market. According to the data released by FitchRatings⁵ which quotes the majority of issues, in late 2013 Q1, the value of debt resulting from the issue of non-Treasury debt securities in Poland amounted to PLN 118.3 billion (see Figure 67). The largest share had bonds issued by banks (38%) and corporates (27%) with original maturity exceeding one year. The value of corporate bonds listed on the Catalyst platform, where only some of issues are quoted (including those of banks, real estate developers and other companies), amounted in 2013 Q1 to approx. PLN 45.7 million, and the value of the bonds issued by real estate developers reach PLN 1.9 billion. The average interest rate on developers' bonds in 2013 Q1 reached 9-10% (see Figure 69). The analysis should be based on yields on securities, yet, in this case it is fraught with too much error. It should be kept in mind that the corporate bond market, including the developers' bond market, is shallow and illiquid (in 2013 Q1 no transactions were concluded involving debt securities of many real estate developer companies).

Also the economic performance and the balance sheet data of small real estate developer companies do not raise any major concerns (see Figure 55-63). These indicators, however, should be viewed with caution given considerable diversity across companies. As it may be inferred from the analysed data they differ also in their activities. As compared to large real estate developers, what attracts attention is the lower share of companies' own costs and smaller stock of housing (see Figure 57 and 61) - probably due to higher price elasticity observed in the market. What is characteristic of small real estate developers is the large share of equity and client' prepayments, supported in 2012 Q4 by bonds issued by real estate developers (see Figure 63). The increase in

⁵ Estimates of the actual volume of bond issues by real estate developers, based on the value of production and the structure of liabilities of real estate developer companies indicate that it may be in the range of PLN 4-5 billion. As shown in the balance sheet data, also small businesses start to issue such bonds. Even under these assumptions, bonds issued by real estate developers account for less than 4% of all existing bonds in the securities market.

ROE and ROA indicators, observed in 2012, is the result of the rising number of newly finished buildings, which may be disclosed in the financial statements (see Figure 58).

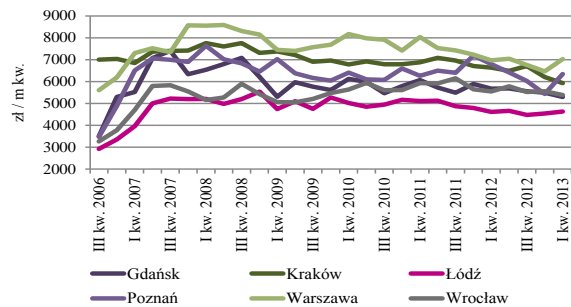
Developments in the residential market are either the result of previously taken decisions or the consequences of the described process. As a result of regulatory changes (the RNS housing scheme and the Real Estate Development Act), amidst a substantial surplus of housing construction contracts and completed housing units, real estate developers are limiting their activity (see Figure 50 and 60). Consequently, there is a steady decline in the number of projects under construction, issued building permits (see Figure 75) and new investment projects (see Figure 72 - 74). For the past two quarters, the surplus of housing contracts in the market has been diminishing, yet it continues to be significant. This situation is likely to continue in the coming quarters. The number of completed and sold housing is still high, which is rather the result of the recovery observed 2-3 years ago (see Figure 71).

Neither the value nor the structure of real estate loans to enterprises has not seen any material changes since 2012 Q4. At the end of 2013 Q1, the value of those loans reached approx. PLN 47 billion (see Figure 66). As compared to mortgage loans to households, the total volume of corporate loans is low, but with a higher share of doubtful loans. The share of doubtful loans to real estate developers increased for another time and stood at 30% at the end of the analysed period. Despite its high level, it does not pose any risk to the stability of the banking system, as the share of those loans in the assets of banks which extend the most real estate loans was less than 4%. The value and the quality of corporate loans for premises and other property did not change significantly.

Appendix

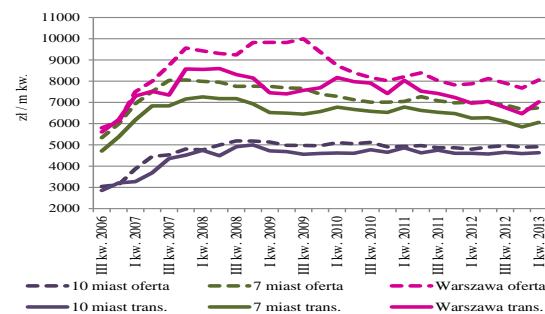
1. Transaction, hedonic⁶, and offer prices of housing, primary market and secondary market

Figure 1 Transaction prices per square meter of housing – Primary market



Source: NBP.

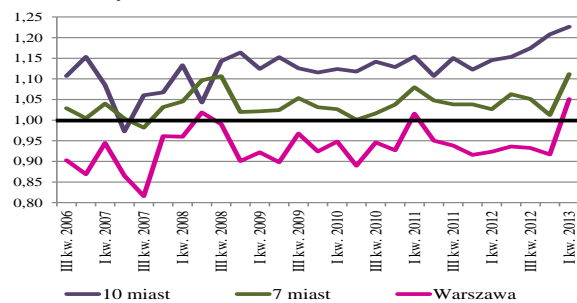
Figure 3 Weighted average price per square meter of housing, offers and transactions - primary market



Note to Figures 3-9: The price weighted with the share of housing in the market stock, the average price for Warsaw; Prices collected from developers and intermediaries and included in the BaRN database; description of the database in the 2011 annual report. 7 cities: Warsaw, Cracow, Poznań, Wrocław, Łódź, Gdańsk, Gdynia; 10 cities: Białystok, Bydgoszcz, Kielce, Katowice, Lublin, Olsztyn, Opole, Rzeszów, Szczecin, Zielona Góra.

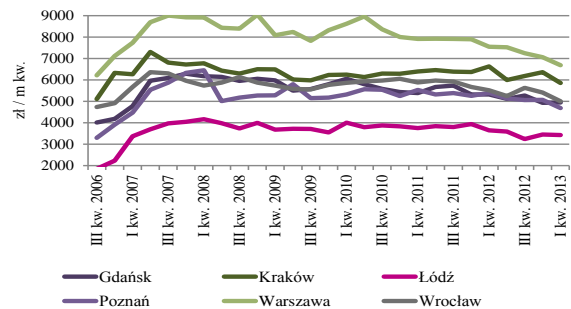
Source: NBP.

Figure 5 Ratio of the average weighted transaction price per square meter of housing - primary market to secondary market



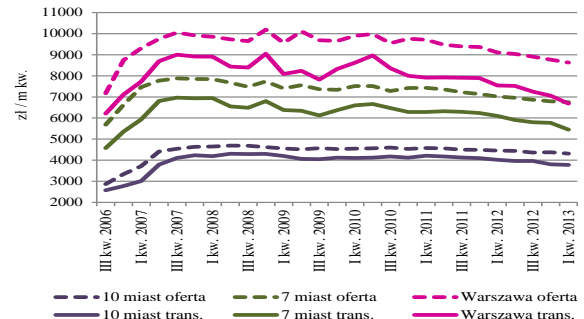
Source: NBP.

Figure 2 Transaction prices per square meter of housing – Secondary market



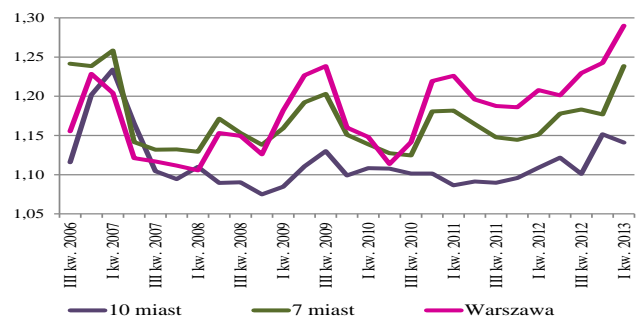
Source: NBP.

Figure 4 Weighted average price per square meter of housing, offers and transactions - secondary market



Source: NBP.

Figure 6 Ratio of the average weighted price per square meter of housing, offer price to transaction price - secondary market



Source: NBP.

⁶ 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 stemming from the sample taking into account 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 (2012) article entitled "Metody wyznaczania hedonicznych indeksów cen jako sposób kontroli zmian jakości dóbr" in Wiadomości Statystyczne no. 9.

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

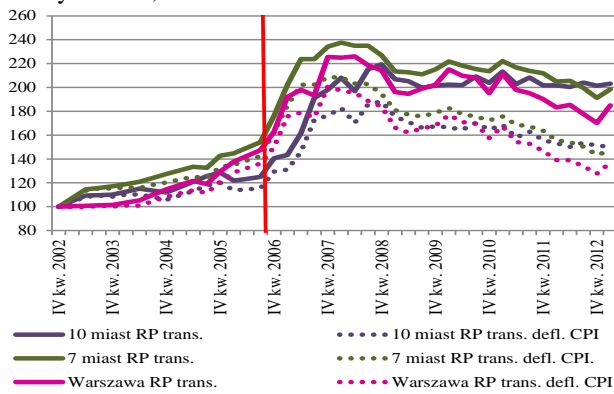
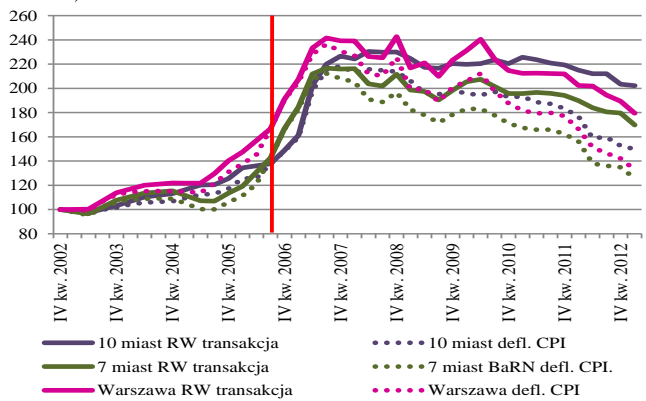


Figure 8 Weighted average and real price per square meter of housing and CPI-deflated price (2002 Q4 =100) – secondary market, transactions



Note: The home price data base of the NBP (BaRN) has existed since 2006 Q3; red line separates BaRN data from PONT Info price estimates.

Source: NBP, PONT Info, GUS.

Source: NBP, PONT Info, GUS.

