N a r o d o w y B a n k P o l s k i
I n s t y t u t E k o n o m i c z n y

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Information on home prices and the situation in the residential and commercial real estate market in Poland[1] in 2011 Q4

Summary

Analysis of the situation in the Polish real estate market in 2011 Q4 leads to the following conclusions:

- the majority of trends observed in the housing market since the beginning of 2011 continued in the analysed period, which may be viewed as the market's shift toward a new equilibrium with lower home prices and falling production costs;
- slight declines in home prices, expressed in nominal terms (both offer and transaction prices in the primary market and existing stock) were observed in the largest cities; prices declined more markedly in real terms which was driven by growing wages and inflation;
- slight declines in margins on PLN housing loan had a positive impact on the demand for loans and housing; yet, despite a significant growth in loan disbursements under the government-subsidized housing scheme *Rodzina na Swoim* (RnS), the quarter-on-quarter rise in individual debt resulting from housing loans was lower than the one recorded in the corresponding period of 2010;
- banks' withdrawal from FX lending to households constituted an important factor supporting the security of the financial system;
- we assume a slight decrease in banks' profits on housing loans (in particular, zloty denominated loans), accompanied by a funding gap and growing deposit costs, which is likely to hinder the attempts to increase lending in the future;
- the share of profits in the price per square meter of housing and the estimated average annual rate of return on real estate developments remained attractive to developers, especially smaller-sized ones; this resulted in the commencement of new real estate development projects despite the already existing large stock of home construction contracts in place, which might be attributed to the *vacatio legis* of the new act on real estate development[2];
- in the analysed period, the actual financial indicators of real estate developers (ROA, ROE) were weaker that the theoretical ones, yet, the economic situation of the whole sector does not raise any major concerns;
- the commercial real estate market saw a rise in the value of investment transactions which, by the end of 2011, exceeded their 2010 level, whereas the capitalization rate of investment projects in prime locations continued on a downward trend.

[1] The information was prepared by the Economic Institute to be used the NBP's authorities and it presents the authors' opinions. This document should not be read as an advisory material or the basis for investment decisions.

[2] The Act of 16 September 2011 (Journal of Laws no. 232, item 1377) on the protection of home buyers' rights, defines the real estate development contract and obliged the real estate developer to provide the buyer with appropriate protection measures.

The study provides a synthetic description of key developments affecting the housing market in Poland's largest cities in 2011 Q4 and contains an attachment with charts and figures presenting: 1/ home prices (Figures 1-12), 2/ availability: loan availability, housing 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) (Figures 13-24) 3/loan disbursements and real interest rates (Figures 25-40), 4/ costs of construction and assembly output, profitability of real estate development projects and economic situation of real estate developers in Poland (Figures 41-60), residential construction in Poland (Figures 61-72), and 6/ commercial real estates (Figures 73-88).

This study was based on the data from the Real Estate Market Database BaRN[3], 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, the Central Statistical Office (GUS) and the National Bank of Poland (NBP). Offer prices of housing put on sale and information concerning profitability of real estate development projects were based on the data furnished by the Real Estate Advisory Service (REAS) and information supplied by the GUS (F01 and F02).

Information concerning the commercial real estate market[4] was prepared on the basis of data provided, on a voluntary basis, by commercial real estate agents and commercial real estate management companies as well as companies involved in commercial real estate consultancy. The analysis also draws on the expertise of experts of various consulting companies and the NBP. The study relied on the data and information provided by the following consulting companies: CBRE, Colliers International, Cushman & Wakefield, DTZ, Horwath HTL, Jones Lang LaSalle, Ober Haus, BRE Bank Hipoteczny and associations: the Retail Research Forum of the Polish Council of Shopping Centres and the Warsaw Research Forum.

In 2011 Q4 the housing real estate sector, similarly to the previous four quarters, saw processes accompanying the search for a new long-term equilibrium. This involved many different processes connected with both the demand side, but also with the rebuilding of the existing stock, thus the supply side. Factors affecting household income and loan availability were of particular importance in the first group of processes. This coincided with regulatory measures and speculation of both producers and buyers, which is typical in the real estate market. While speculation, by boosting supply, enhanced the cyclic nature of the market in a short-term horizon, regulatory measures had both a short-term and long-term impact.

The discussed processes are clearly visible when comparing the time series presenting the main sector proportions from the perspective of housing supply (see Figure 41 and Figure 42). The housing market boom in the years 2005-2007 triggered a dramatic surge in prices, which, with a certain time lag, gave rise to growing costs of construction and assembly production and production factors, including materials and labour. In the subsequent years, home prices, in real terms, decreased gradually and real-term prices of production factors, including materials and

[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 sales offers and transactions as well as home rentals within city limits of sixteen voivoship cities, where the majority of real estate deals are closed.

[4] The study focuses on modern commercial real estates as they are the object of transactions conducted by large real estate agents and since there is a strong and direct relationship between the scale of those transactions and the domestic economy. Introductory information on the commercial real estate market, definitions and in-depth analysis of major economic variables are presented in the NBP's report: "Report on the situation in the residential and commercial real estate market in Poland in 2010", available on the NBP's website.

labour, showed a sustainable growth. The market also saw continued high land prices. As a result, prices of construction and assembly production failed to return to their previously observed level, and the profitability of real estate development is closer to the one noted in 2005 than its 2007 level. Consequently, for fundamental reasons, there is no room for larger home price reductions than those observed in the past. Yet, a moderate price adjustment will continue in the nearest future, which is connected with a gradual attainment of the equilibrium and business cycle factors. Still, further moderate price adjustments may be expected as a result of gradual limitation of public infrastructure schemes. This will give rise to falling prices of materials and labour, and, consequently, lower prices of construction and assembly works.

The main factor behind imbalances on the demand side, namely the lower interest rate on FX loans affecting loan availability, is on the wane. As a result, availability of loan-financed housing (see Figure 16, Figure 18, Figure 20, Figure 22) and the average home price to average income ratio (see Figure 70) revert to the pre-boom level. This level may be considered as close to the equilibrium level. The less favourable level of those indices is the effect of continued relatively high home prices.

General trends discussed in this paper are reflected in analytical indicators, including the 2011 Q4 indicators. The largest markets continued to experience a slight downward trend in prices (see Figure 1-Figure 12), which is especially visible in real-term, CPI-deflated prices (see Figure 4). A particularly marked decline was observed in offer prices; moreover, real estate developers started to value home construction contracts in a more realistic way.

The decline of the share of FX loan made the loan availability and availability of loan-financed housing levels reverse to similar ones as in2004 (see Figure 15-Figure 22). The relatively lower availability of loan-financed housing continues to be driven by persistently high home prices. Although high inflation observed in 2011 drives down the costs of home financing in real terms (see: Figure 14), there are no products to make use of the low real interest rates prevailing in the market (like loans with delayed repayment). As a result, of paramount importance are high nominal interest rates, based on which banks determine loan availability, thus curbing demand.

Undoubtedly, the government-subsidized housing scheme RnS is a factor supporting demand, which, despite limits for major markets being reduced below the average, continued to see peak popularity (see Figure 24). Yet, it should be remembered that the consequences of reduced limits will show their impact at the earliest in 2012, when the scheme is scheduled to end. This may, as past experience shows, further increase demand for lending under the scheme, and consequently, increase demand for housing.

Restricted FX lending combined with regulatory measures and banks' concerns about further declines in home prices resulted in a lower loan availability and led to a lower debt increase (see Figure 25-Figure 27). Yet, neither the geographical location of loans nor the loan quality saw any significant changes. The return on mortgage loans continued at a stable level since the beginning of the year and did not pose any barrier to lending. On the other hand, the funding gap proved to be a problem for some banks, which on account of the poorly operating interbank market incurred significant costs of loan funding (see Figure 31-Figure 32).

In the real estate development sector, relatively high home prices (margins at approx. 40%) enabled the newly commenced real estate development projects to generate gross annual operating return of approximately 25%. This gave rise to good business conditions in the sector and commencement of new projects despite the existing surplus of unsold housing. This was driven by developers' assumption that at this level of return they might continue to lower home price and succeed in selling housing. In the absence of official GUS data, we base on the knowledge on the market and assume that the return surplus did not change significantly in 2011 Q4, continuing at a high level.

The performance of real estate development companies, in real terms, was weaker, which was due to a number of reasons, including real estate development risks such as unexpected costs. Also development projects commenced during the market boom, i.e. amidst high prices of land, construction materials and labour, affected their performance.

The real size of construction measured with completed housing was slightly lower than a year ago, which was the effect of the 2009 construction collapse (see Figure 61 - Figure 67). The average period of development project execution is 2 years.

The commercial real estate market saw in 2011 Q4 the continuation of trends observed since the beginning of 2011. By the end of 2011, the value of investment in commercial real estate reached EUR 2.5 billion. The value of investment in the retail space exceeded the level for the whole year 2010, whereas the value of investment in office space almost doubled. Capitalization rates in all sectors continued on a slightly downward trend. In the case of office real estate, with rents remaining stable, this indicates growing real estate prices (see: Figure 73-74).

The outlook for the Warsaw real estate market, including commercial real estate, in particular office space, seems optimistic. In a 2012 survey report released by the PwC and the Urban Land Institute[5], Warsaw ranked third, between Munich and Berlin. Investors are attracted by Warsaw's stable economic growth and its perception as CEE's financial centre. According to the survey report, considerably higher optimism is displayed by external investors than those who have already entered the market. Investors already operating in the market pointed at Poland facing a risk brought about by a potential economic slowdown in the whole ECC region. Investors' optimism is reflected in the forecasts released by Jones Lang LaSalle[6], according to which an estimated 250 000 square meters of office space will be completed in Warsaw in 2012. This would mean an almost twofold increase in new office space as compared to its 2011 level and the reversal of the 2-year-long downward trend. This is the result of previously signed construction contracts (it is assumed that the time between signing of a construction contract and completion of the project is two or three years). It should also be noted that so far the commercial real estate market has been dominated by foreign investors, whose investment decisions are largely dependent on the developments in the euro area.

The situation in the office real estate market did not see any major changes (see Figure 75-78). A moderate growth was noted in office space in all major cities. In Warsaw, in the whole of 2011, new supply was, however, lower than in 2010 with a stable vacancy rate (see Figure 79-Figure 80). In other regional cities, except for Łódź, vacancy rates continued on a downward trend. Rents remained stable in all markets.

In 2011 Q4 the modern retail space market (see Figure 81 – Figure 82) saw growth in retail space, especially outside of agglomerations. There is an increasing number of shopping centres located in medium-sized cities and towns. This may be driven by the fact that market participants have observed a certain level of saturation in terms of retail projects in large cities and agglomerations (see the DTZ report[7]). In the absence of direct competition and amidst low prices of land in medium-sized cities and towns, investors are more inclined to taking risk and investing in cities where they cannot always count on wealthy customers from large agglomerations and which are strongly dependent on business conditions. In the second half of 2011, rents per square meter of retail space in prime locations continued at the early 2011 level. In 2011 Q2, the capitalization rate continued to decline (see Figure 83 and 84). In 2011 Q4 rents for retail space in

[5] "Emerging Trends in Real Estate Europe 2012" published by the PwC and the Urban Land Institute (2012)

[6] Jones Lang LaSalle "Pulse – Analysis of the Warsaw Office Market in 2011 Q4"

[7] DTZ Property Times "Poland – Shopping centres in medium-sized cities. Steady growth of interest." December 2011

prime high streets continued at the levels observed since the beginning of 2011. Only the Wrocław prime high street rents have seen a downward trend, persisting since the beginning of 2009. Prime high street rents in different cities continued to differ considerably (see Figure 85 and 86).

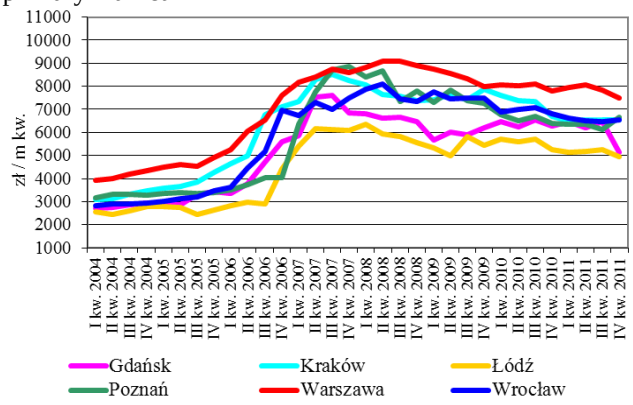
The warehouse space market in the second half of 2011 experienced a supply growth exceeding 250 thousand square meters. In the majority of markets, rents remained stable (see Figure 87 and Figure 88). The Cracow market saw warehouse space rents decline, which may be driven by proportionally large volume of newly completed warehouse space. In 2011 more than 46 thousand square meters of warehouse space was completed which accounts for an annual space growth of almost 70%. In accordance with the CBRE data[8] in 2011 approx. 40% of warehouse space in Poland was built in the build-to-suit format, which may point to a prudential attitude of real estate developers. According to the *Spring 2012 Marketbeat* report by Cushman & Wakefield, at the end of 2011 approximately 270 thousand square meters of warehouse space was under construction.

