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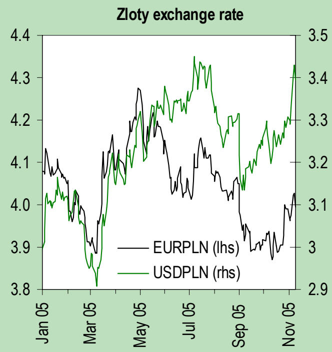
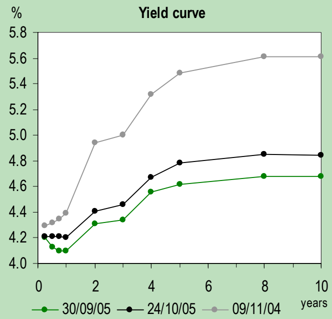
MACROscope

Polish Economy and Financial Markets

November 2005





In this issue:

About turn?

- **In the last edition of MACROscope called *Turn right!* we expressed hopes that the coalition of POPiS would be formed, although we paid attention to several risks.** During last month the political situation changed considerably, so one should ask whether economic and market scenario will be different as well. While previously we noticed a risk of the zloty rate to break the level of 4.0 and the yield curve to steepen, we did not expect it to happen so fast and in such a scale. Recent developments on the political scene (the most likely scenario assuming PiS government supported by Samoobrona, LPR and PSL) requires updating financial forecasts for 2006. While our previous forecast pointed to EURPLN rate slightly below 4.0, today it is close to 4.1. What is more, while formerly we saw a risk of deviation from our projection in the direction of stronger zloty, today a risk is on the other side. The same applies to bond yields, as one should not exclude a possibility that yields for 5-10-years bonds would reach 6% during 2006, especially as long-awaited rise in yields abroad is taking place.

- **It seemed prior to the elections that the zloty rate would be one of the hottest issues in the upcoming years.** Reason for that being delivery of ambitious reforms by the PO-PiS coalition and the related risk of excessive zloty appreciation. In view of this, politicians of both parties considered the possibility of fixing the zloty against the euro. That prompted us to try to estimate the optimal zloty rate as part of the Special focus. However, the PO-PiS coalition was not formed and the zloty instead of strengthening (too) rapidly started to weaken. Therefore, the issue of fixing the zloty can be put aside for the time being. Our attempt to obtain a reliable result using one of the concepts of estimating the equilibrium rate turned out as difficult as forming the PO-PiS coalition. Maybe in the course of time (amongst others, along with extension of data time series), the calculations charged with a lesser degree of uncertainty will be easier leaving thus less room for politicians' subjective opinions on the zloty optimal rate.

- **Since the euro zone entry is deferred into the indefinite future (2013-14, at the earliest), this issue will also lose its priority in considerations of the central bank.** The question remains what decisions the MPC will make in the immediate future. Undoubtedly, the recent developments on the political stage (impact on the foreign exchange market) shrink the chances for another interest rate cut. However, the inflation environment is still relatively comfortable and therefore we do not anticipate interest rate increases which are currently expected by the market within the timeframe of 6-9 months. And if the data on GDP strongly disappoint, then even some cut may be possible. Perhaps we will see a compromise solution in November (rate cut if GDP data surprise on the downside) and change in bias to neutral?

Financial market on 31 October 2005:					
NBP deposit rate	3.00	WIBOR 3M	4.62	USDPLN	3.3067
NBP reference rate	4.50	Yield on 52-week T-bills	4.28	EURPLN	3.9893
NBP lombard rate	6.00	Yield on 5-year T-bonds	5.19	EURUSD	1.2064

This report is based on information available until 09.11.2005

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Special focus

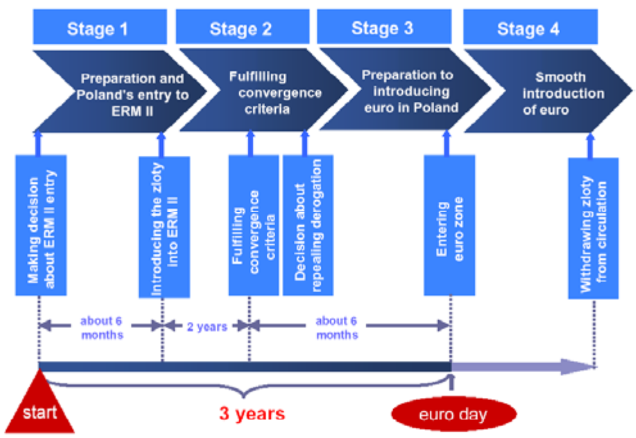
Searching for an optimal rate

There was a plan…

After a few months of election campaign, a few weeks of election marathon, and then a period of “rough-and-tumble fight” between potential coalition members, there is still a lot of uncertainty around the future government. As this is the case, it is hard to talk about details of the economic program of the new government. In view of the outcome of the parliamentary and presidential elections, we know that the main political force over the upcoming years (unless an accelerated election is held which might change the structure of forces on the political scene) will be the Law and Justice (PiS). One of the key areas in which PiS stance is different than that displayed by the Polish authorities to date, is FX policy and the date of Poland’s joining the euro zone.