Figure 9 Weighted average price per square meter of housing and the hedonic price* - secondary market, transactions

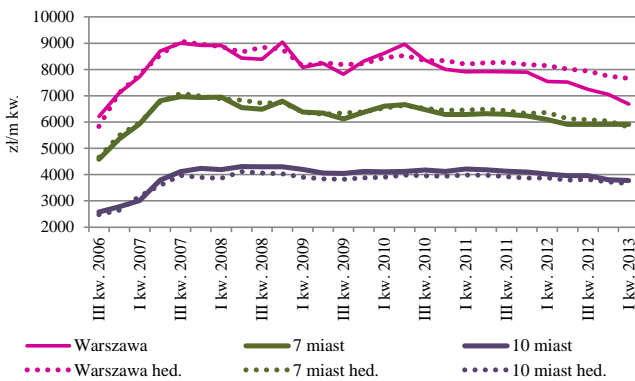
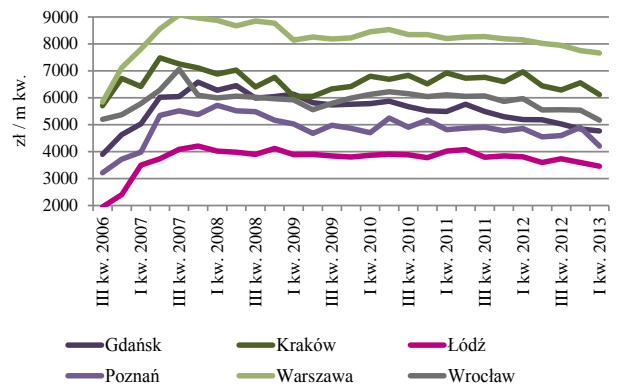


Figure 10 Housing transaction price per square meter in the secondary market, adjusted by the hedonic index*, in 6 cities



Note: 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.

Source: NBP.

Figure 11 Average offer prices per square meter, new housing contracts - primary market

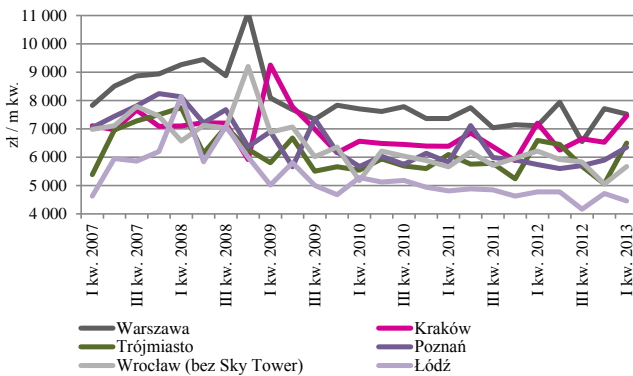
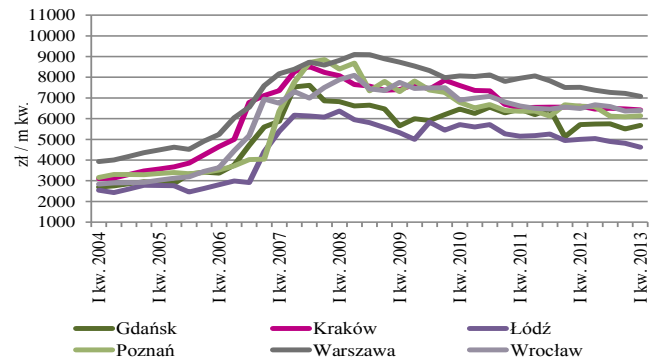


Figure 12 Average offer prices per square meter of housing - primary market



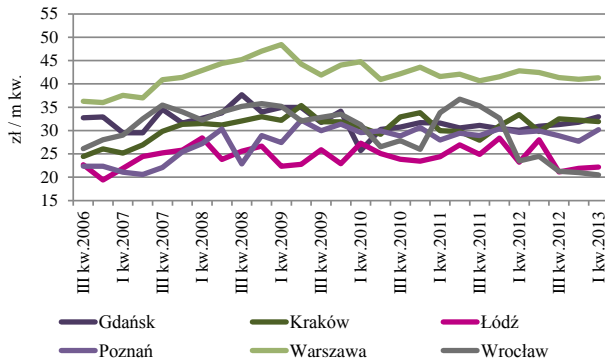
Note: prices refer only to new contracts put on the market for the first time.

Source: REAS.

Note: prices are collected from all available sources.

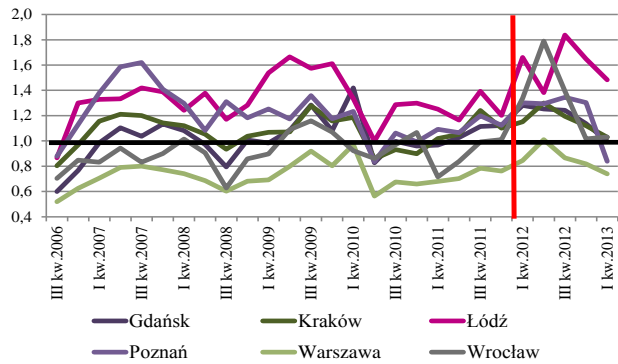
Source: PONT Info Nieruchomości.

Figure 13 Average transaction rent rates per one square meter of housing in 6 cities



Source: NBP.

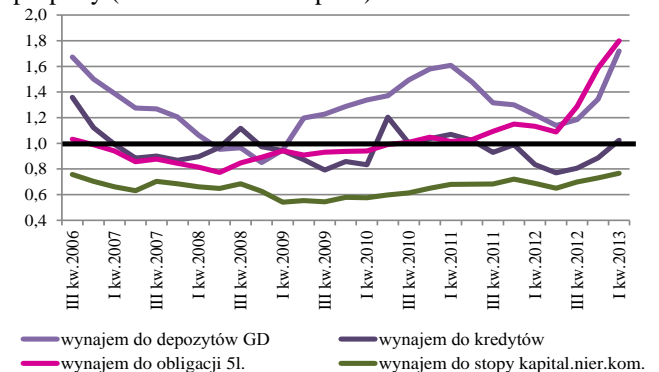
Figure 14 Relation of interest expenses on loans for the purchase of one square meter of housing to the rental price of one square meter of housing (exclusive of service charges) in the case of weighted loans in 6 cities



Note: in Figures 14 and 15 values exceeding 1 denote higher profitability of housing rental.

Source: NBP, GUS.

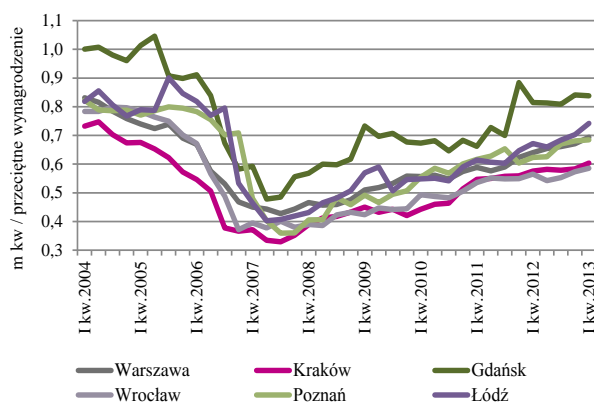
Figure 15 Profitability of home rental (average housing in 6 cities) as compared with bank deposits and loans, 5-year Treasury bonds and rate of capitalization of commercial property (offices and retail space).



Source: NBP, GUS.

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

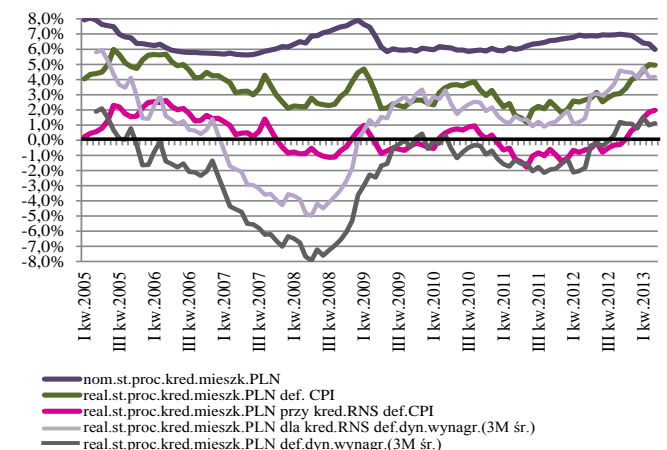
Figure 16 Housing availability in terms of one square meter of housing for an average wage in the enterprise sector



Housing availability – a measure of the potential ability to purchase housing space; it expresses the number of square meters of housing at an average transaction price (1/3 transaction price in the primary market and 2/3 transaction price in the secondary market) in a particular market (BaRN), that can be purchased for an average wage in the enterprise sector in a particular city (GUS).

Source: NBP, GUS.

Figure 17 Costs of PLN housing loans for consumer as deflated with CPI or wage growth



Source: NBP, GUS.

Figure 18 Available weighted* mortgage loans / (expressed as multiplication of an average monthly wage in a particular market) and accumulated index of banks' housing loan policy (ZKPK)

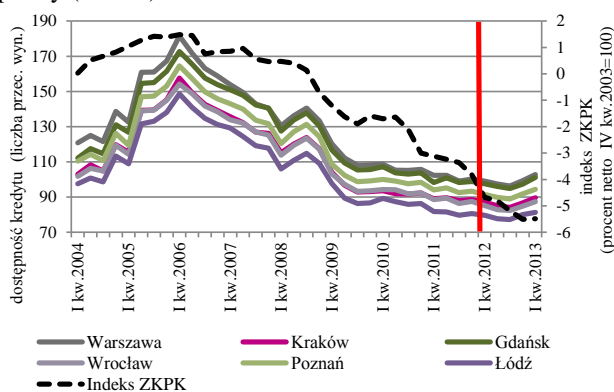
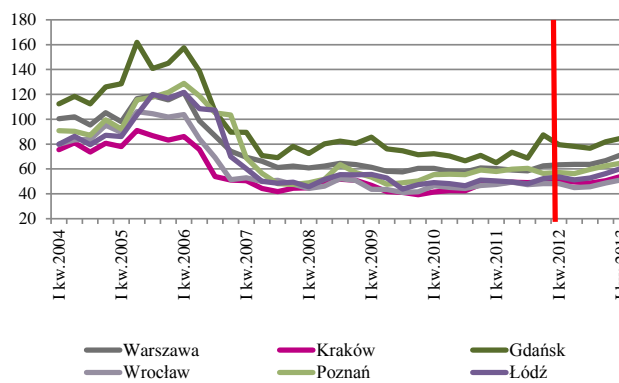


Figure 19 Availability of loan-financed housing per one square meter of housing (weighted loans *)



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 bank's lending requirements and loan parameters (interest rate, amortization period, minimum wage as the minimum income after payment of loan instalments); **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*.