[8] CBRE "Big Box Poland – Warehouse market in Poland", 2011 Q4.

Attachment

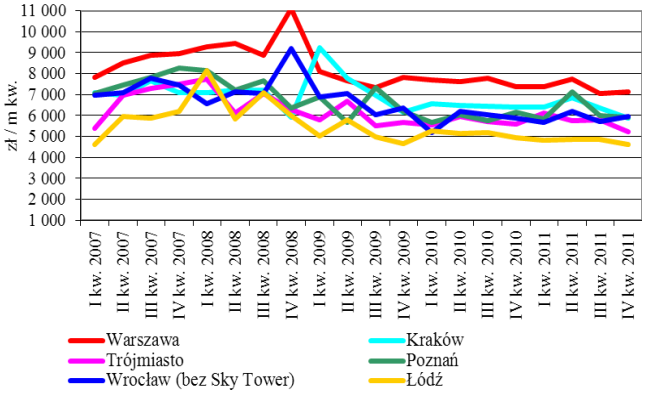
1. Offer, transaction and hedonic[9] prices of housing, primary market and secondary market

Figure 1 Offer prices per square meter of housing – primary market



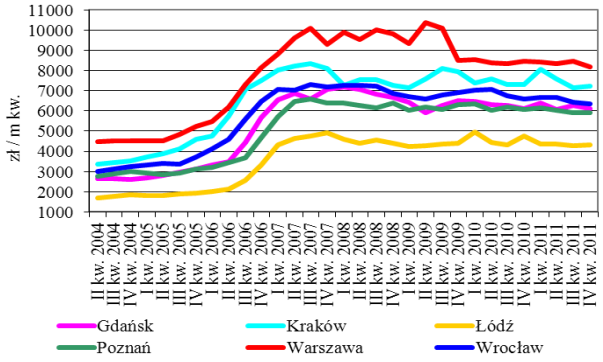
Source: PONT Info Nieruchomości.

Figure 2 Offer prices per square meter of housing as per new contracts– primary market



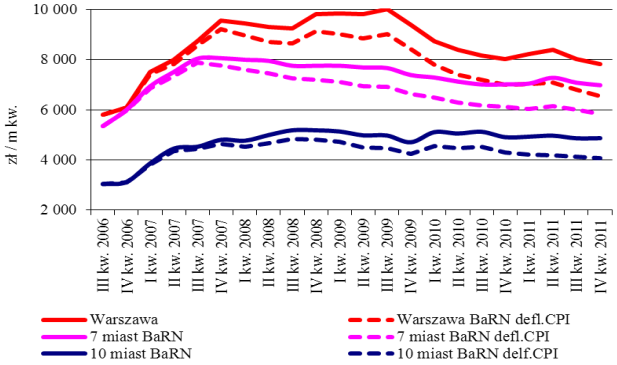
Source: REAS.

Figure 3 Offer prices per square meter of housing – secondary market



Source: PONT Info Nieruchomości.

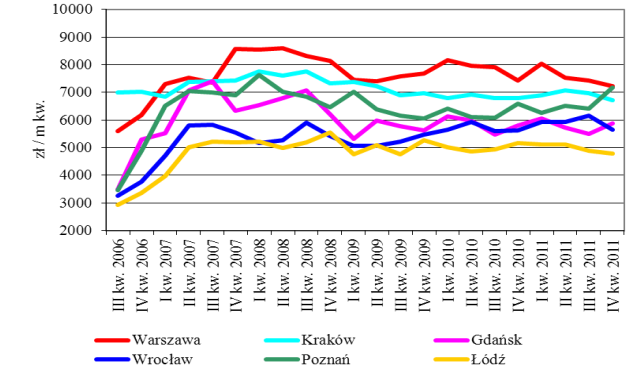
Figure 4 Weighted average*/ price per square meter of housing and CPI-deflated price (2006 Q3 =100) – primary market, offer



*/ Price weighted with the share of housing in the housing market stock;
Source: NBP.

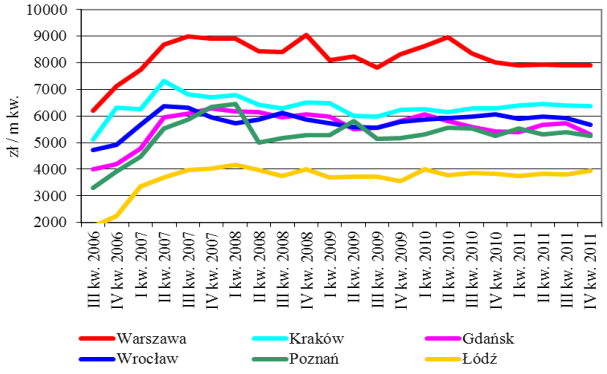
7 cities: Warsaw, Cracow, Poznań, Wrocław, Łódź, Gdańsk, Gdynia;
10 cities: Białystok, Bydgoszcz, Kielce, Katowice, Lublin, Olsztyn, Opole, Rzeszów, Szczecin, Zielona Góra;

Figure 5 Transaction prices per square meter of housing – primary market



Source: NBP.

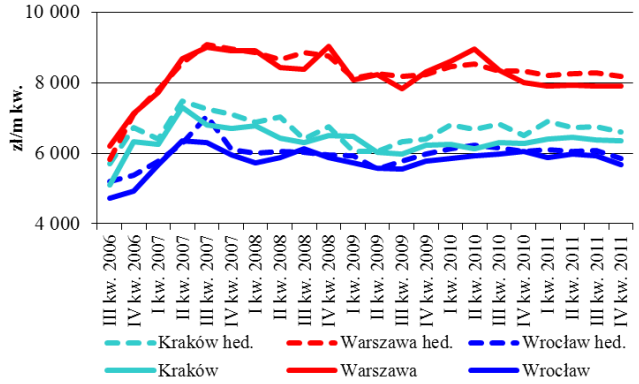
Figure 6 Transaction prices per square meter of housing – existing stock



Source: NBP.

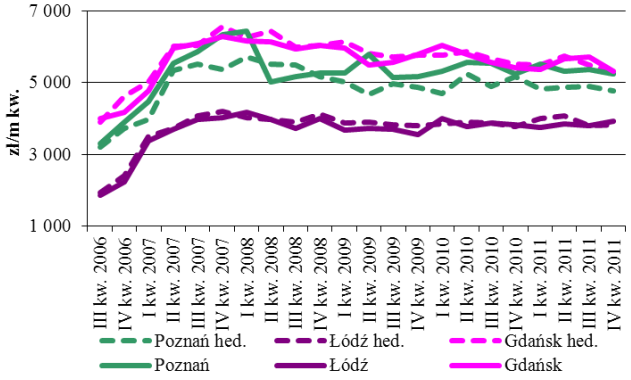
[9] The hedonic price index is a measure reflecting the price change resulting from factors other than differences in housing quality. The index accounts for changes in the quality of housing in the empirical samples in each period.

Figure 7 Average transaction price per square meter of housing, and price adjusted with the hedonic index [9/] – existing stock



Source: NBP.

Figure 8 Average transaction price per square meter of housing, and price adjusted with the hedonic index [9/] – existing stock



Source: NBP.

Figure 9 Growth (y/y) in average prices per square meter of housing – primary market, offers and transactions

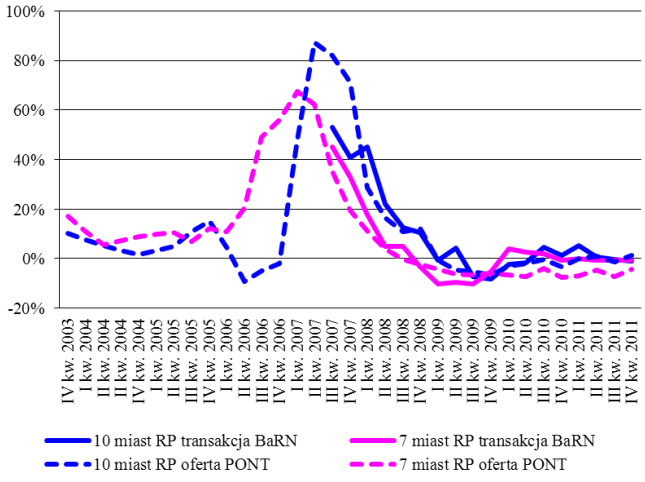
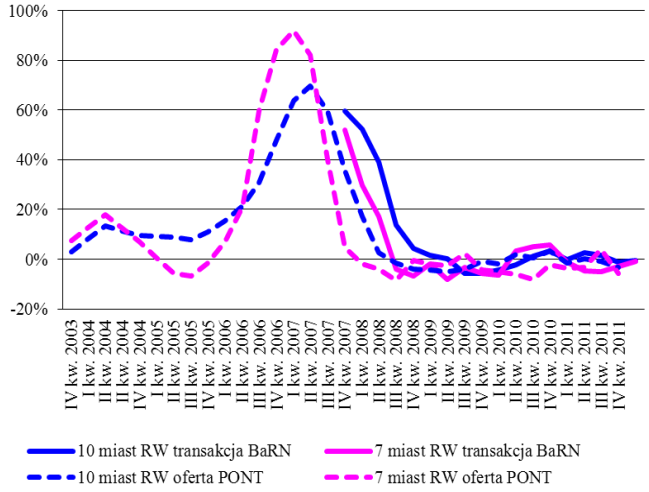


Figure 10 Growth (y/y) in average prices per square meter of housing – existing stock, offers and transactions



7 cities: Warsaw, Cracow, Poznań, Wrocław, Łódź, Gdańsk, Gdynia;
10 cities: Białystok, Bydgoszcz, Kielce, Katowice, Lublin, Olsztyn, Opole, Rzeszów, Szczecin, Zielona Góra;
Source: NBP (transactions), PONT Info Nieruchomości (offers).

Source: NBP (transactions), PONT Info Nieruchomości (offers).

Figure 11 Average weighted*[/] price per square meter of housing – primary market, transactions

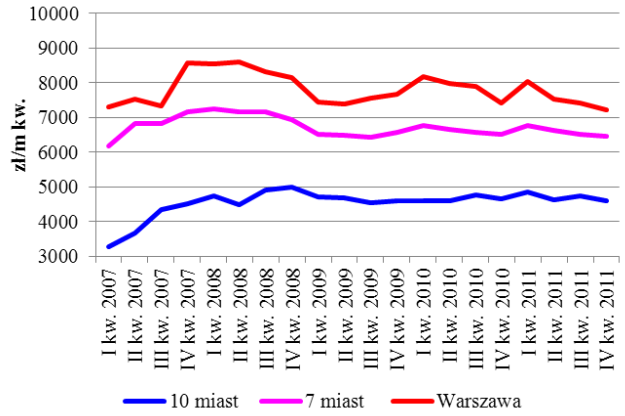
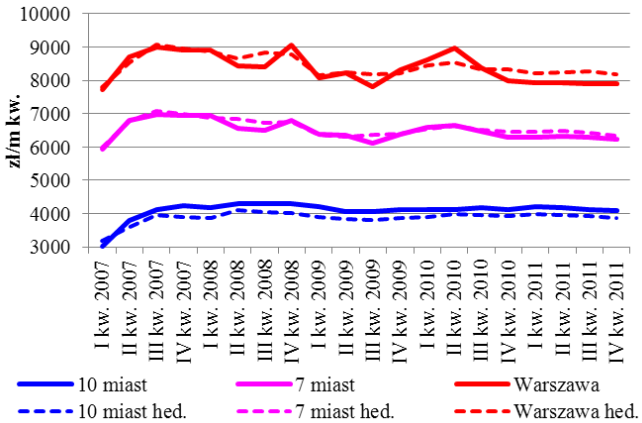


Figure 12 Average weighted*[/] price per square meter of housing and hedonic price – existing stock, transactions



Note: */ Price weighted with the share of housing in the housing market stock;
Source: NBP.