It should be noted that in relation to the latter issue the Belka’s government’s position was similar to this of the central bank, i.e. that the zloty should be converted into euro and the sooner it happens the better. PiS is not convinced whether the euro adoption will produce tangible gains for the Polish economy and wants to defer the decision. Prior to the election, PiS stated that the decision on joining the euro zone should be made in a referendum[1] run at the end of the term of office of the new parliament. After the presidential election, President-elect, Lech Kaczyński, stated that the referendum should be held in … 2010.

Stages on the road to the euro zone



Source: The Ministry of Finance

In view of the length of the procedure for entering the euro zone from the moment of making a binding decision to the moment of becoming the euro zone member (see the graph above), and on the assumption that Poland will not decide to enter the ERM2 system (i.e. at least 2-year period for exercising stability of the exchange rate prior to euro adoption) before the referendum, the zloty could be converted by the common currency in 2013-2014 at the earliest.

Accordingly, the date for joining the euro zone assumed by the central bank and the previous government (although the Polish authorities did not define an official target date), i.e. 2009 is out of question. Dismissing the prospect of Poland’s accession to the euro zone does not mean that exchange rate issues are fading into the background. Just the opposite, the longer we stay outside the euro zone, the longer the zloty exchange rate ‘problem’ will exist. Politicians realise this too. Before the election, some of them warned that as a result of aggressive economic reforms, especially those related to public finance, (let us forget for a moment that there are serious doubts around this in view of the elections’ outcome), the zloty exchange rate can be under a stronger appreciation pressure. In other words, Poland might become a victim of its own success. In the opinion of economic experts of some political parties, the remedy would be some form of fixing the zloty exchange rate. Prime Minister Kazimierz Marcinkiewicz has not referred official to the idea of fixing the zloty, but he has already expressed an opinion about the optimal level of the zloty exchange rate. In his opinion, the EURPLN rate ranging from 4.1 to 4.3 would be favourable for the Polish economy.

The question that should be posed here is what is the right zloty exchange rate to be fixed against the euro (and then linked to euro in the ERM2 system, and later in the euro zone). Inappropriate exchange rate can have serious implications for the real economy. Too low zloty would contribute to a substantial growth in the foreign-currency denominated debt (both public and private, e.g. home mortgage-related) and decrease in the purchasing power of domestic salaries. On the other hand, too high zloty might contribute to the drop in competitiveness and/ or profitability of exporters. In addition, in the period prior to the zloty conversion, setting the zloty exchange rate at the level violently departing from fundamental factors would increase the likelihood of speculative attack on zloty aimed at forcing the change in its exchange rate. From the point of view of real economy, fixing the zloty exchange rate at a wrong level would enhance the sense of the loss of monetary policy autonomy.

Either way, in view of the costs of fixing the zloty exchange rate at a wrong level, while doing it, next to the market exchange rate and convictions of politicians, account should be taken of the equilibrium exchange

[1] In fact, a question in the possible referendum should not concern a consent to euro zone entry (Poles agreed for that accepting the Accession Treaty), yet the timing of the euro adoption.

rate. This is the equilibrium exchange rate that should be the basis for setting the parity not only for ERM2 and the euro zone, but also for possible exchange system which assumes fixing the zloty prior to our joining ERM2. The level of the equilibrium exchange rate is not the only argument in the very complex political process leading to setting the parameters of the defined exchange rate regime. The decision on possible change in the exchange rate regime in Poland before joining the ERM2 and the euro zone will have to be made in harmony by the government and the central bank, unless the legislation, including the constitution, changes. While setting the parity for ERM2 and the euro zone, two EU institutions, i.e. the European Central Bank and the European Commission, will join the two domestic parties in the negotiations. Still, it is always the equilibrium rate that is the basis for the discussion.