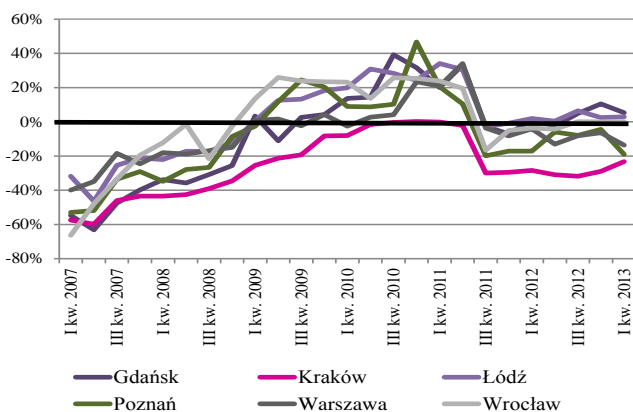
Availability of loan-financed housing – a measure, specifying how many square meters of housing may be purchased at an average offer price in a particular market (BaRN), with a mortgage loan obtained basing on an average monthly wage in the enterprises sector in a particular market (GUS), in view of 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.

Note: weighting with the currency structure of the quarterly loan increase; red line separates weighted values from values expressed in PLN only recorded since the beginning of 2012.

Source: NBP, GUS.

Source: NBP, GUS.

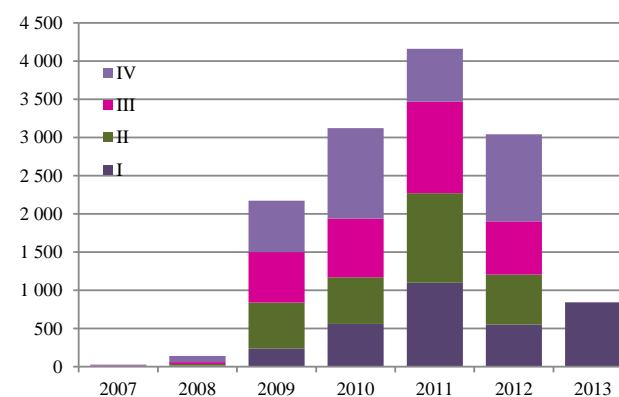
Figure 20 The gap between the limit under the RnS Housing scheme in relation to the median transaction price in 6 cities - primary market



Note: The gap is calculated as the difference between the maximum (limit) of the RnS housing scheme and the median transaction price in the primary market in relation to the median transaction price. A positive difference means that the scheme finances housing with prices higher than the median, whereas a negative difference means the opposite situation.

Source: NBP, BGK.

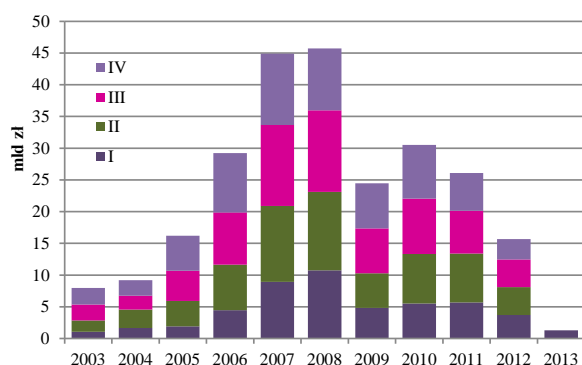
Figure 21 The value of loan disbursements under the RnS housing scheme in the period of the scheme in 16 voivodship cities



Source: BGK.

3. Disbursement of housing loans, interest rates

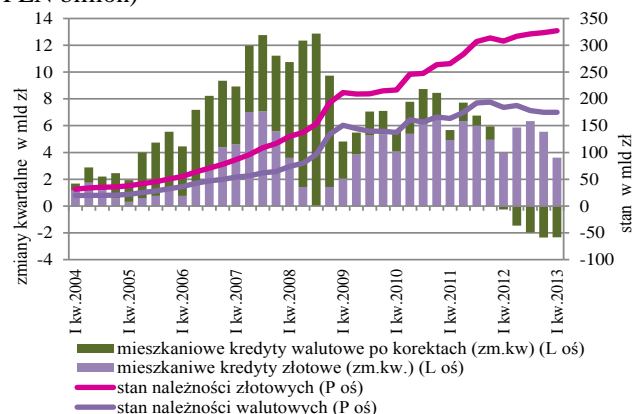
Figure 22 Quarter-on-quarter increases in housing loan receivables from households in FX adjusted terms (in PLN billion)



Note: The increase in receivables means the actual change in the amount of household debt, as it takes into account the actual disbursement of housing loans and their repayment.

Source: NBP.

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



Source: NBP.

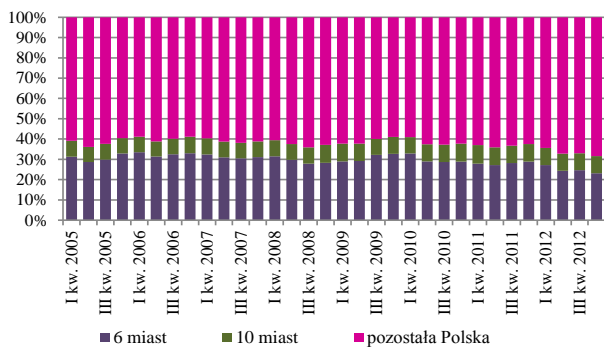
Table 1 Estimated gross mortgage loan disbursements to households in Poland and estimated value of cash and loan-financed purchase transactions involving real estate developer housing in the 6 largest markets (in PLN billion)

| Date | Estimated amount of housing loan disbursements in Poland | Estimated value of housing transactions in the primary market in 6 cities | Estimates disbursements of loans with own equity for home purchases in the primary market in 6 cities | Estimated value of cash transactions involving home purchases in the primary market in 6 cities | Estimated share of cash transactions involving home purchases in the primary market in 6 cities |
|---------|--|---|---|---|---|
| 2011 Q4 | | 2 770 | | | |
| 2012 Q1 | 5 409 | 2 726 | 879 | 1 847 | 0,68 |
| 2012 Q2 | 7 346 | 2 783 | 1 194 | 1 589 | 0,57 |
| 2012 Q3 | 7 177 | 2 510 | 1 166 | 1 343 | 0,54 |
| 2012 Q4 | 7 274 | 2 839 | 1 182 | 1 657 | 0,58 |
| 2013 Q1 | 5 491 | 2 610 | 892 | 1 717 | 0,66 |

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 amortisation and flows between the foreign currency loan portfolio and the zloty loan portfolio, available in the NBP reporting. In order to calculate the estimated value of the primary market in 6 cities, 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 the half of the volume of mortgage loans for home purchases in 6 cities were granted for primary market transactions. The estimated value of cash transactions was calculated as the differences between transactions in 6 markets and disbursements of loans with down-payment.

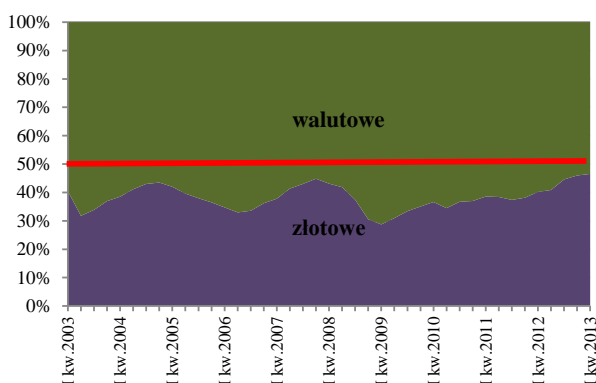
Source: NBP.

Figure 24 Geographical breakdown of new housing loans in Poland



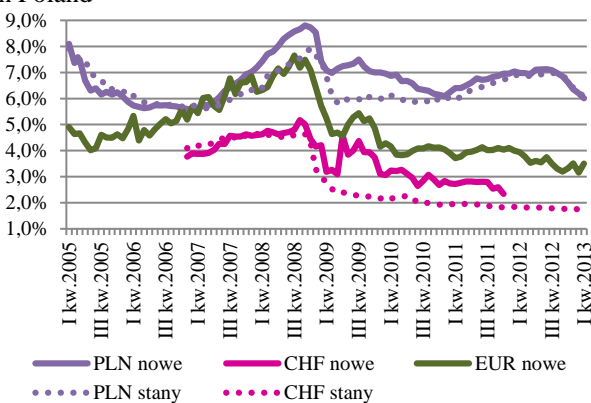
Note: BIK data do not cover the total of housing loan disbursements;
Source: NBP based on BIK data.

Figure 26 Structure of housing loan receivables from households (in %)



Source: NBP.

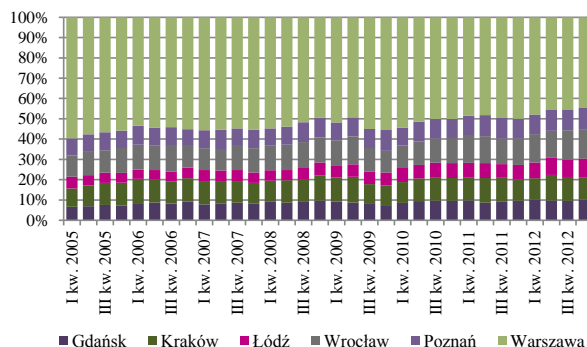
Figure 28 Interest rates on housing loans to households in Poland



Note: CHF denominated loans ceased to be granted in 2012.

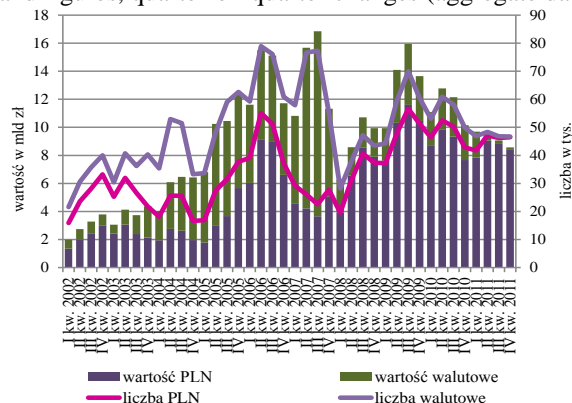
Source: NBP.