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

Figure 13 Availability of square meters' of housing for an average wage in the enterprise sector

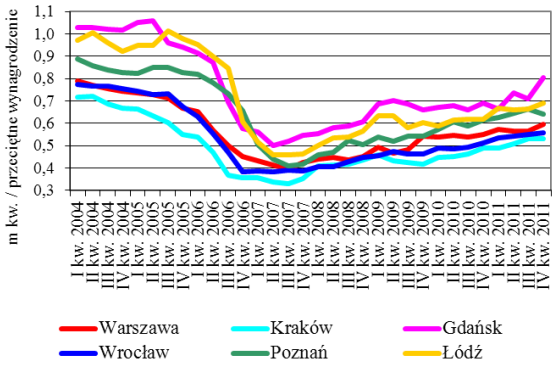
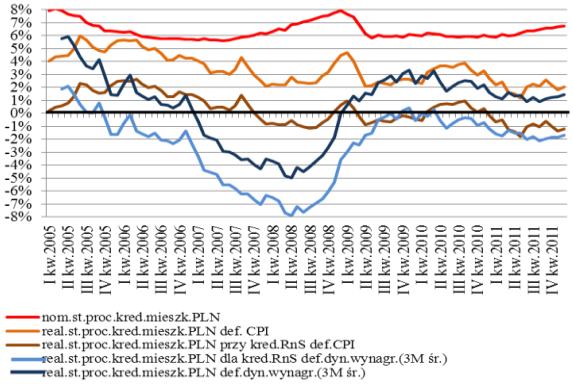


Figure 14 Profitability of housing loan for consumer



Housing availability – a measure of the potential ability to purchase housing space at offer prices for an average monthly wage in the enterprise sector; it expresses the number of square metres of housing with an average offer price in a particular market (PONT Info) , that can be purchased for an average wage in the enterprise sector in a particular city (GUS);

Source: NBP, GUS, PONT Info Nieruchomości.

Source: NBP, GUS, PONT Info Nieruchomości.

Figure 15 Available housing loan in PLN (in thousand PLN)

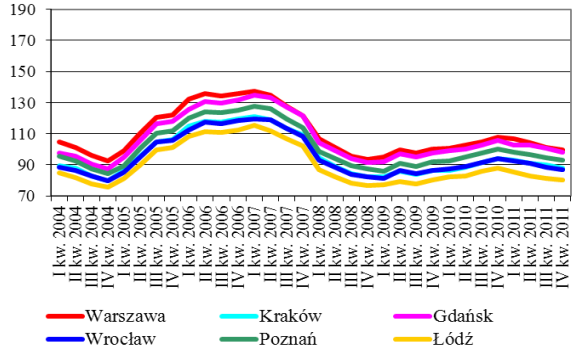
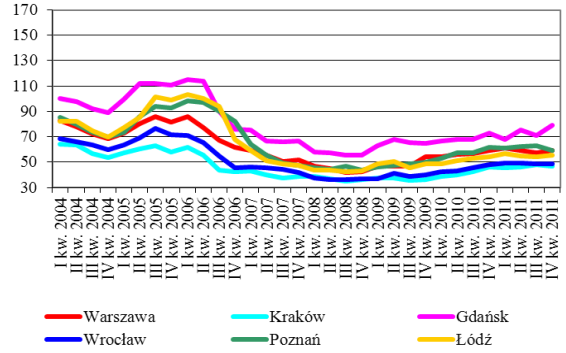


Figure 16 Availability of loan-financed housing per square meter of housing (in the case of PLN loan)



Availability of loan-financed housing – a measure, specifying how many square metres of housing at an average offer price in a particular market (PONT Info) may be purchased, for a housing 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 speed of changes of the index and differences between particular markets provide important information.

Source: NBP, GUS, PONT Info Nieruchomości.

Source: NBP, GUS, PONT Info Nieruchomości.

Figure 17 A CHF (in PLN thousand)

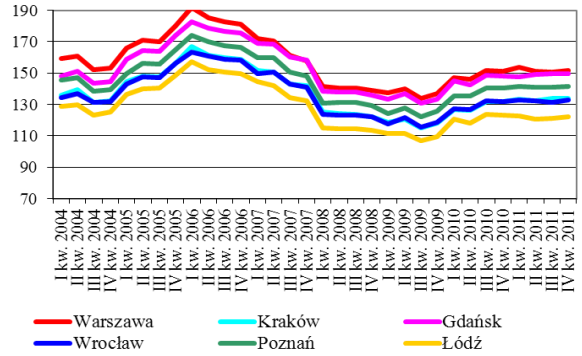
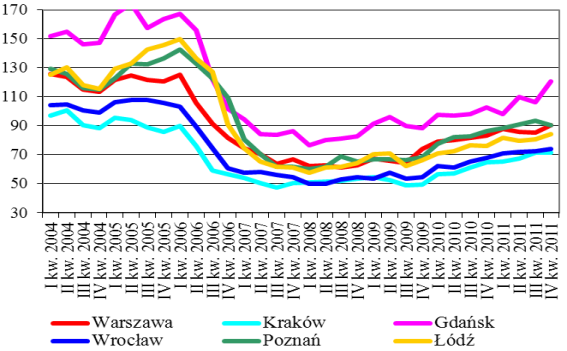


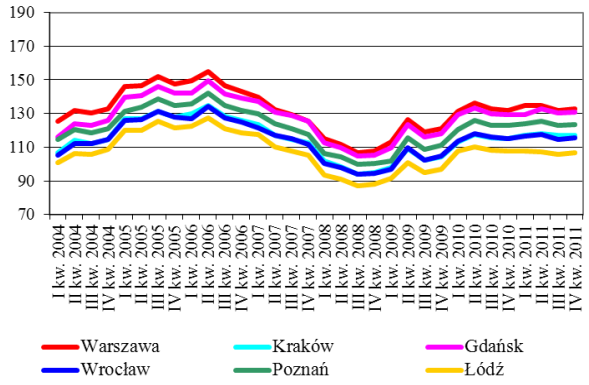
Figure 18 Availability of loan-financed housing per 1 square meter of housing (in the case of CHF-denominated loan)



Source: NBP, GUS, PONT Info Nieruchomości.

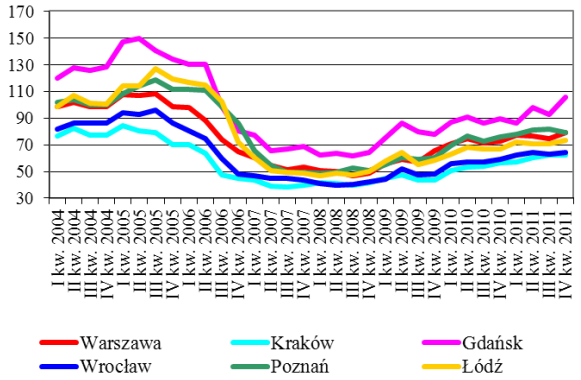
Source: NBP, GUS, PONT Info Nieruchomości

Figure 19 Available housing loans denominated in EUR (in thousand PLN)



Source: NBP, GUS, PONT Info Nieruchomości.

Figure 20 Availability of loan-financed housing per square meter of housing (in the case of EUR-denominated loans)



Source: NBP, GUS, PONT Info Nieruchomości.

Figure 21 Available weighted housing loans [10/] (in PLN thousand)

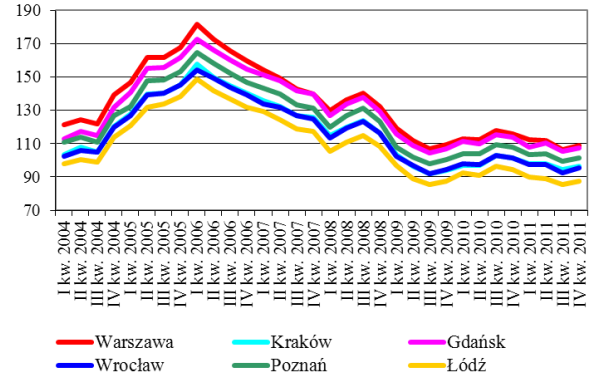
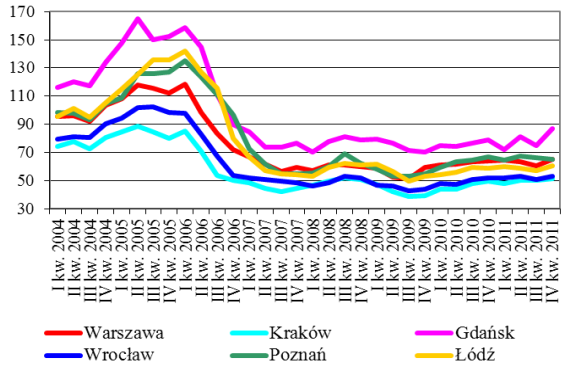


Figure 22 Availability of loan-financed housing per square meter of housing (in the case of weighted loans[10/])

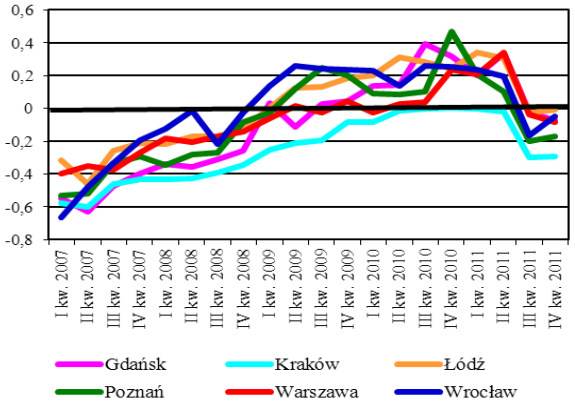


[10/] Loans weighted with FX structure of the quarterly increase in housing loans to individuals;

Source: NBP, GUS, PONT Info Nieruchomości.

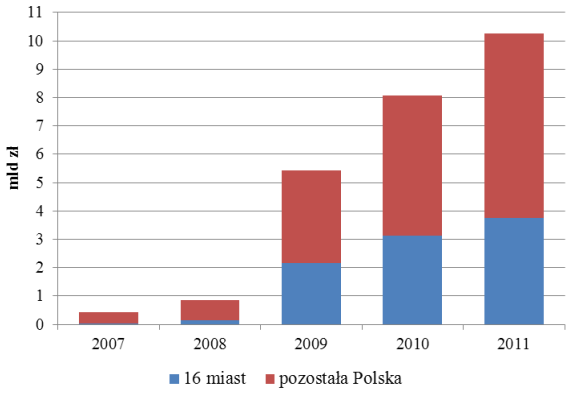
Source: NBP, GUS, PONT Info Nieruchomości.

Figure 23 Gap between limits under the government-subsidized housing scheme *RnS* and the median transaction price in six cities – primary market



Source: NBP, BGK.

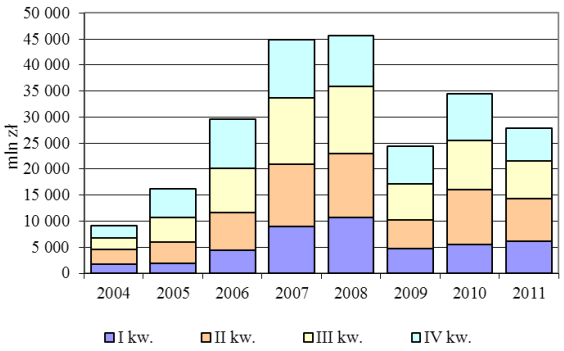
Figure 24 Loan disbursements under the government-subsidized housing scheme *RnS*



Source: BGK.

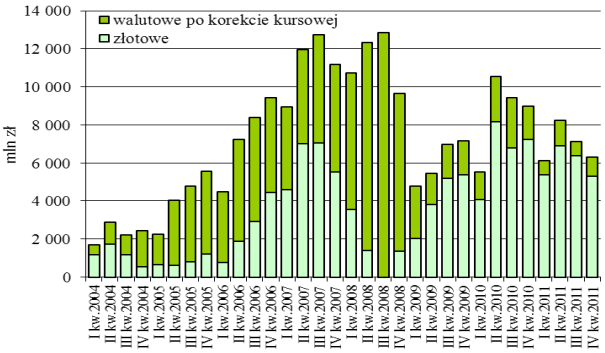
3. Disbursement of housing loans, interest rates

Figure 25 Q-o-q increases in housing loan receivables from individuals in FX adjusted terms (in PLN million)



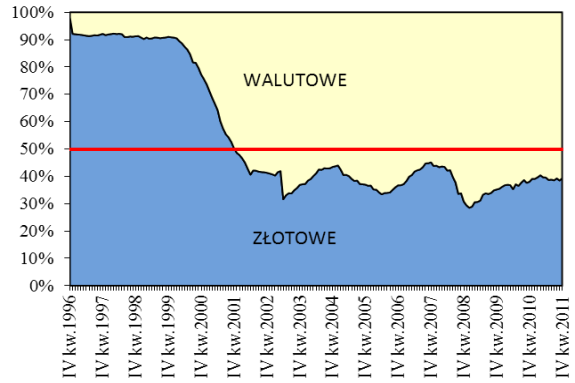
Source: NBP.