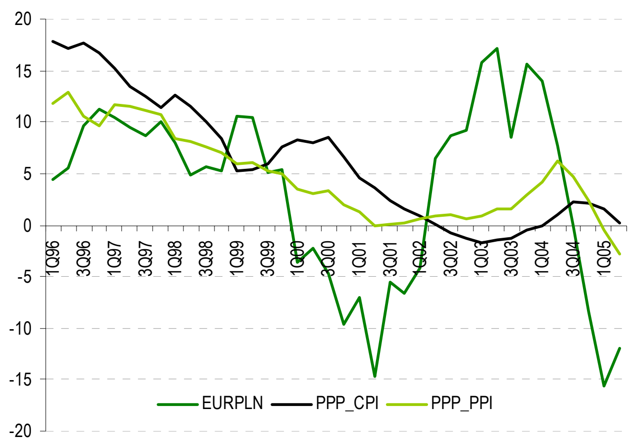
In search of equilibrium

There is a lot of theoretical and empirical literature on the search for the equilibrium exchange rate. Based on that, there are three basic approaches to estimating the equilibrium rate. They are purchasing power parity (PPP), fundamental equilibrium exchange rate (FEER) and behavioural equilibrium exchange rate (BEER).

The PPP exchange rate is based on the assumption that as a result of the absence of restrictions in international trade, the prices of commodities in different states, expressed in one currency, must be equal. As a consequence, nominal exchange rates of two currencies depend on the level of prices in the two states, while assuming that the currency exchange rate in real terms is stable. In the short and medium term, empirical research does not support the PPP theory. This is illustrated in the chart below. As shown in the chart, in the period from 1Q1996 to 2Q2005, the changes in the actual EURPLN exchange rate departed much from the purchasing power parity concept. The reason for this may be that unlike in the PPP concept, in the real world there are some barriers in international trade, there are also costs of transport and non-tradable goods.

From the point of view of criticism of the PPP concept, taking account of the Harrod-Balassy-Samuelson Effect was a kind of improvement. This allowed us to factor in the fact that some goods are not tradable. First of all, however, thanks to acknowledging the impact of changes in relative labour productivity on relative prices, it allowed to refute the unrealistic assumption that the real exchange rate remains stable. Nonetheless, while the PPP concept was sometimes applied in practice2, most often it is criticised as of little use for establishing the equilibrium rate. The criticism of the PPP-based exchange rate is primarily about failure to take account of significant changes in economic policy or economic structure of a given state and failure to acknowledge that real variables have impact on the equilibrium rate. In addition, it demonstrates some statistical weaknesses, e.g. high sensitivity of PPP rate depending on a selection of a specific price change indicator. Moreover, as the PPP concept is based on changes in prices, the assessment of the exchange rate in an individual period requires selection of some base period as a benchmark of a state of equilibrium. In general, the PPP concept is considered inappropriate for setting the equilibrium exchange rate, and some say that it should not be even used for making rough estimates. Still, if we used it for this purpose, our calculations would indicate that the nominal zloty exchange rate against the euro in 2Q2005 (quarterly average was 4.13) was overvalued by 9%-12% depending on the indicator used as a measure for prices in Poland and the euro zone. This seems to stem from the fact that a year earlier the zloty was considerably undervalued, and not from the fact that the zloty was actually too strong as compared to the equilibrium level.

Nominal EURPLN rate and EURPLN according to PPP



Source: CSO, Eurostat, NBP, own calculations

Ideal exchange rate

FEER approach is a response to the weaknesses of the PPP concept. It is based on the concept of internal and external equilibrium. Internal equilibrium is defined as a closed output gap (in more precise words, it is economic growth at a potential level with full employment and low and stable inflation), while external equilibrium is defined as achieving an optimum balance in the current account

[2] For instance Great Britain, joining the ERM in early 90's, set sterling parity against ECU based on the PPP exchange rate.

of the balance of payments (which means optimum flow of capital between the country and abroad).