Figure 25 Geographical breakdown of new housing loans in Poland's 6 cities



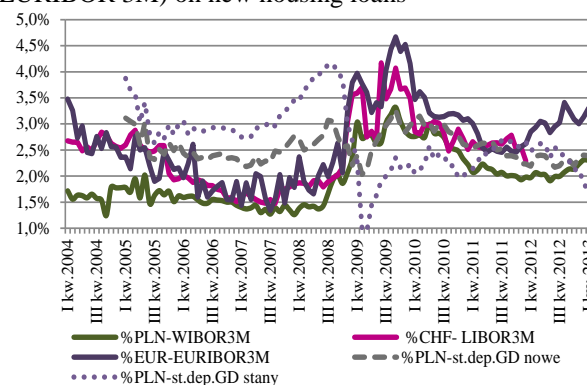
Source: NBP based on BIK data.

Figure 27 New housing loan contracts in terms of values and figures, quarter-on-quarter changes (aggregate data)



Note: data provides information on the concluded loan agreements and not the actual loan disbursements. Source: ZBP.

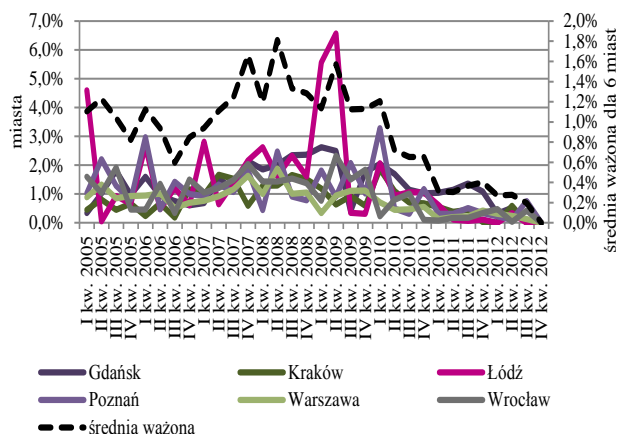
Figure 29 Bank margins (to WIBOR, LIBOR, EURIBOR 3M) on new housing loans



Note: Bank margin is the difference between housing loan rate (NBP data) and the LIBOR3MCHF rate, the LIBOR3MEUR rate or the WIBOR3M rate.

Source: NBP.

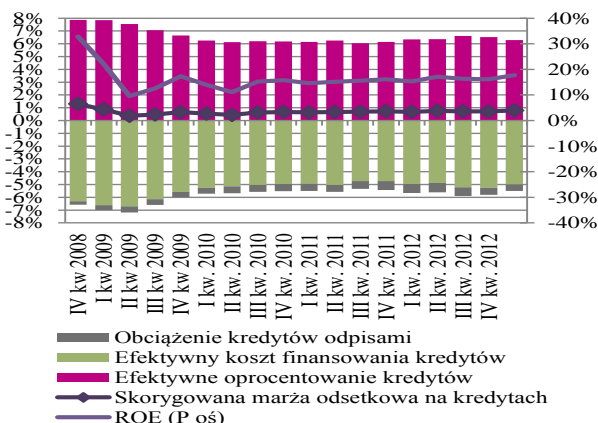
Figure 30 Quality of the mortgage loan portfolio in Poland's 6 cities (recorded in 2012 Q4)



Note: Quality is defined as a percentage share of non-performing mortgage loans being in arrears for more than 91 days in the total of mortgage loans in a particular period for a particular city and the average level for 6 cities; average weighted with the city's share in loan increase in 6 cities.

Source: NBP based on BIK data.

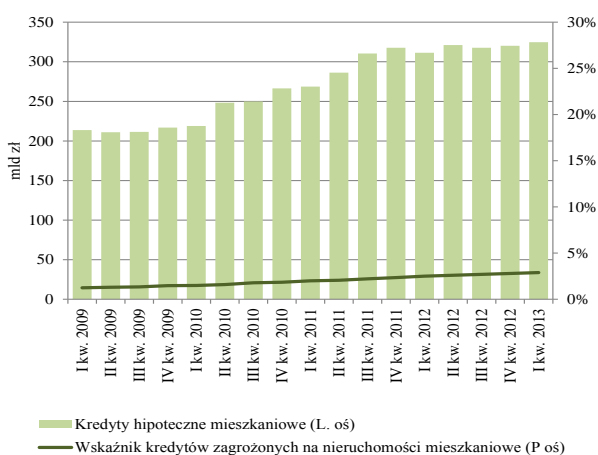
Figure 31 Estimated banks' return on FX loans in Poland



Note: 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 equity. The minimum equity requirement is assessed on the basis on the LTV estimate derived from the AMRON data and capital requirement for mortgage loans as set by the Polish Financial Supervisory 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 and LIBOR rates by adding estimative costs related to bank's own financing.

Source: NBP, AMRON.

Figure 32 Housing loans to households (in PLN billion, left-hand axis) and doubtful loans (% , right-hand axis)

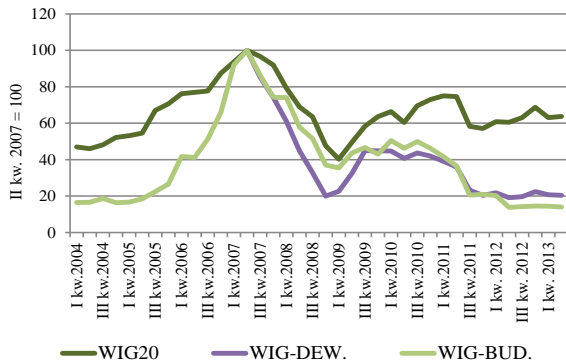


Notes to Figures 30 and 55: receivables (loans) with determined loss of value – receivables from B portfolio, with objective premises for a loss of value of future cash flow (at banks using the International Financial Accounting Standards IFAS) or which have been classified as doubtful in accordance with the Decree of the Minister of Finance concerning creation of provisions for risk related with banks' activity (at banks using the Polish Accounting Standards).

Source: NBP.

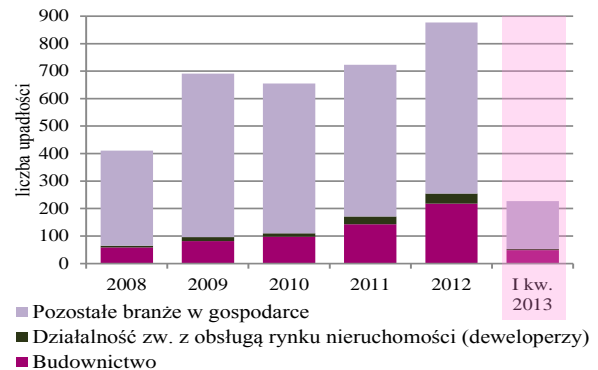
4. Operating rate of return on housing and real estate development projects, costs of construction and assembly production and economic situation of real estate developers in Poland

Figure 33 Growth in stock exchange indices: WIG20 and for real estate developers and construction companies



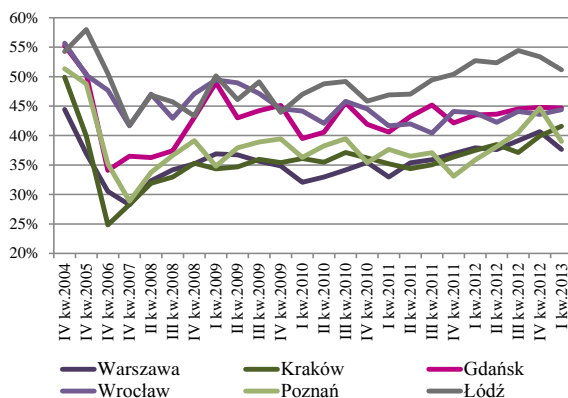
Note: harmonized data 2007 Q2 = 100.
The WIG index for real estate developers has been recorded since 2007 Q2 = 100.
Source: Warsaw Stock Exchange.

Figure 34 Number of bankruptcies in the sectors



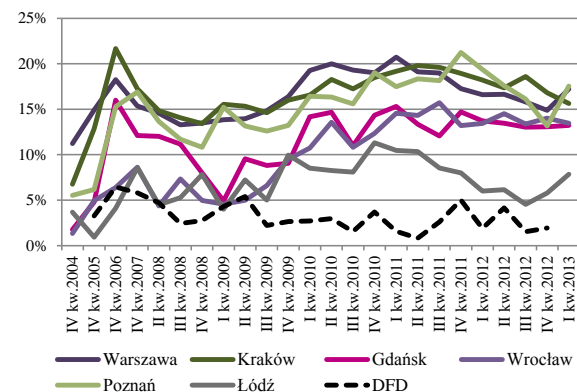
Note: breakdown according to the first entry into the National Court Register (KRS).
Source: Coface Poland.

Figure 35 Share of direct construction costs per square meter of the residential building's usable area (type 1121⁷) in the transaction price – primary market



Source: NBP based on Sekocenbud.

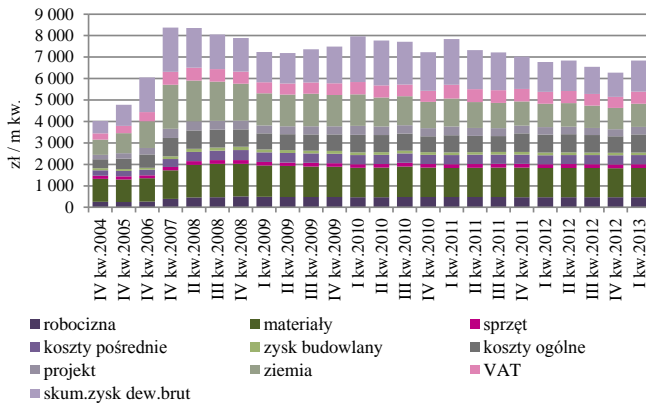
Figure 36 Rate of return on equity in investment projects in 6 cities and the actual rate of return of real estate developers (DFD)



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".
Source: NBP based on Sekocenbud, GUS.

⁷ Building (type 1121) monitored by the 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".