Figure 26 Currency structure of q-o-q increases in housing loan receivables from individuals in FX adjusted terms (in PLN million)



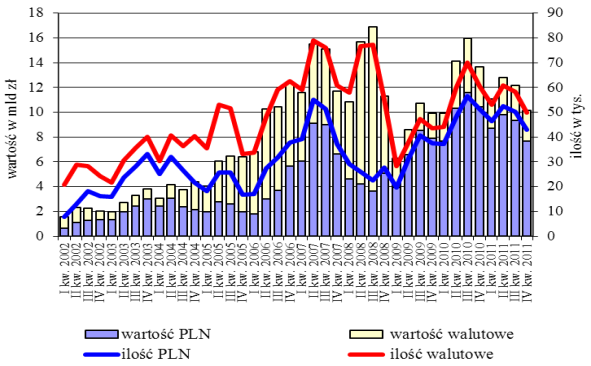
Source: NBP.

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



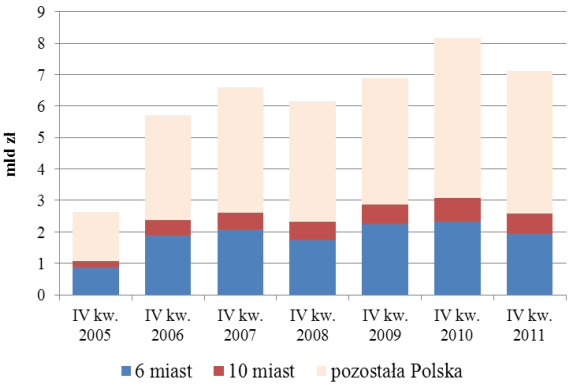
Source: NBP.

Figure 28 New housing loans in terms of values and quantities, quarter-on-quarter changes (in PLN billion)



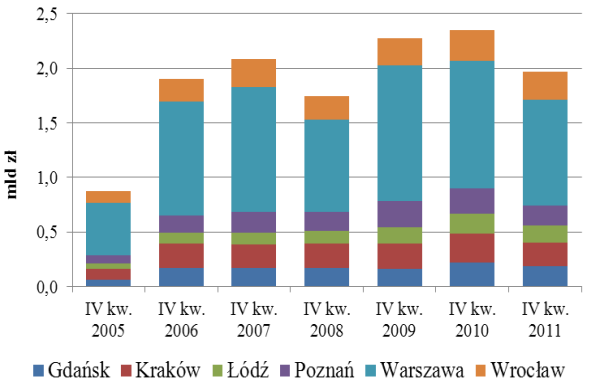
Source: ZBP.

Figure 29 Geographical breakdown of housing loans in Poland, in Q4



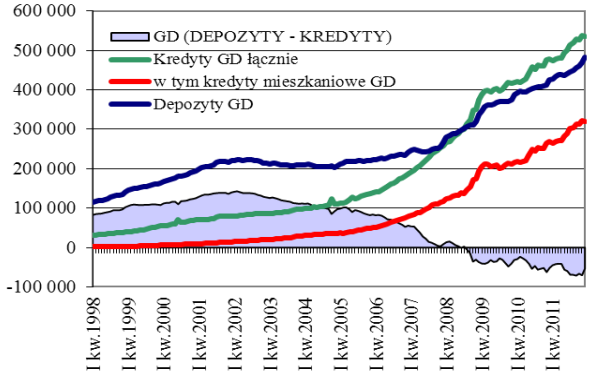
Note: BIK data do not cover the total of housing loans
6 cities: Warsaw, Cracow, Poznań, Wrocław, Łódź, Gdańsk;
10 cities: Białystok, Bydgoszcz, Kielce, Katowice, Lublin, Olsztyn, Opole, Rzeszów, Szczecin, Zielona Góra;
Source: NBP based on BIK data.

Figure 30 New housing loans in Poland's six largest cities, in Q4



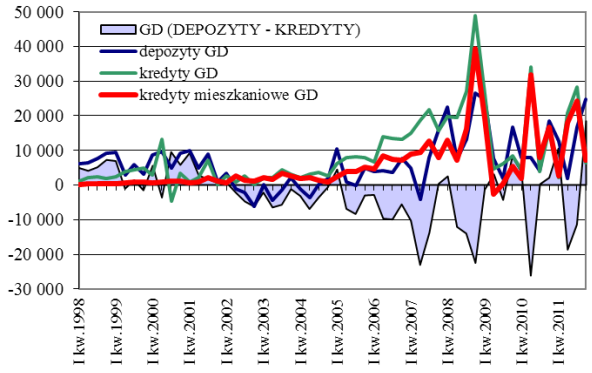
Source: NBP based on BIK data.

Figure 31 Banking sector funding gap in Poland (actual situation in PLN million)



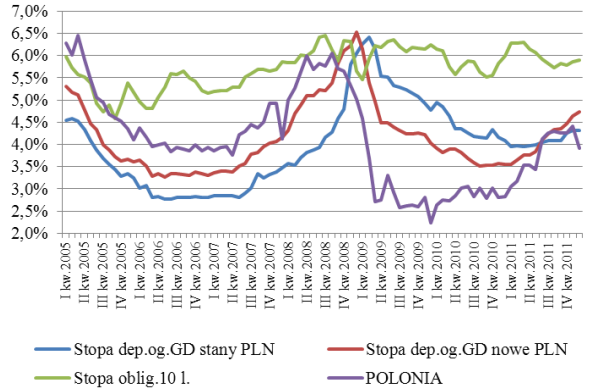
Source: NBP.

Figure 32 Banking sector funding gap in Poland (quarter-on-quarter changes, in PLN million)



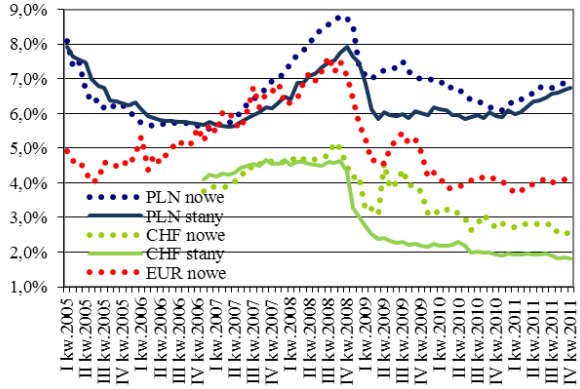
Source: NBP

Figure 33 Interest rates in Poland



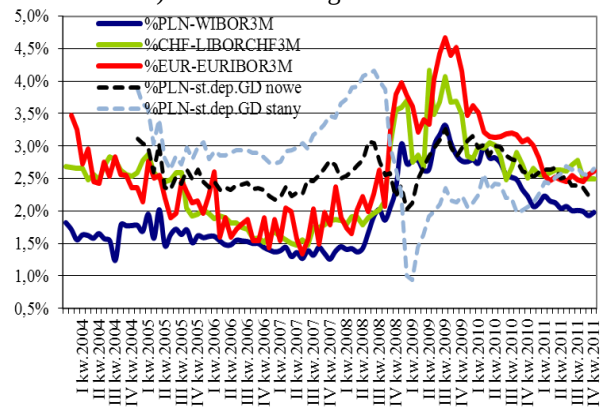
Source: NBP.

Figure 34 Interest rates on housing loans in Poland



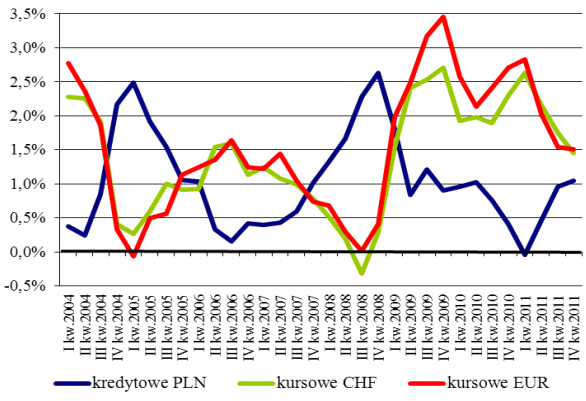
Source: NBP.

Figure 35 Bank margins (to WIBOR, LIBOR, EURIBOR 3M) on new housing loans



Source: NBP.

Figure 36 New housing loan risk assessement[12/] by banks

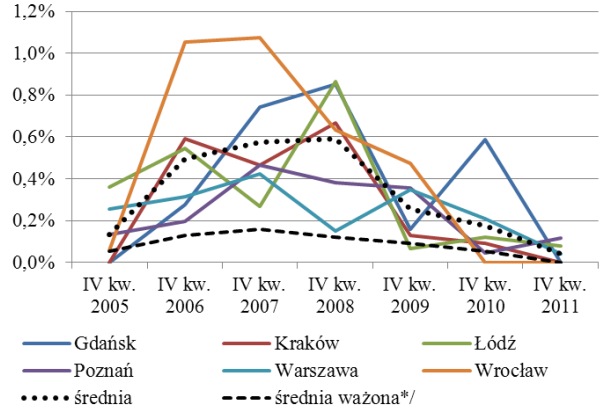


Source: NBP.

Bank margin is the difference between housing loan rate (NBP) and LIBOR3MCHF rate, LIBOR3MEUR rate or WIBOR3M rate;

[12/]Risk assessment: for PLN denominated loans (PLN housing loan rate minus Treasury bond rate 10L), for CHF – denominated loans (CHF loan rate minus PLN loan risk assessment minus LIBOR3MCHF), for EUR denominated loans (EUR loan rate minus PLN loan risk assessment minus LIBOR3MEUR);

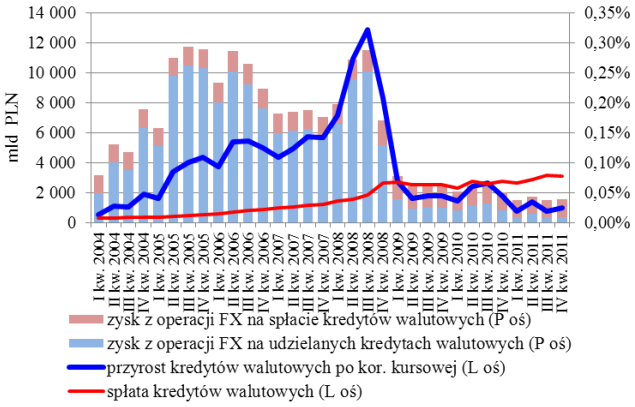
Figure 37 Quality [13/] of housing loan portfolio in Poland's six cities in Q4



[13/]Percentage share of substandard/non-performing housing loans (i.e. in arrears for 91-180 days) in the total of housing loans of a particular city and the average level for the six cities; up-to-date data as at the end of Q3;
*/average weighted with the city's share in loan increase;

Source: NBP based on BIK data.

Figure 38 Estimated banks' return on FX loans granted and repaid in Poland [14/]



[14/]Income on FX transactions is calculated as follows. New FX loans are disbursed in PLN. It has been assumed that an average FX spread amounts to 6% which means that the bank charges 3% on each FX transaction. Likewise, when the client pays subsequent foreign currency loan instalments, FX transactions take place, and the bank charges additional 3% on this amount. Rate of return is calculated as the ratio of income on FX transactions to the whole loan portfolio, i.e. composed of PLN and foreign currency loans. Repayment of loan instalments has been calculated with the use of fixed instalments, under the assumption of a 20-year lending period;
Source: NBP, AMRON.