The FEER is an equilibrium exchange rate which equalizes the balance of payments for the assumed potential economic growth, capital flows and transfers as well as flexibility of foreign trade turnover against the exchange rate. The assessment of the deviation of the current exchange rate from the FEER equilibrium rate is interpreted as a deviation of the exchange rate stemming from the deviation of fundamental values from their ideal/desired level. FEER is thus often referred to as “ideal exchange rate”. Economy, however, seldom hits equilibrium and thus the FEER is not often an optimum exchange rate. For example, while pursuing the inflation containment policy, an optimum solution for the economy is overvaluation of the current exchange rate relative to the FEER, while in the circumstances when production capacity has not been utilized fully, it is recommended that the current exchange rate be undervalued temporarily relative to the FEER. The normativeness of the FEER concept (the fact that it concerns only “ideal macroeconomic conditions”) is not its only weakness. It is often noted that this approach ignores the impact of the macroeconomic policy on the level of the potential product, as well as it does not refer to the issue of equilibrium in the market of financial assets, basing on a hardly grounded assumption that interest rates stay in equilibrium. Although the FEER value can be estimated within the overall equilibrium framework (taking into account hypothetically all the relations in the economy in equilibrium), it deteriorates a lot the transparency of the calculation process. For this reason, the method applied most often in the FEER calculation is the so-called partial equilibrium framework the basis of which is the foreign trade model. In such a case, the FEER calculation requires, among others, the following steps:

- estimation of parameters (flexibility) of the foreign trade model,

- analysis of the reaction (strength and lags) of the current account balance and the output gap to the exchange rate fluctuations and demand fluctuations,

- estimation of the output gap domestically and abroad with a view to establishing the current deviation of the economy from the internal equilibrium,

- setting an optimum balance in the current account of the balance of payments with a view to establishing the current deviation of the economy from the external equilibrium.

At each stage of setting out the FEER, we encounter serious difficulties. The basic problem is the availability of statistical data, particularly when one wants to analyze the long-term equilibrium relation in economy. The problem with data concerns not only the length of time series but also their quality because frequent changes to methodologies and definitions disrupt the continuity and comparability of very short time series which can additionally adversely impact the outcome of calculations. An additional element is a dynamic change in the time of the structure and strength of relations that the economic variables are subject to due to relentless structural changes in the Polish economy.

For example, in Poland it constitutes a big difficulty to obtain reasonable estimates of foreign trade flexibility3. Even more difficult is obtaining for Poland reliable estimates of the output gap. The most troublesome element of the FEER calculation process is, however, setting the optimum balance of the current account4. This is important insofar as the estimates of the equilibrium exchange rate are very sensitive in terms of the assumed optimum balance in the current account. Especially in an economy like Poland which is relatively hardly open, which means that even minor changes in the current account balance require significant exchange rate adjustments. Adoption of an inadequate level of the optimum current account balance impacts significantly the estimation of the equilibrium exchange rate. Another difficulty in the case of attempting to establish an optimum current account balance for Poland is the fact that fully comparable quarterly data of the balance of payments are available as of early 2000 only.

Due to the fact, among others, that the calculation of the FEER would require adopting many arbitrary assumptions, for which this concept is often a subject to criticism, we confined an attempt to estimate the equilibrium exchange rate to applying the BEER approach5.

Accidential relations

The concept of the behavioral equilibrium exchange rate refers to the exchange rate determination theory as it

[3] The reasons for this can be associated with a few phenomena. For example, both pricing flexibility and income flexibility of exports is disrupted, among others, by large autonomic growths in exports supply in individual periods (launch of a large factory geared towards exports within a large foreign corporation, which is hardly flexible especially against the exchange rate).

[4] Depending on the method of estimating the optimum balance of current account, either strong theoretical foundations are missing or far-reaching simplifications of the empirical application are needed.

[5] Attempts to estimate the FEER for Poland have been made. See for example: M. Rubaszek, *Modelowanie optymalnego poziomu realnego efektywnego kursu złotego – zastosowanie koncepcji fundamentalnego kursu równowagi*, Materiały i Studia nr 175, NBP, Warszawa 2004. According to this analysis, with applied assumptions, the equilibrium exchange rate of the zloty against the euro for 4Q03 was estimated at 4.25 versus an actual rate of 4.62.

consists in seeking, by means of appropriate econometric techniques, relations between the exchange rate and selected macroeconomic variables. These variables are selected based on the selected theories of exchange rate determination, e.g. balance of payment theory, Harrod-Balassa-Samuelson effect, interest rate parity, purchasing power parity, etc). Unlike the FEER, the BEER is not an equilibrium exchange rate for an ideal macroeconomic situation, but simply for the current macroeconomic variables. By means of BEER concept, it is possible, however, to calculate the equilibrium exchange rate in the meaning of FEER. This requires, however, setting levels of equilibrium for the variables which determine the exchange rate. Therefore, this method can be assessed as more universal.

On the application side, the BEER concept is not free from all flaws existing in FEER approach. First of all, it requires an accessibility of long, good quality data time series. However, given the less complex procedure of calculations, BEER is less exposed than FEER to possible distortion of the outcome of estimates due to making wrong assumptions.