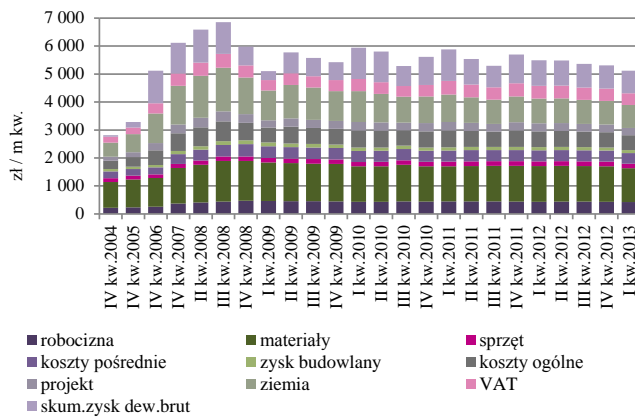
Figure 37 Warsaw - structure of price per one square meter of housing usable area (type 1121 ⁶) to be paid by consumer



Note: data in Figures 37-42 presented in quarter-on-quarter terms since 2008 Q2; previously, the data published in year-on-year terms.

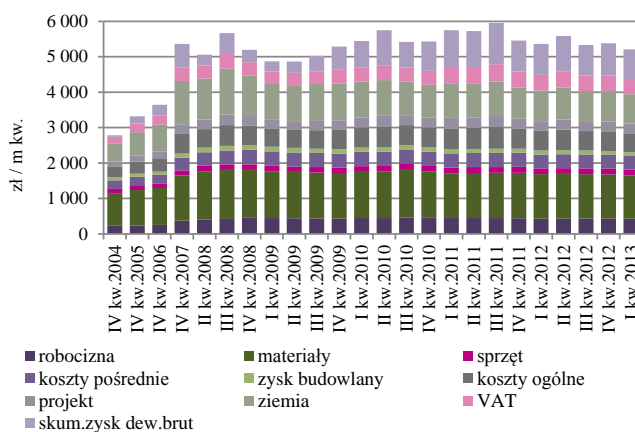
Source: NBP based on Sekocenbud, REAS.

Figure 39 Gdańsk - structure of price per square meter of housing usable area (type 1121 ⁶) to be paid by consumer



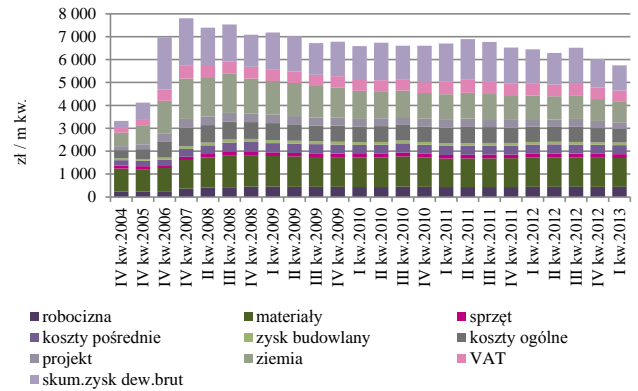
Source: NBP based on Sekocenbud, REAS.

Figure 41 Wrocław - structure of price per square meter of housing usable area (type 1121 ⁶) to be paid by consumer



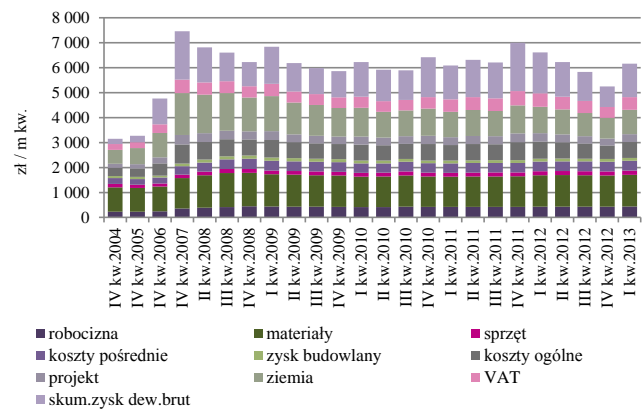
Source: NBP based on Sekocenbud, REAS.

Figure 38 Cracow- structure of price per square meter of housing usable area (type 1121 ⁶) to be paid by consumer



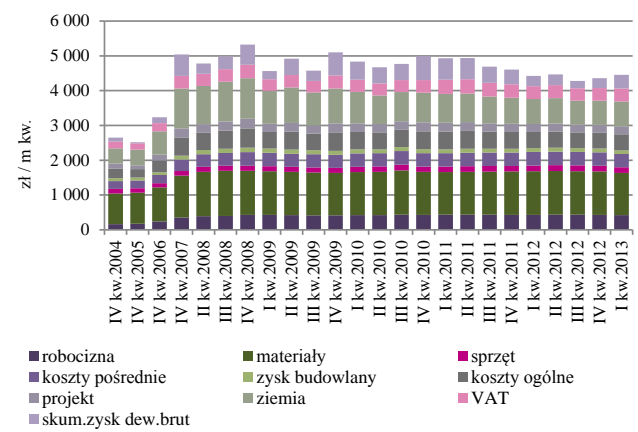
Source: NBP based on Sekocenbud, REAS.

Figure 40 Poznań – structure of price per square meter of housing usable area (type 1121 ⁶) to be paid by consumer



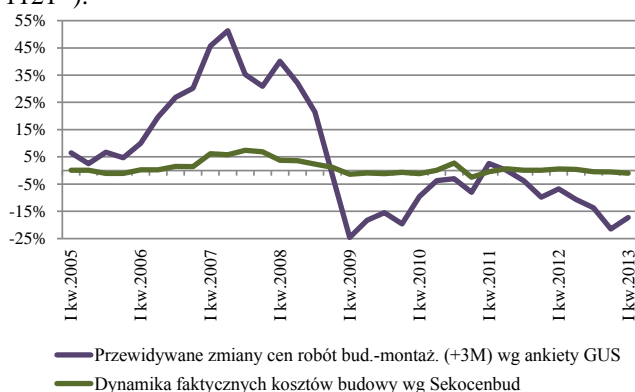
Source: NBP based on Sekocenbud, REAS.

Figure 42 Łódź – structure of price per square meter of housing usable area (type 1121 ⁶) to be paid by consumer



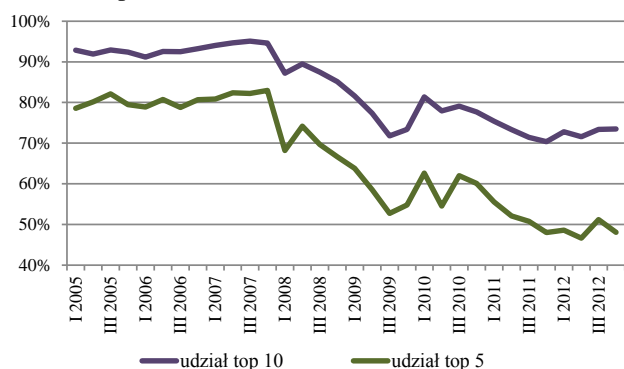
Source: NBP based on Sekocenbud, REAS.

Figure 43 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 1121⁶).



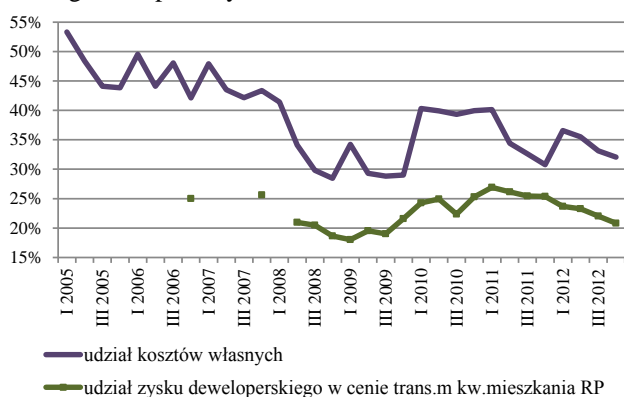
Source: NBP based on GUS data (business conditions survey), Sekocenbud.

Figure 45 Share of sales of 5 and 10 largest real estate development companies in total sales (calculations based on financial reports)



Source: NBP.

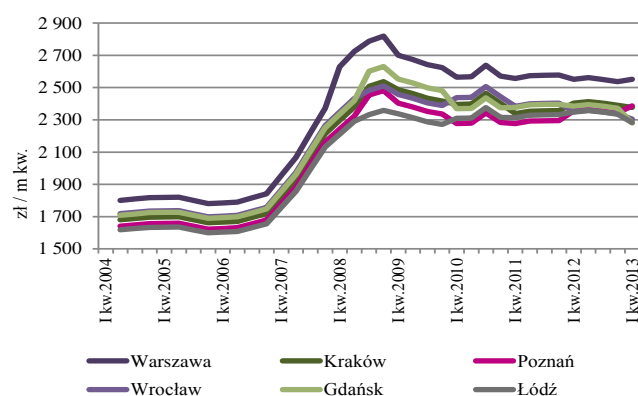
Figure 47 Share of own costs in the costs incurred by a large real estate development company (LD) and the share of real estate developer's return in the price per square meter of housing in the primary market.



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

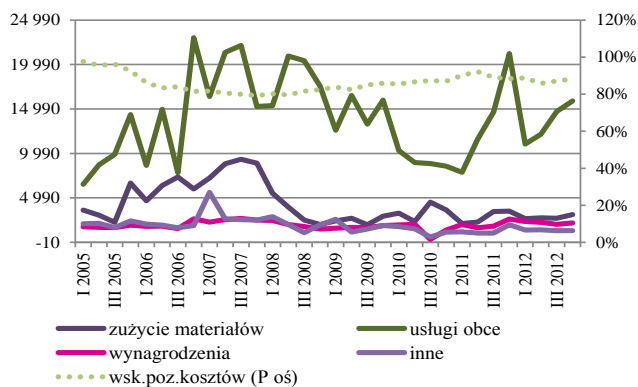
Source: NBP based on GUS (F01) and Sekocenbud.