Figure 39 Estimated banks' return on housing loans, in PLN in Poland [15/]

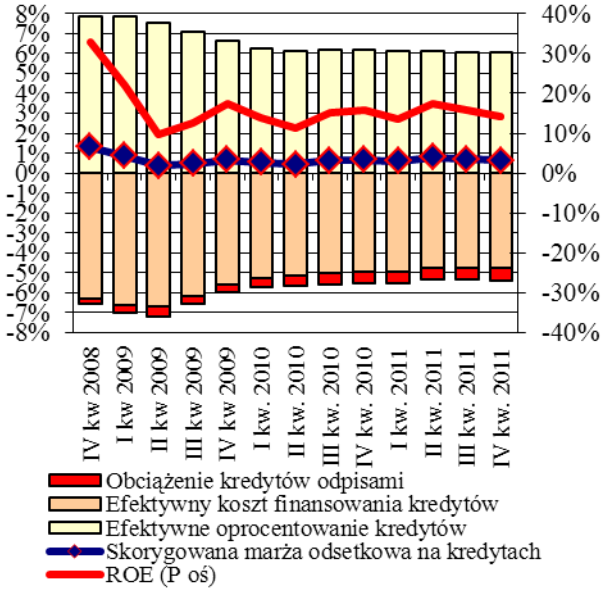
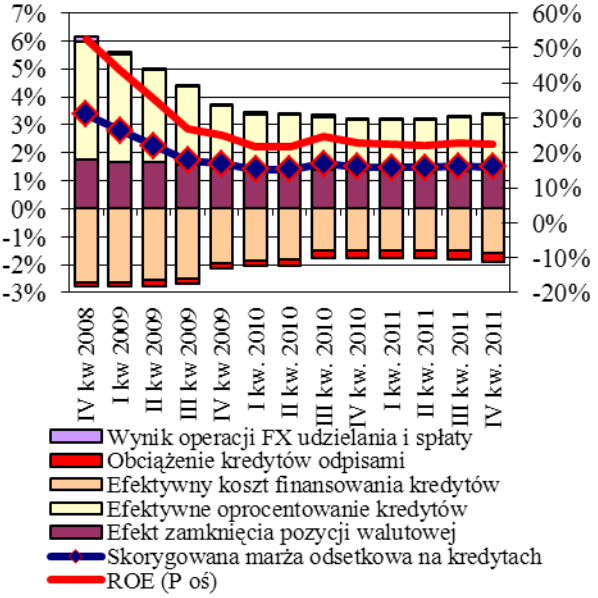


Figure 40 Estimated banks' return on housing loans in foreign currencies in Poland [15/]

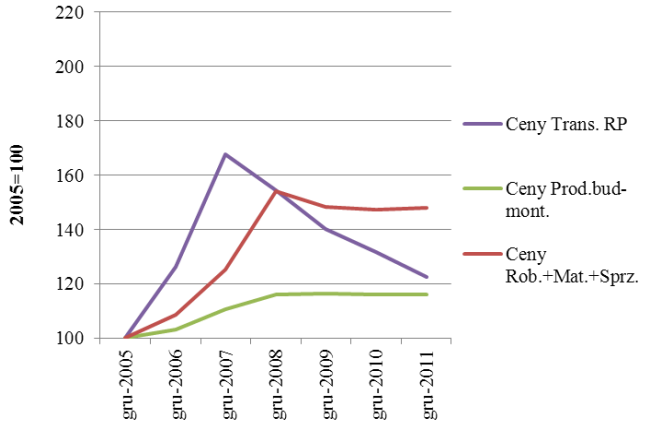


[15/]Income and costs related to housing loan portfolio. Estimated ROE* (Return on Equity) is calculated as the adjusted interest margin on housing loans with respect to the minimum own capital required. The minimum own capital requirement is assessed on the basis on the LTV estimate derived from AMRON data and capital requirement for housing 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. Closing of foreign currency position and effective interest rate on loans are based on a study prepared by the Financial Systems Department of the NBP. The effective funding cost was computed based on WIBOR and LIBOR rates through adding the estimative costs of this operation.

Source: NBP, AMRON.

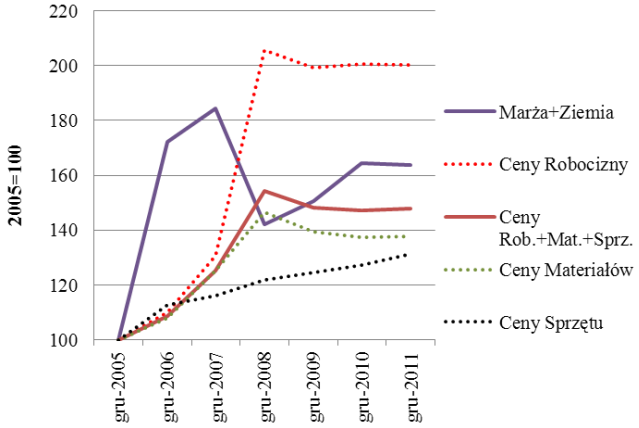
4. Operating rate of return on housing and real estate development projects, costs of construction and assembly production and economic situation of real estate developers in Poland

Figure 41 Real growth in the prices of housing and housing production, part I (December 2005 =100)



Source: NBP based on Sekocenbud, GUS.

Figure 42 Real growth in the prices of housing and housing production, part II (December 2005 =100)



Source: NBP based on Sekocenbud, GUS.

Figure 43 Warsaw- structure of price per square meter of housing usable area (type 1121 building [16/]) to be paid by consumer

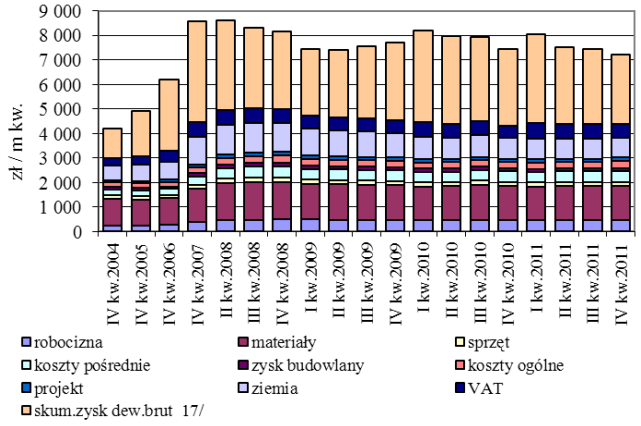
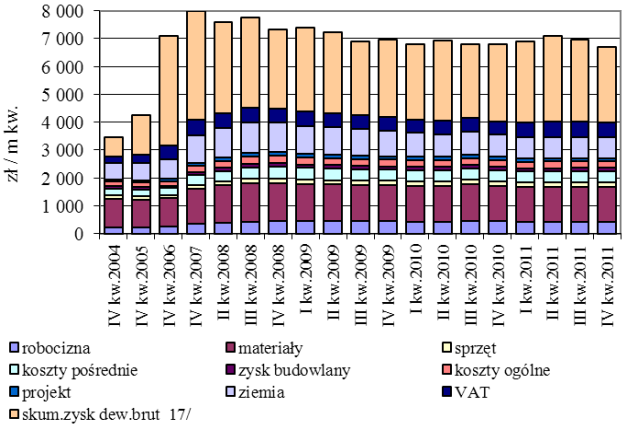


Figure 44 Cracow - structure of price per square meter of housing usable area (type 1121 building[16/]) to be paid by consumer



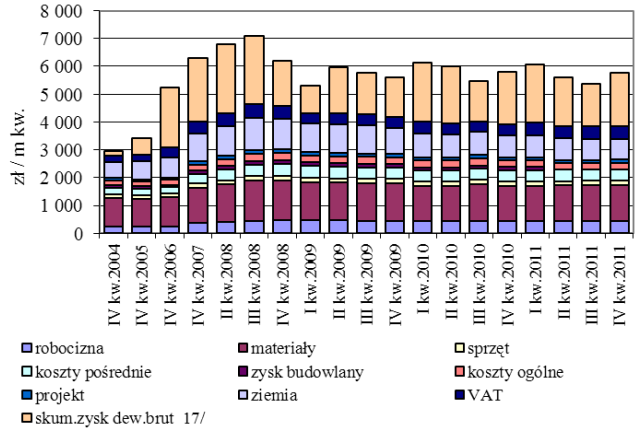
[16/]Building (type 1121) monitored by the NBP since the second half of 2004 as an average residential multi-family five-storey building with an underground parking space and retail premises on the ground-floor; traditional construction (over-ground part made from ceramic bricks); for the sake of convenience, it has been assumed that construction costs of 1 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 common area], different for various building; when calculating the price of 1 square meter of usable housing area to be paid by consumer, we have assumed a 20% share of outer space [building common area] with respect to housing area and by this figure we have adjusted upward the price of 1 square meter of housing.

[17/]The legend to figures 42-47 – gross aggregate return earned by real estate developer (for the whole period of investment) fails to account for write-offs/provisions for investment risks;

Note: data in figures 42-47 have been presented in quarter-on-quarter terms since 2008 Q2; previously, annual data;

Source: NBP based on Sekocenbud, REAS.

Figure 45 Gdańsk – structure of price per square meter of housing usable area (type 1121building [16/]) to be paid by consumer



Source: NBP based on Sekocenbud, REAS.

Figure 46 Wrocław - structure of price per square meter of housing usable area (type 1121 building [16/]) to be paid by consumer

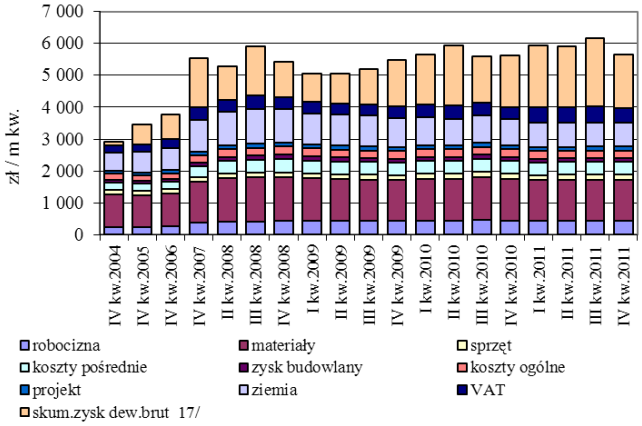
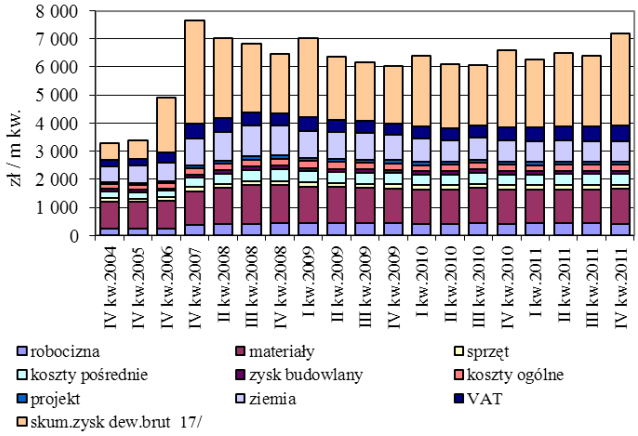


Figure 47 Poznań - structure of price per square meter of housing usable area (type 1121 building [16/]) to be paid by consumer



Source: NBP based on Sekocenbud, REAS.

Figure 48 Łódź - structure of price per square meter of housing usable area (type 1121 building [16/]) to be paid by consumer

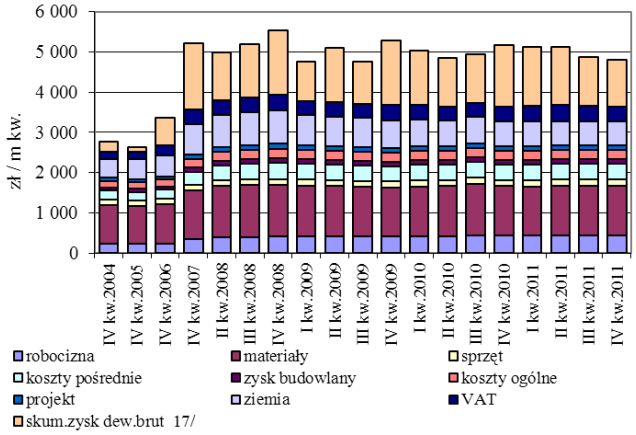
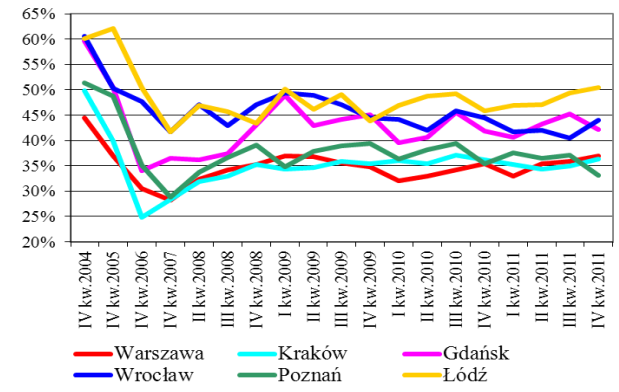
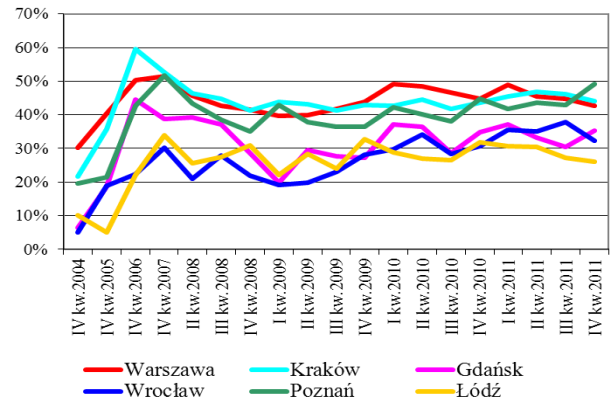


Figure 49 Share of direct construction costs per square meter of a residential building's usable area (type 1121 building [16/]) in the transaction price in the primary market



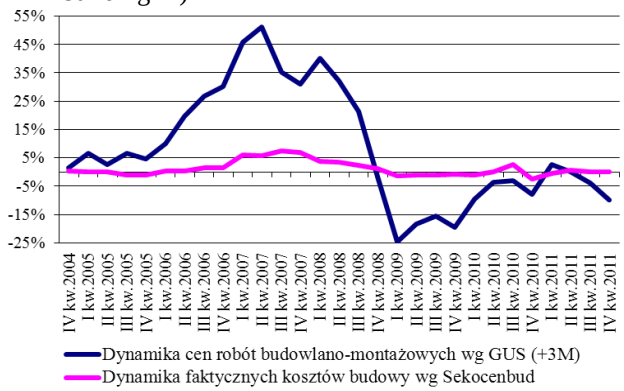
Source: NBP based on Sekocenbud.

Figure 50 Share of real estate developer's return in the price per square meter of a residential building's usable area (type 1121 building [16/]) in the transaction price in the primary market



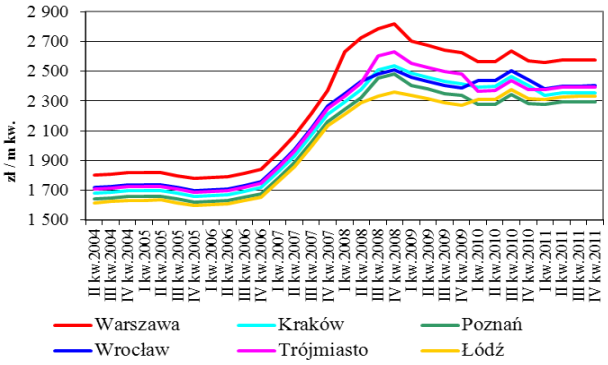
Source: NBP based on Sekocenbud.

Figure 51 Year-on-year growth in the expected price of construction and assembly production and costs of construction of a residential building's usable area (type 1121 building [16/])



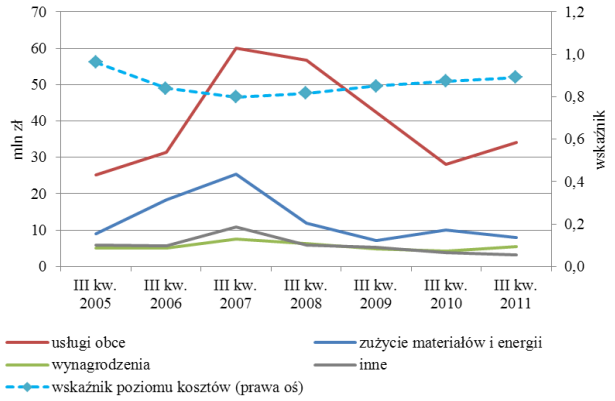
Source: NBP based on data published by the GUS (business conditions survey), Sekocenbud.

Figure 52 Cost of construction per square meter of a residential building's usable area (type 1121 building [16/])



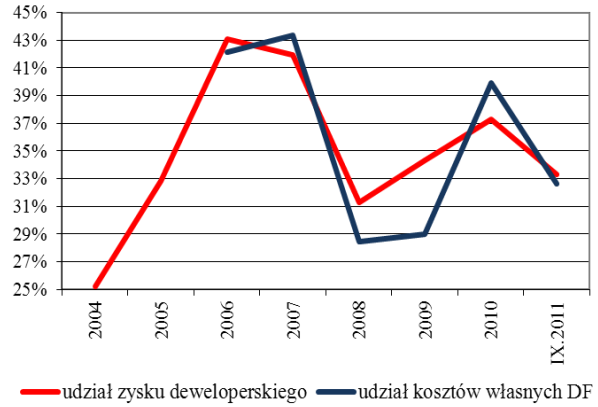
Source: NBP based on Sekocenbud.

Figure 53 Costs incurred by a typical large real estate development company (DF) [18/] in Q3



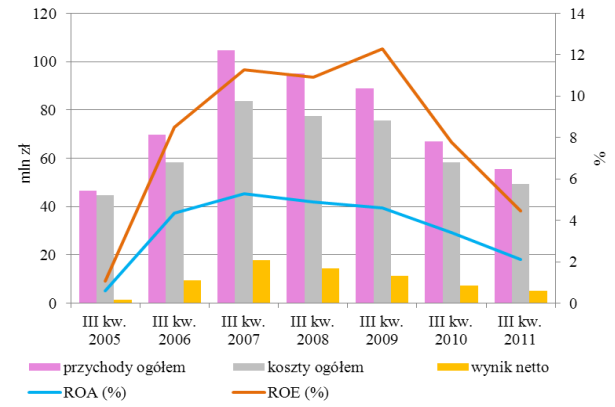
[18/] According to GUS, a large company employs on average more than 50 persons;
Source: NBP based on GUS (F01).

Figure 54 Share of own costs in the costs incurred by a large real estate development company (DF) [18/] and the share of real estate developer's return in the price per square meter of housing in the primary market



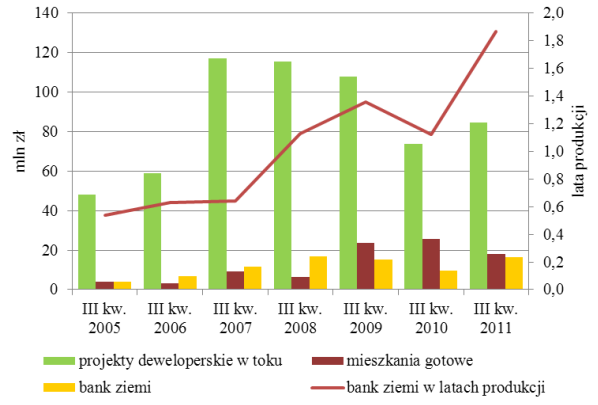
Source: NBP based on GUS and Sekocenbud.

Figure 55 Economic indicators of a typical large real estate company [18/] in Q3



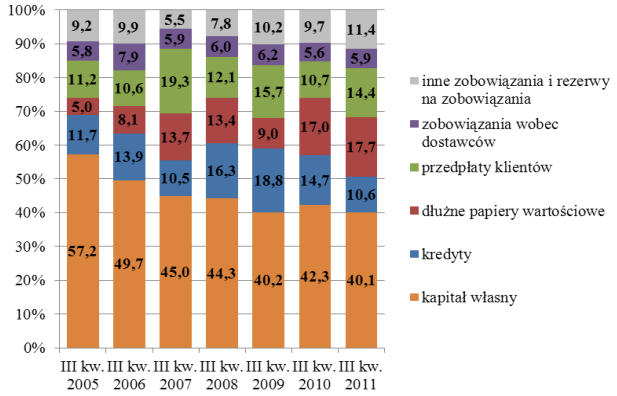
Source: NBP based on GUS (F01).

Figure 56 Situation of a typical large real estate development company [18/] in Q3



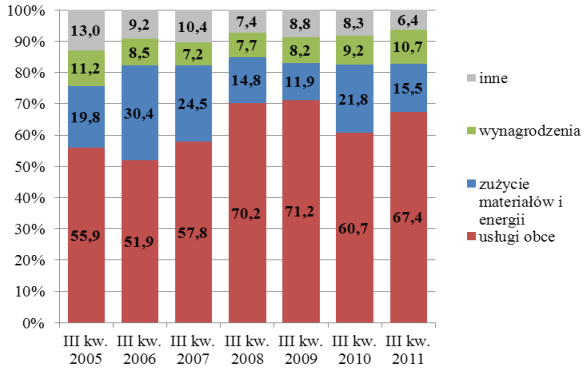
Source: NBP based on GUS (F01).

Figure 57 Funding structure of a typical large real estate development company [18/] in Q3



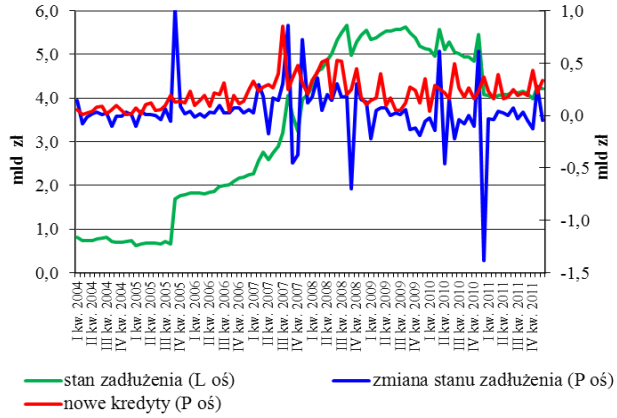
Source: NBP based on GUS (F01).

Figure 58 Cost structure of a typical large real estate development company [18/] in Q3



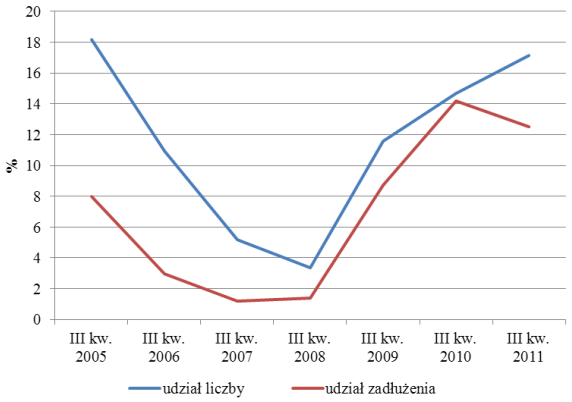
Source: NBP based on GUS (F01).

Figure 59 Lending to real estate developers in the years 2002-2011 (in PLN billion)



Source: ZBP.

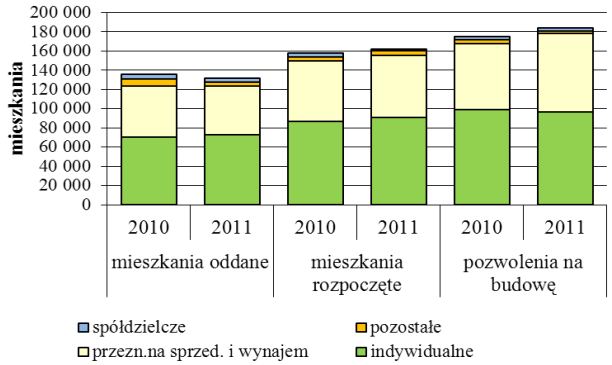
Figure 60 Quality of liabilities [19/] of real estate development companies in Q3



[19/] Liabilities classified as non-performing debts.
Source: NBP based on GUS (F01).

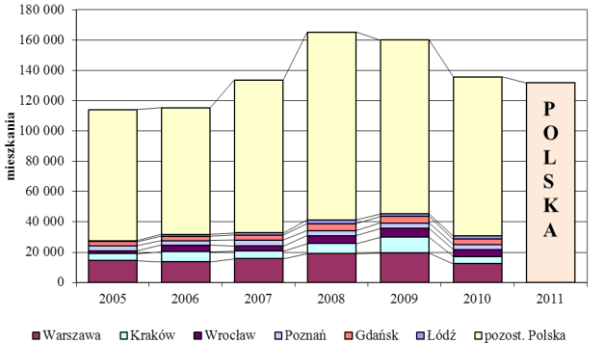
5. Residential construction and housing market in Poland in selected cities

Figure 61 Poland – ownership structure of residential construction in 2010 and 2011



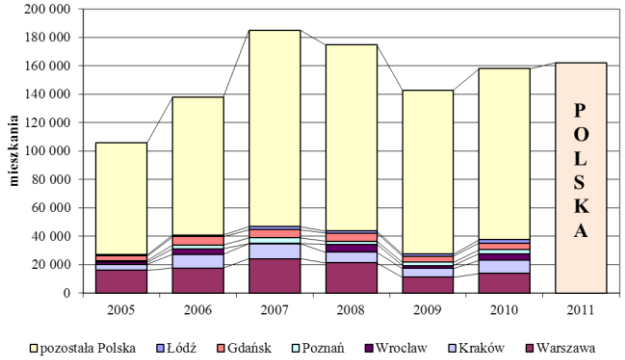
Source: GUS.