Figure 44 Cost of construction of one square meter of the residential building's usable area (type 1121⁶)



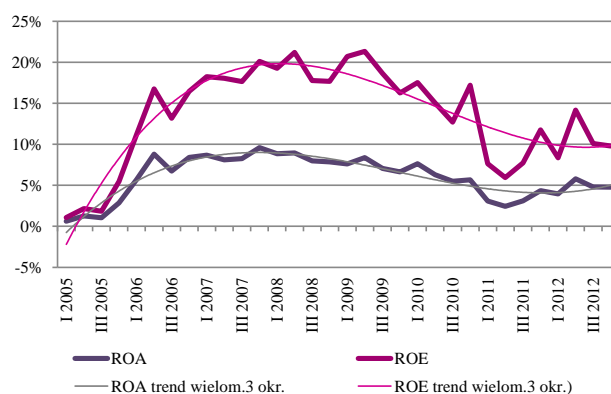
Source: NBP based on Sekocenbud.

Figure 46 Costs incurred by a standard large real estate development company (LD)



Note: according to the GUS, a large company employs on average more than 50 persons; relates to Figures 45-53; Source: NBP based on GUS (F01).

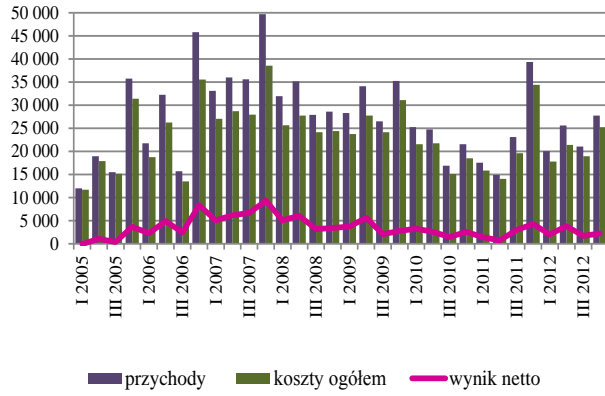
Figure 48 ROE and ROA of large real estate developers



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

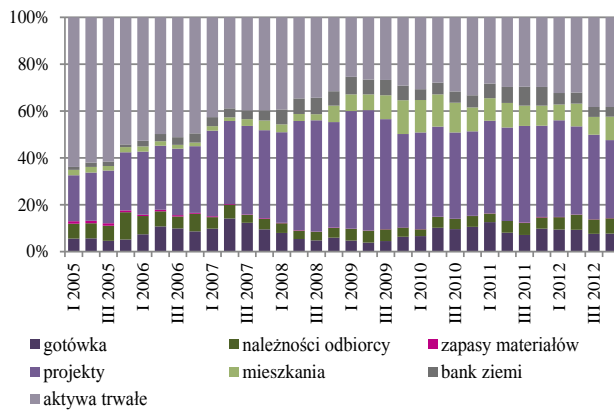
Source: NBP based on GUS (F01).

Figure 49 Economic indicators of LDs



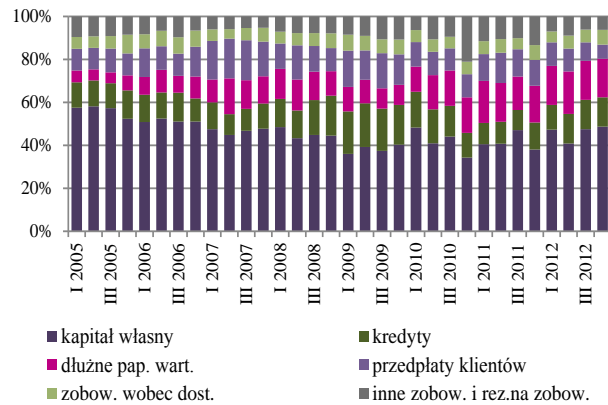
Source: NBP based on GUS (F01).

Figure 51 Structure of LD assets



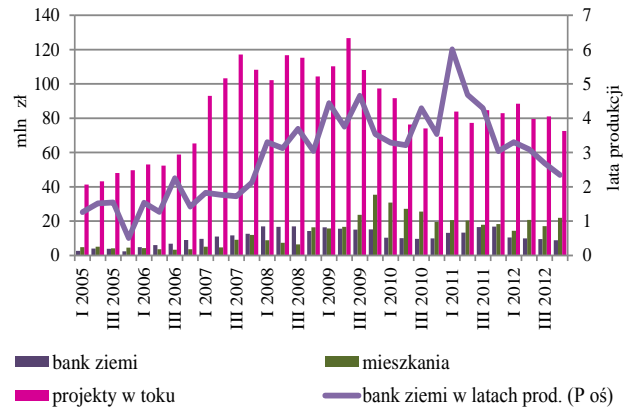
Source: NBP based on GUS (F01).

Figure 53 Structure of LD financing



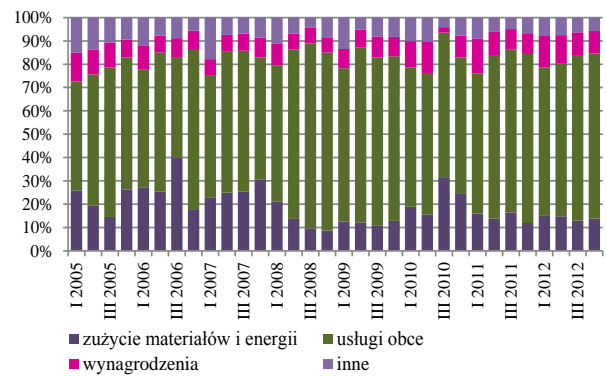
Source: NBP based on GUS (F01).

Figure 501 Situation of LDs



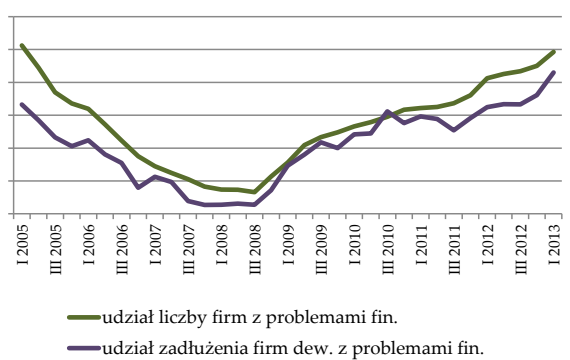
Source: NBP based on GUS (F01).

Figure 52 Structure of LD costs



Source: NBP based on GUS (F01).

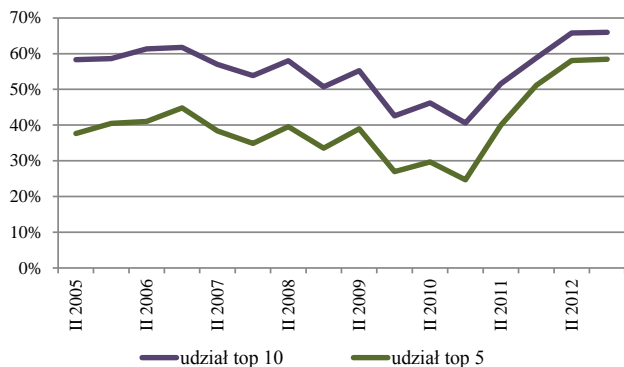
Figure 54 Real estate development companies facing financial problems



Note: companies whose liabilities have been classified by banks as non-performing (this refers to large-scale liabilities, exceeding the value of PLN 500 thousand).

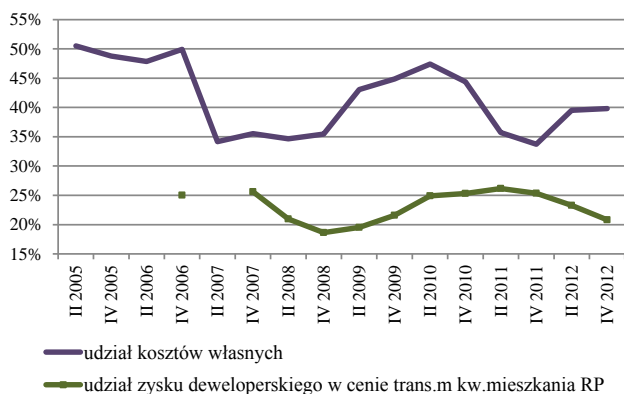
Source: B300.

Figure 55 Share of sales of 5 and 10 small real estate development companies in the total sales of small real estate companies (based on financial reporting)



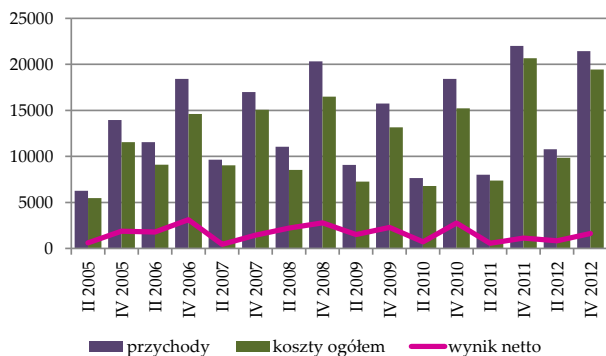
Source: NBP.

Figure 57 Share of own costs in the costs of a small real estate development company and the share of real estate developer's profit in the transaction price of one square meter of housing in the primary market



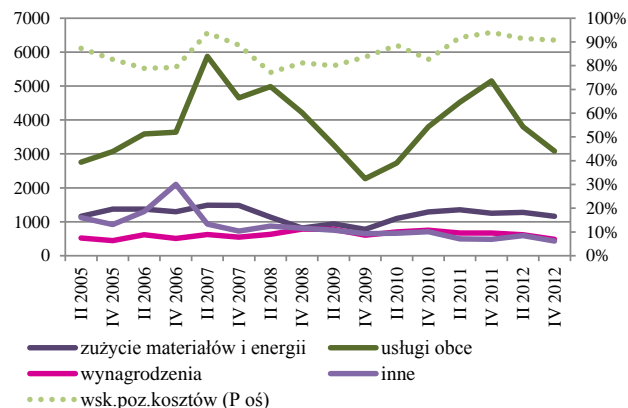
Note: shares of real estate developer's profit until 2007, concerning the last quarters only.
Source: NBP based on GUS (F01) and Sekocenbud.