Figure 62 Poland – completed housing



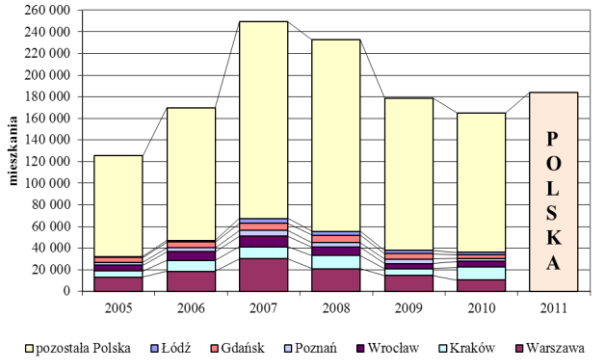
Source: GUS.

Figure 63 Poland – housing units under construction



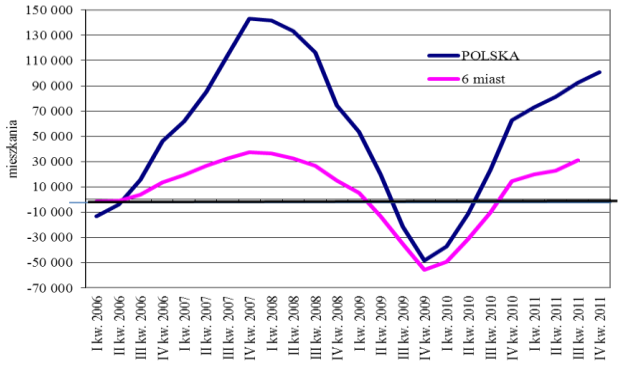
Source: GUS.

Figure 64 Poland – permits issued for housing construction



Source: GUS.

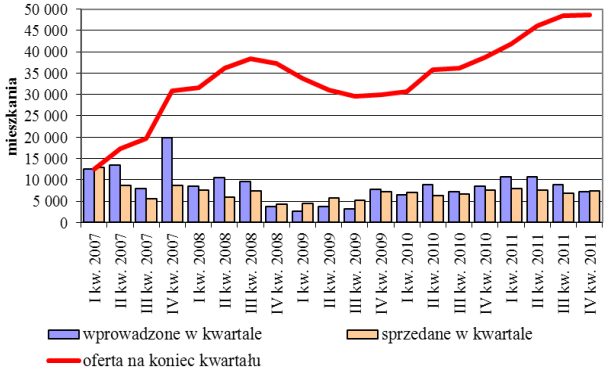
Figure 65 Housing market indicator[20/] in Poland and in Poland's six largest cities [*/] (housing under construction minus completed and sold housing)



[20/] The index is a 12-month rolling number of dwellings; */Poland's six largest cities: Warsaw, Cracow, Gdańsk, Łódź, Poznań, Wrocław;

Source: NBP based on PABB and GUS.

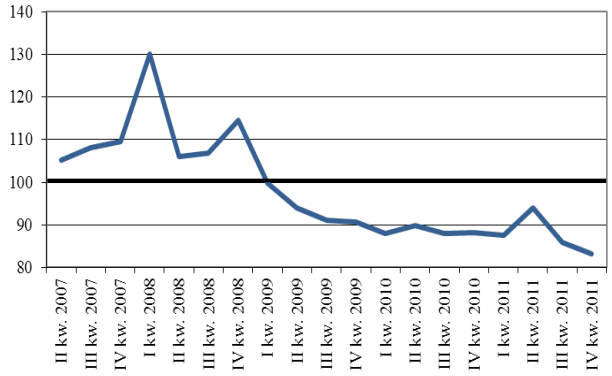
Figure 66 Number of housing units on the market, both sold and offered for sale in Poland's six largest markets [*/]



[*/]Poland's six largest markets: Warsaw, Cracow, Gdańsk- Sopot-Gdynia agglomeration, Wrocław, Poznań, Łódź;

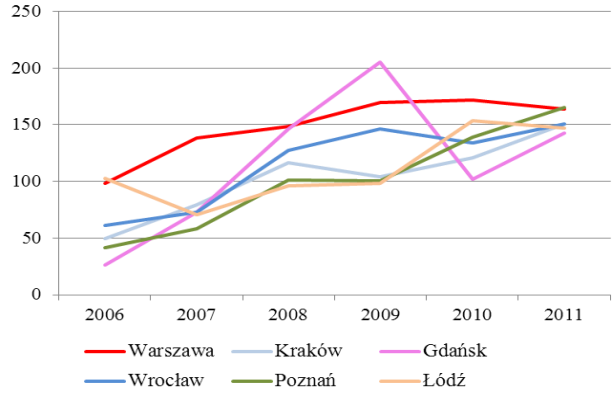
Źródło: REAS.

Figure 67 Growth in average price per square meter of housing put on sale in the primary market in Poland's six largest cities*/ (2007 Q1=100)



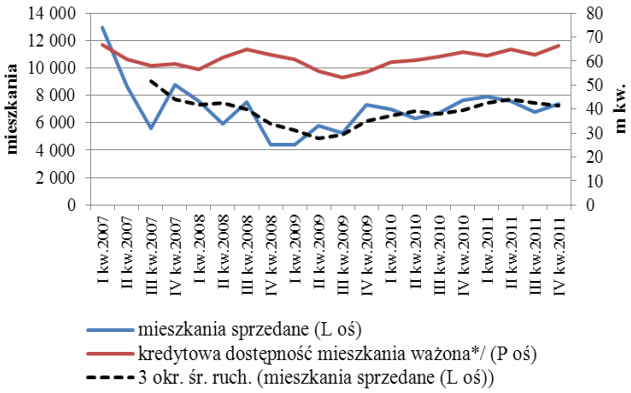
*/ Warsaw, Cracow, Gdańsk-Sopot- Gdynia agglomeration, Wrocław, Poznań, Łódź;
Source: REAS.

Figure 68 Average period (in days) of home sale in the primary market in Poland's six largest cities



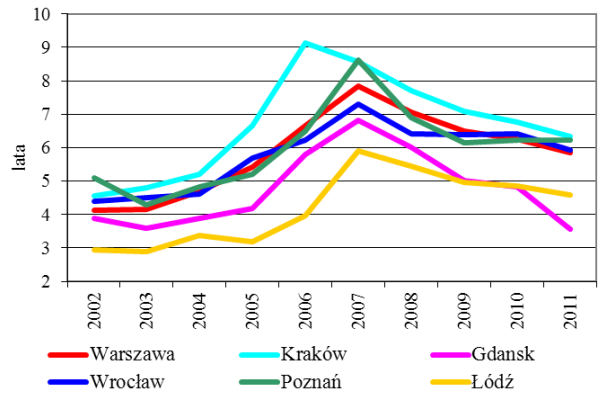
Source: NBP.

Figure 69 Availability of loan-financed housing versus housing units sold in Poland's six largest cities*/(demand and supply estimates)



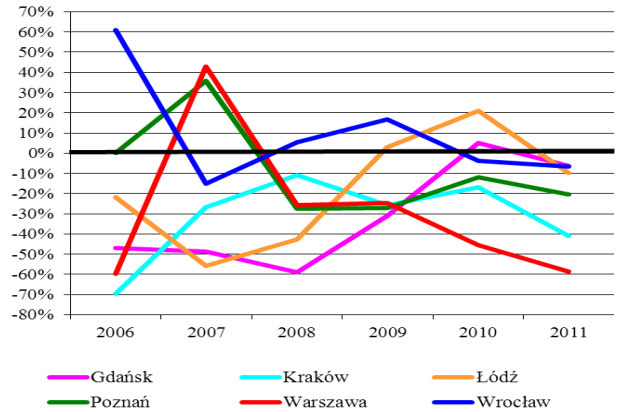
*/Warsaw, Cracow, Gdańsk, Poznań, Wrocław, Łódź;
Source: NBP based on REAS.

Figure 70 Transaction price index for an average housing unit in the primary market as compared to an average income (P/I – price to income ratio) in Poland's six largest cities



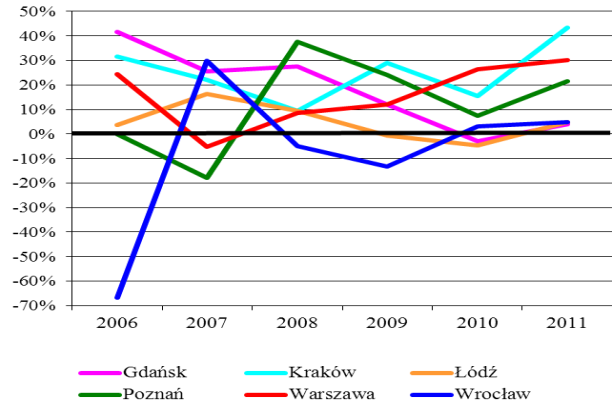
Source: GUS, NBP.

Figure 71 Structure of supply and demand [21/] for housing with an area ≤ 50 square meters in the primary market in selected cities in Poland



Source: NBP.

Figure 72 Structure of supply and demand [21/] for housing with an area > 50 square meters in the primary market in selected cities in Poland

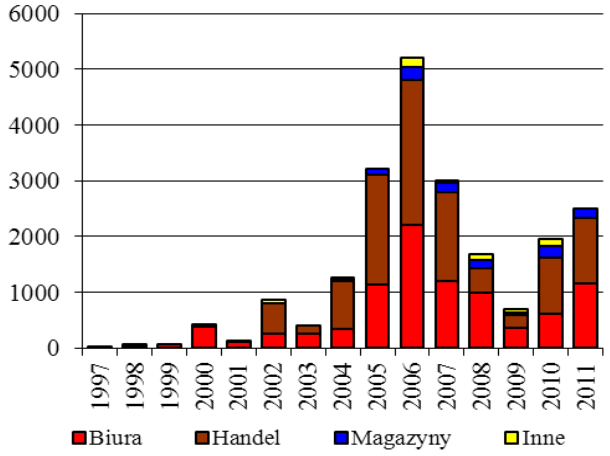


Source: NBP.

[21/] The structure of housing sales offers has been adopted as an approximation of supply structure; the structure of transactions has been adopted as an approximation of demand structure;

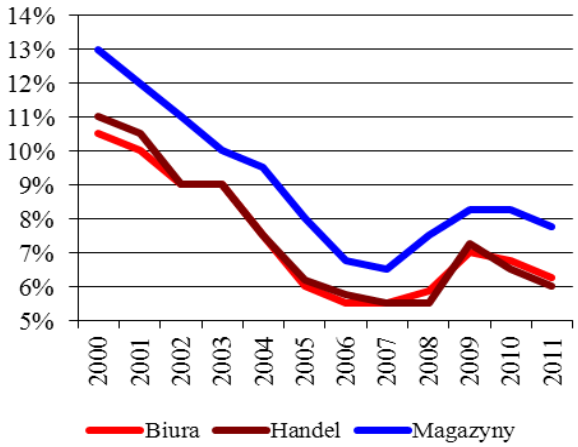
6. Commercial real estate

Figure 73 Value of investment transactions (EUR million)



Source: Cushman & Wakefield.

Figure 74 Capitalization rate on investments in commercial real estates in prime locations



Source: DTZ.

Figure 75 Aggregate supply of modern office space (in square meters)

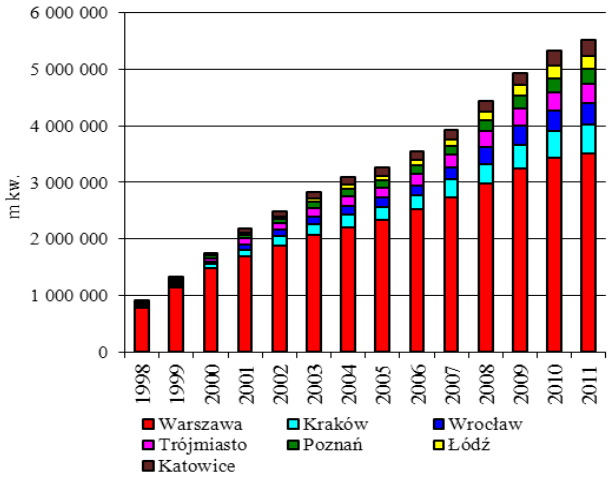


Figure: DTZ.