Figure 59 Economic indicators of a small real estate developer company



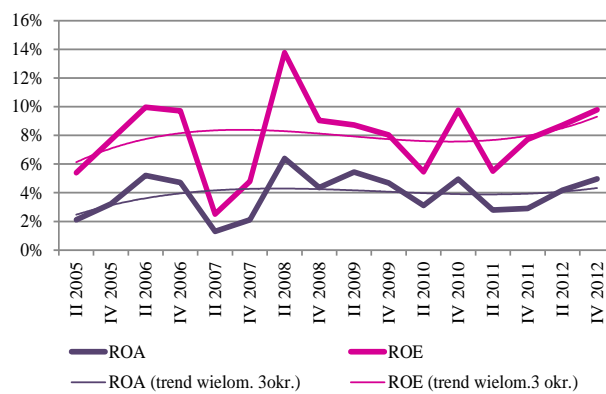
Source: NBP based on GUS (F01).

Figure 56 Costs of an average small real estate developer company



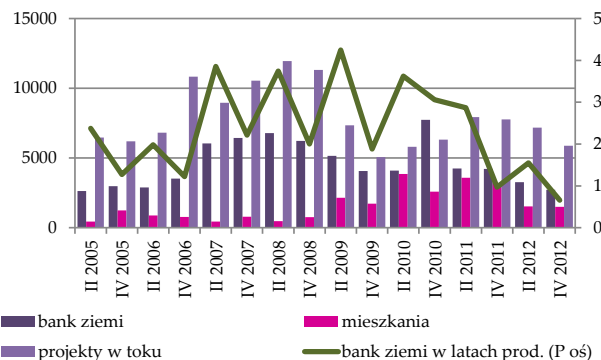
Note: an average small real estate developer company, according to GUS definition, employs more than 50 persons; this concerns Figures 55–63.
Source: NBP based on GUS (F01).

Figure 58 ROE and ROA of small real estate developer companies



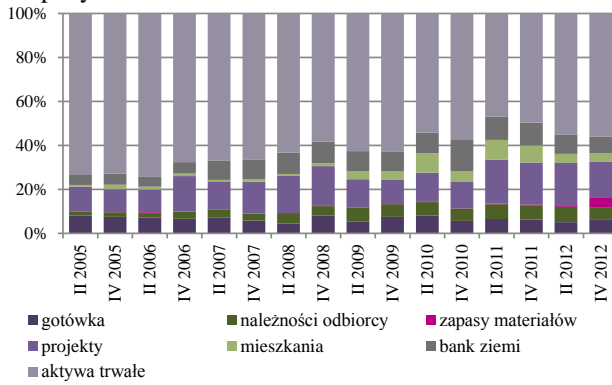
Note: net result in a particular quarter in relations to assets (equity) at the end of a particular quarter.
Source: NBP based on GUS (F01).

Figure 60 Situation of a small real estate developer company



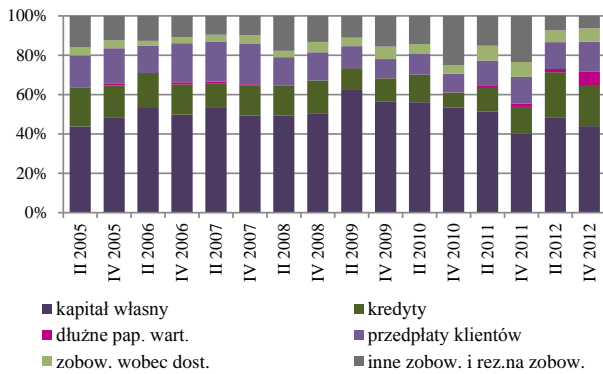
Source: NBP based on GUS (F01).

Figure 61 Asset structure of a small real estate developer company



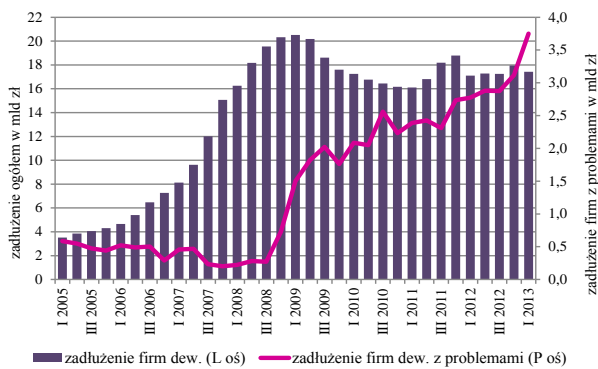
Source: NBP based on GUS (F01).

Figure 63 Financing structure of a small real estate developer company



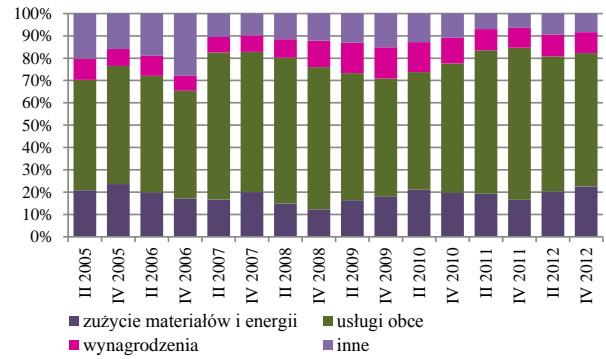
Source: NBP based on GUS (F01).

Figure 64 Value of real estate developers' debt (commercial banks) and debt of real estate developers facing financial problems



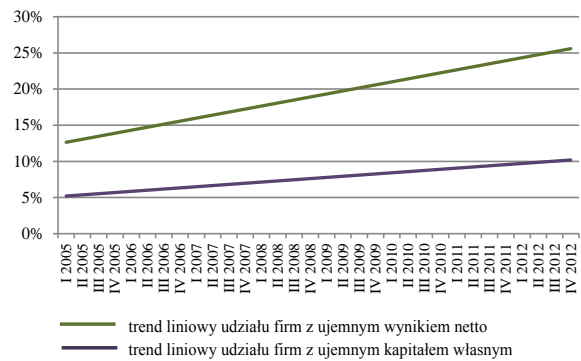
Source: B300; only large loans exceeding PLN 500 thousand.

Figure 62 Cost structure of a small real estate developer company



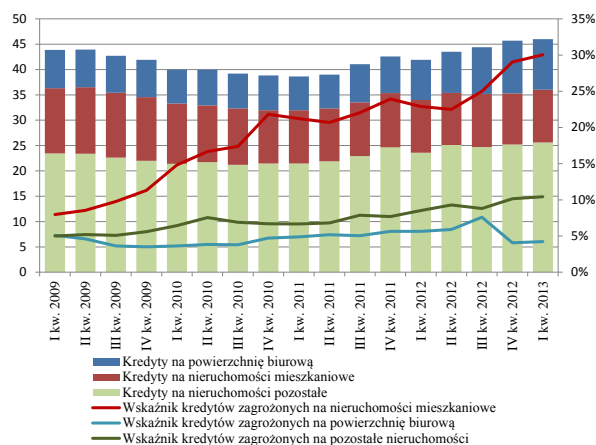
Source: NBP based on GUS (F01).

Figure 65 Share of real estate development companies with negative financial result and negative equity



Source: B300; only large loans exceeding PLN 500 thousand.

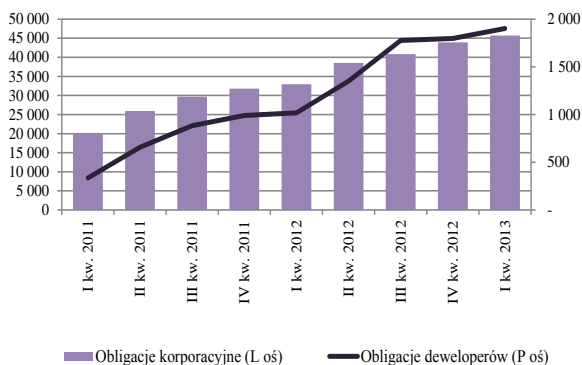
Figure 66 Real estate loans to corporations (in PLN billion, left-hand axis) and share of doubtful loans (in %, right-handed axis)



Note: data exclusive of BGK; detailed remarks as with Figure 30.

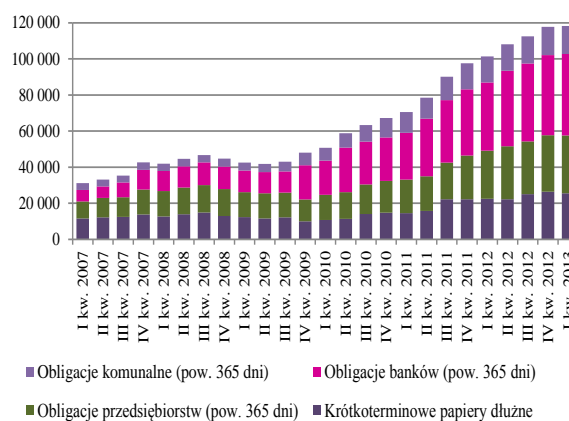
Source: NBP.

Figure 68 Value of debt securities of corporations (in PLN billion, left-hand axis) and value of debt securities of real estate developers listed in the Catalyst Stock Exchange Market (in PLN billion, right-hand axis)



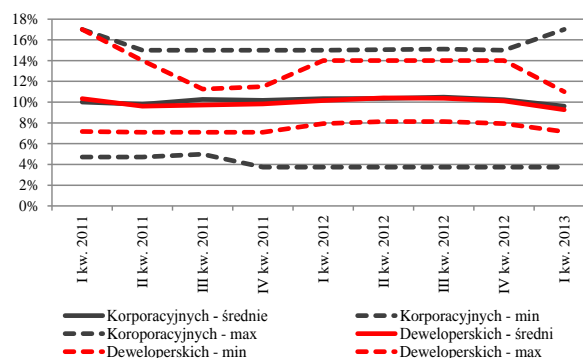
Source: GPW Catalyst.

Figure 67 Value of debt securities issued by banks, corporations and local government entities (in PLN billion)



Source: FitchRatings.

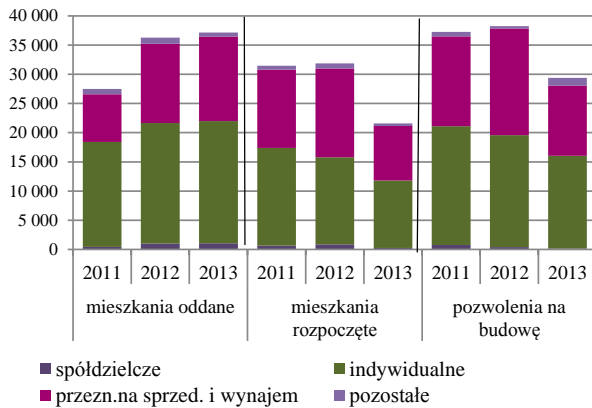
Figure 69 Interest rate on debt securities of corporations and debt securities of large real estate developers listed in the Catalyst Stock Exchange Market



Source: GPW Catalyst.

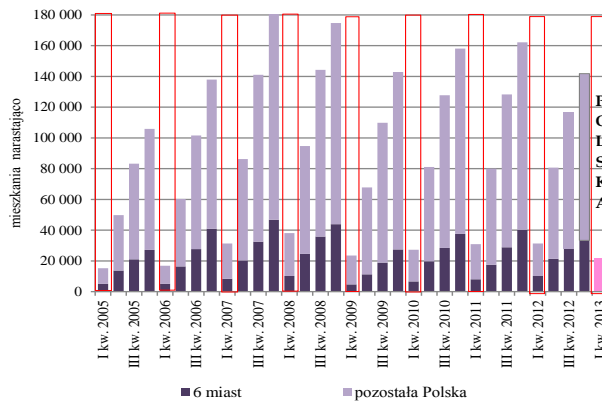
5. Residential construction and housing market in Poland in selected cities

Figure 70 Poland – structure of housing construction investors in Q1 in 2011-2013



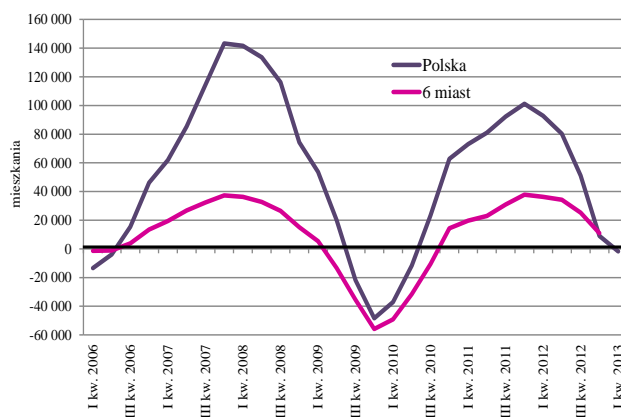
Source: GUS.

Figure 72 Poland – housing whose construction has started, in growing order



Source: GUS.

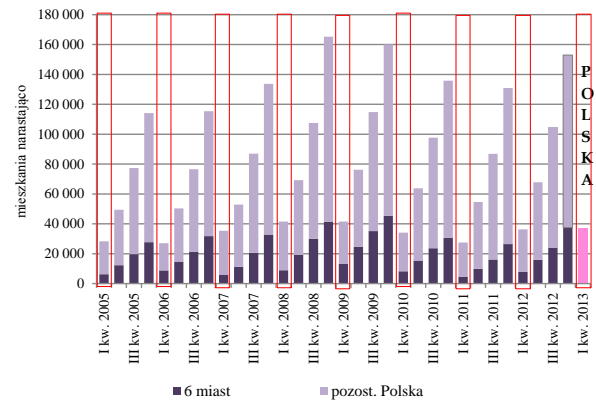
Figure 74 Housing market indicator in Poland and in Poland's 6 largest cities*/ (housing under construction minus completed housing)



The index is a 12-month rolling figure;
*/Warsaw, Cracow, Gdańsk, Łódź, Poznań, Wrocław;

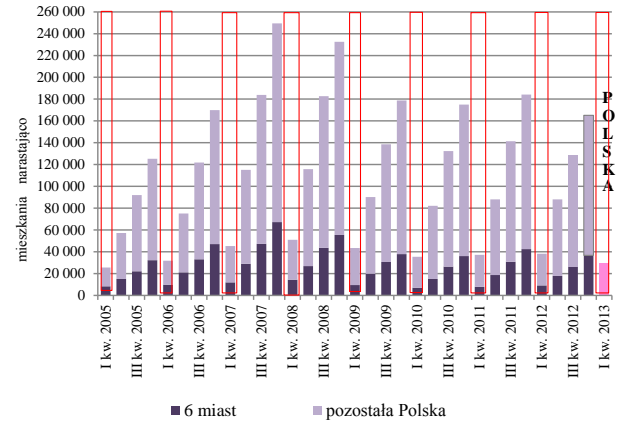
Source: NBP based on PABB and GUS.

Figure 71 Poland – completed housing, in growing order



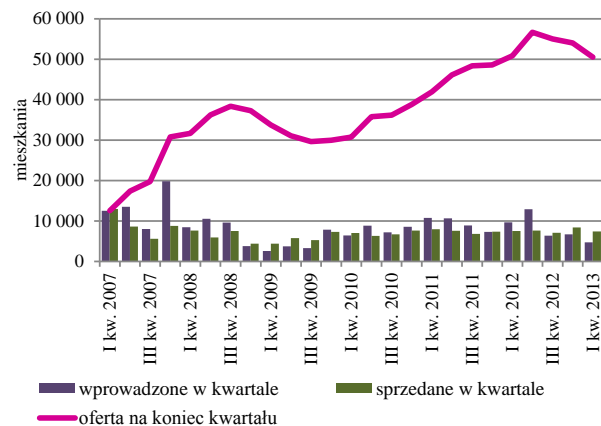
Notes to Figures 71–73: only first quarters marked.
Source: GUS.

Figure 73 Poland – issued building permits, in growing order



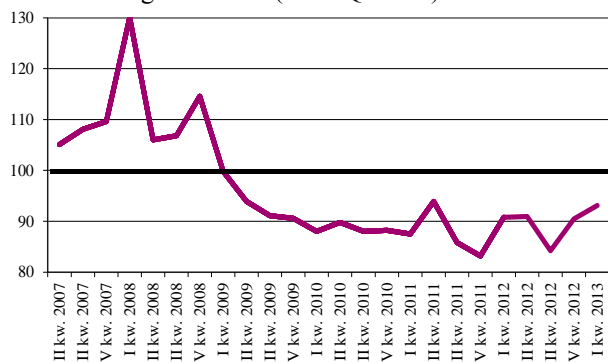
Source: GUS.

Figure 75 Number of housing units put on the market, both sold and offered for sale in Poland's 6 largest markets*/



* Warsaw, Cracow, Gdańsk-Sopot-Gdynia agglomeration, Wrocław, Poznań, Łódź;
Source: REAS.

Figure 76 Growth in the average price per one square meter of housing put on sale in the primary market in Poland's 6 largest cities*/ (2007 Q1=100)



* Warsaw, Cracow, Gdańsk-Sopot-Gdynia agglomeration, Wrocław, Poznań, Łódź
Source: REAS.

Figure 78 Structure of supply and demand*/ for housing with an area ≤ 50 square meters in the primary market in selected cities in Poland

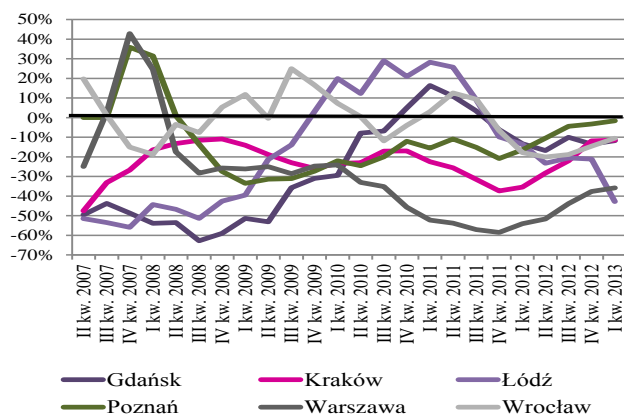
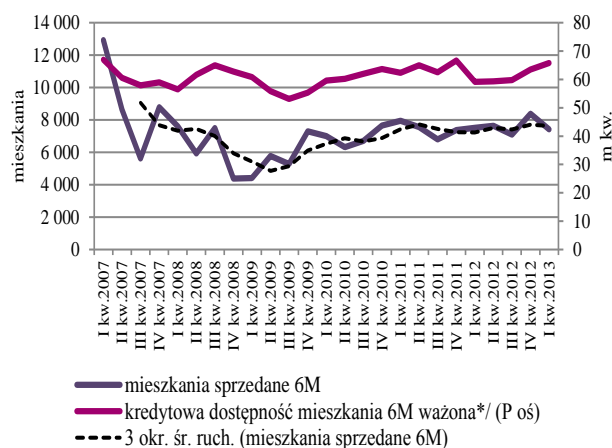


Figure 78 presents a mismatch (in %) between supply (developers' housing offer) and the estimated demand (housing transactions) in terms of the housing unit's size, according to the data from the BaRN database. The mismatch is calculated as the ratio of the share of housing units with a usable area of 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 line) indicates a surplus of housing of this particular size, whereas the negative result indicates a shortage thereof. Figure 79 is parallel.
Source: NBP.

Figure 77 Availability of loan-financed housing versus housing units sold in Poland's 6 largest cities*/(demand and supply estimates)



* Warsaw, Cracow, Gdańsk, Poznań, Wrocław, Łódź.
* Loan-financed housing availability measured with the currency structure of quarterly increases in housing loan
Source: NBP based on REAS.

Figure 79 Structure of supply and demand*/ for housing with an area >50 square meters in the primary market in selected cities in Poland

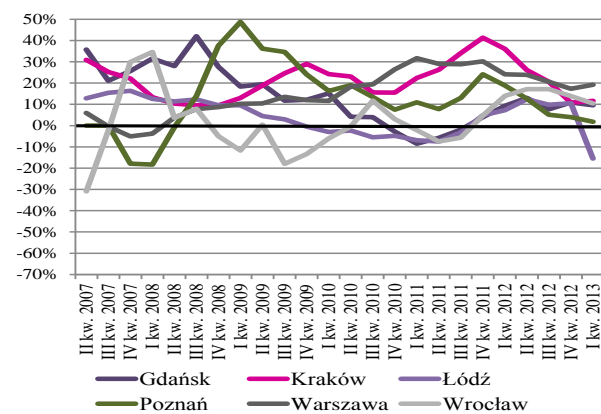


Figure 79 presents a mismatch (in %) between supply (developers' housing offer) and the estimated demand (housing transactions) in terms of the housing unit's size, according to the data from the BaRN database. The mismatch is calculated as the ratio of the share of housing units with a usable area of 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 line) indicates a surplus of housing of this particular size, whereas the negative result indicates a shortage thereof. Figure 78 is parallel.
Source: NBP.