Figure 76 Vacancy rate

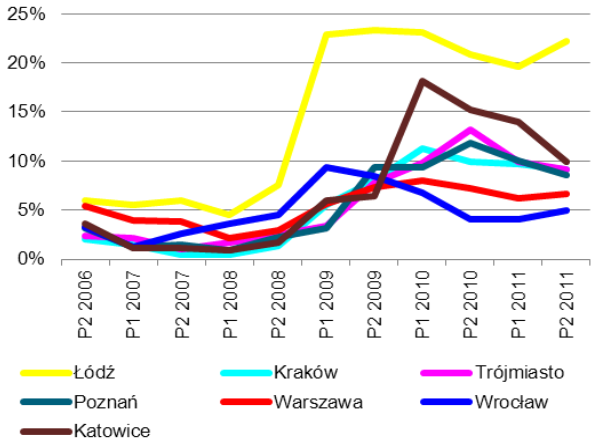
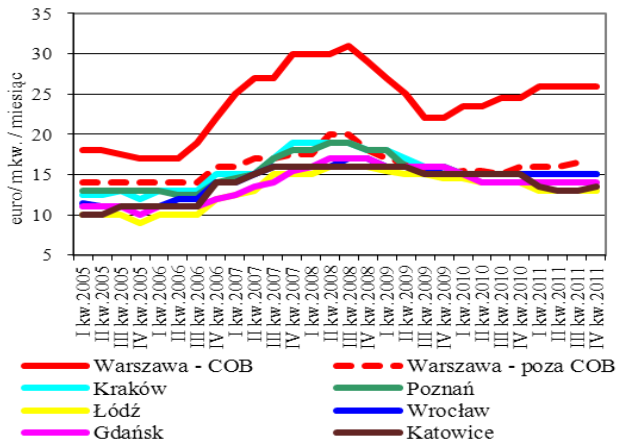


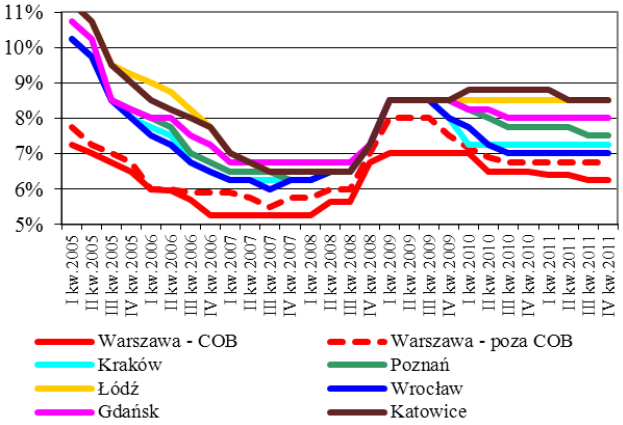
Figure: DTZ.

Figure 77 Rents (EUR/per square meters/per month) for office space in prime locations



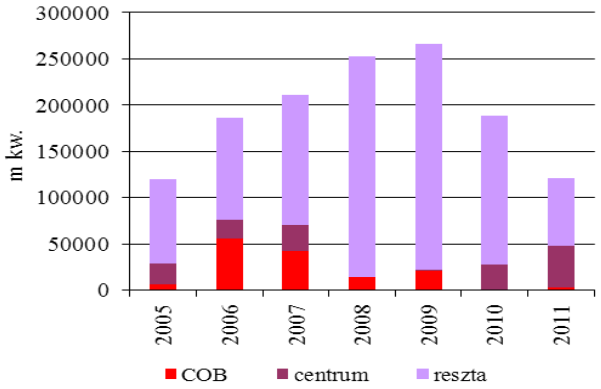
Source: Cushman & Wakefield.

Figure 78 Capitalization rate on investments in modern office space in prime locations



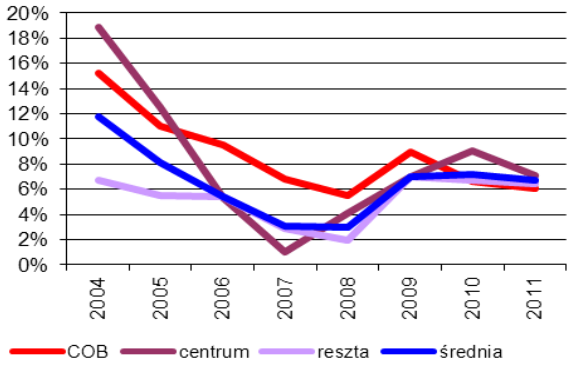
Source: Cushman & Wakefield.

Figure 79 Annual supply of modern office space in Warsaw (square metres)



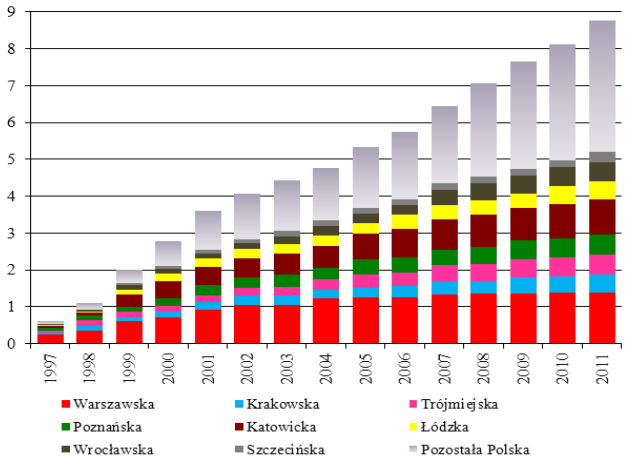
Source: Jones Lang LaSalle.

Figure 80 Vacancy rate in particular parts of Warsaw



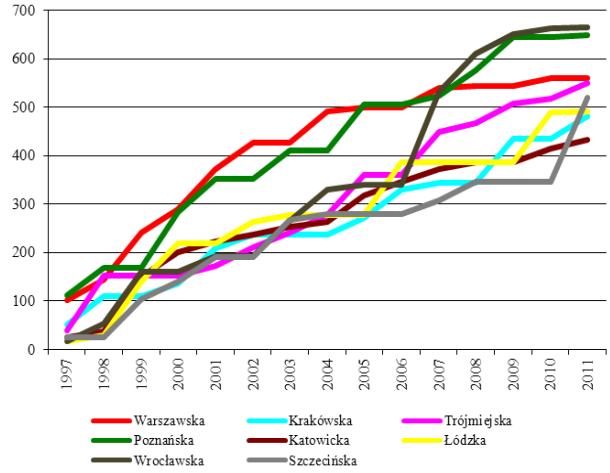
Source: Jones Lang LaSalle.

Figure 81 Aggregate supply of modern retail space (in millions of square metres) in large agglomerations and in other parts of Poland



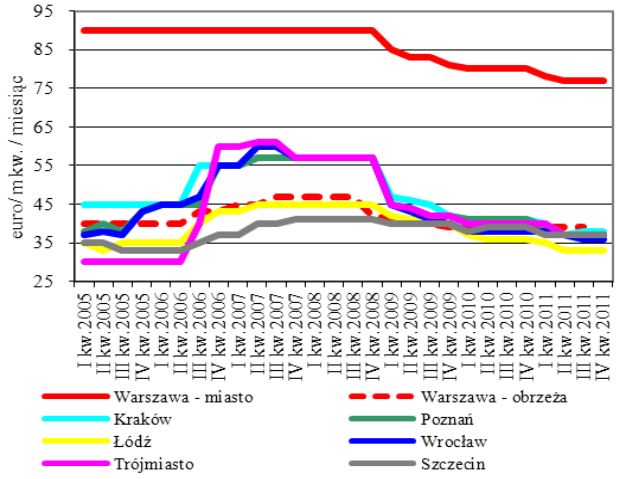
Source: Polish Council of Shopping Centres

Figure 82 Aggregate supply of modern retail space in large agglomerations (square meters per 1000 inhabitants)



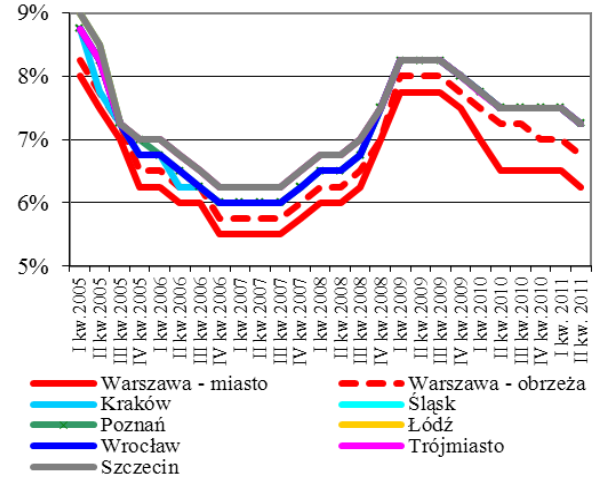
Source: Polish Council of Shopping Centres

Figure 83 Rents (EUR/per square meter/per month) for retail space in prime locations



Source: Cushman & Wakefield.

Figure 84 Capitalization rate on investments in retail real estates in prime locations

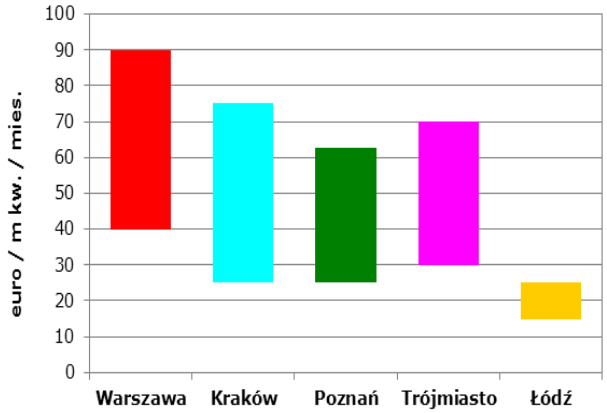


Note: Capitalization rates for all markets, except for the Warsaw market, were identical by the end of 2008
Source: Cushman & Wakefield.

Figure 85 Rents (EUR/per square meter/per month) in

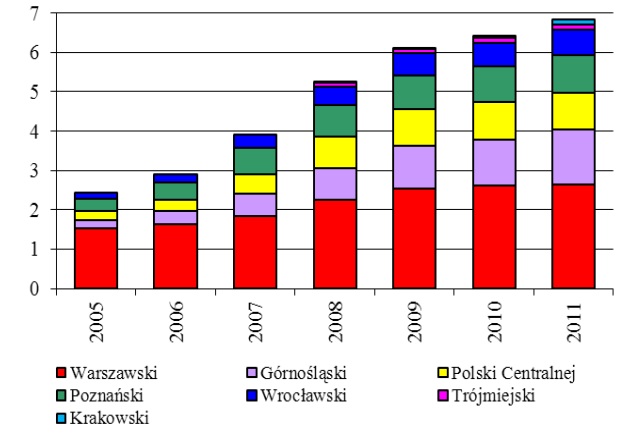
Figure 86 Highest rents (EUR/per square meter/per

prime high streets in the first half of 2011



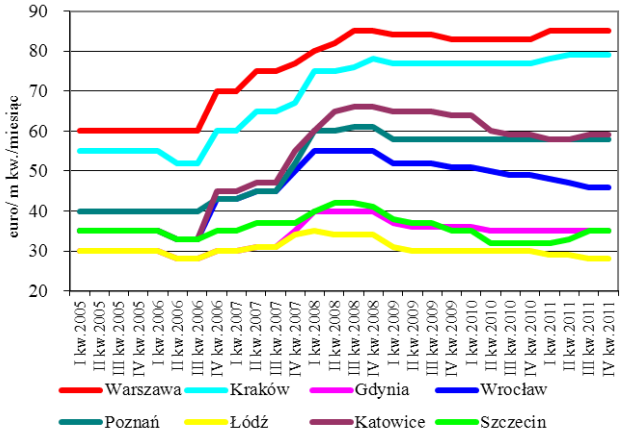
Source: Ober-Haus.

Figure 87 Aggregate supply of modern warehouse space in Poland's regions (in millions of square meters)



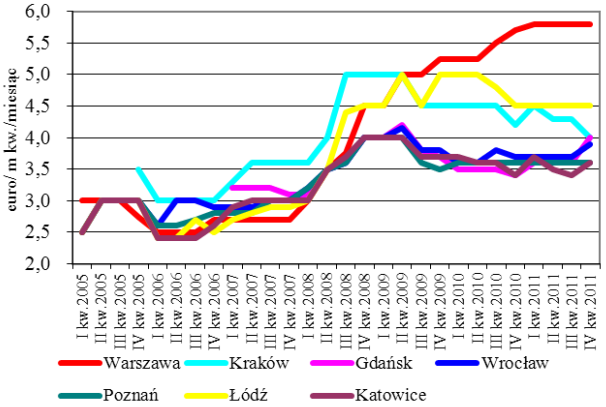
Source: Cushman & Wakefield.

month) in prime high streets



Souce: Cushman & Wakefield.

Figure 88 Rents (EUR/per square meter/per month) for warehousing space in prime locations



Source: Cushman & Wakefield.