Based on the selected exchange rate determination theory and an analysis of other studies for developing countries, the basic version of the model estimated by us is based on the following exchange rate determination function:

BEER = f(PROD, RIR, ToT)

We are thus assuming that the exchange rate in Poland is determined by relative changes in labor productivity in Poland and the euro zone (PROD), the difference between the real interest rates in Poland and the euro zone (RIR) as well as by terms of trade (ToT – changes in the transaction prices in exports to transaction prices in imports) for Poland. Our measure of the exchange rate is a real effective exchange rate (REER) calculated by the investment bank JP Morgan Chase. Theoretical REER values from the estimated model is the BEER. Factoring in the model the relative labor productivity refers to the Harrod-Balassa-Samuelson effect, i.e. a thesis whereby a quicker growth in labor productivity in Poland in the tradable goods sector is conducive to the zloty appreciation. Considering the structure of the REER index (growth in REER means an exchange rate appreciation), the expected sign next to PROD should be positive. The terms of trade variable is used to take into account pricing conditions in foreign trade and it should also have positive correlation with the exchange rate. Application of real interest rates as one of the factors determining the exchange rate refers to the interest rate disparity hypothesis, according to which the level of interest rates higher in the domestic market than abroad, triggers appreciation of the domestic currency. Therefore, the sign next to this variable, should also be positive.

To examine the analyzed relation, we used a multi-equation model of vector auto-regression (VAR). More details on the fashion of calculations and statistical data used as well as the outcome of estimation are contained in Technical Annex on page 7). Based on the data for the period from 1Q1996 to 2Q2005, we managed to find one long-term equilibrium relation between for the zloty exchange rate and its determinants in the following form:

$$REER_t = -1{,}44 - 3{,}81 \cdot PROD_t - 2{,}86 \cdot RIR_t - 0{,}20 \cdot ToT_t$$

The first observation one can have when looking at the relation, is that the signs of estimated parameters are inconsistent with the economic theory and intuition. This suggests that the results obtained most likely fail to reflect the actual long-term equilibrium relation between the exchange rate and variables selected as its determinants. Therefore, the results of BEER calculation based on the estimated relation would not be reliable.

Based on the outcome of estimates, a presumption can be made that the simple specification of our model (stemming from the limited accessibility and comparability of statistical data) failed to include all the relations responsible for determining the zloty exchange rate. For example, the model could take into account next to or in place of some applied variables such variables as: relation of net foreign assets to GDP, long-term interest rates, inflow of foreign direct investments, stance of public finance, the measure of Polish economy openness, relative relation between the prices of tradable goods and non-tradable ones, etc. Extension of the model by other variables could, however, deteriorate even further the quality of estimates due to rather short time series (which is of significant importance in the case of multi-equation models like VAR, whose “appetite” for data is very big), and thus a limited number of degrees of freedom. Besides, application of some variables, e.g. long-term interest rates, is impossible due to the absence of the appropriate-length time series. Our attempts to estimate the relation of long-term equilibrium for other specifications of the BEER model proved futile. Certainly, it must be remembered that the long-term equilibrium relation between the zloty exchange rate and relevant variables is distorted by the EURUSD rate fluctuations, i.e. a factor which is totally exogenous to the Polish economy.

The difficulty with estimating a reasonable long-term equilibrium relation between the exchange rate and its potential determinants, stems undoubtedly from significant structural changes in the Polish economy. In the analyzed sample, the examples of such changes are: gradual change in the FX regime, gradual abolition of limits on capital flows, Russian crisis in 1998 and quite recently Poland's accession to the EU (it can be presumed that the very last factor had a very big impact on the currency market structure in Poland – totally new, significant players have appeared; the nature of transactions has changed). These events have a strong bearing on the network of relations between different economic variables in the Polish economy. Therefore, against the expectations, the signs of the relation estimated by us can stem from the effects of the processes taking place in Poland which are not factored in the simple model specification. Appreciation (depreciation) of the real effective exchange rate in the period we analyze might then have stemmed not so much from the drop (growth) of the exchange rate determinants included in our model, as from other changes in the economy, which cannot be factored in a simple model. Unfortunately, short time series make it impossible to formally verify the impact of selected structural changes (such as Poland's accession to the EU) on the analyzed relation.

Problem of the future

To summarize our analysis, it can be concluded that from the theoretical point of view, a slightly easier concept to set out a specific zloty exchange rate seems to be the BEER concept which allows to estimate an exchange rate appropriate for the current or predicted macroeconomic situation, rather than for a "ideal" macroeconomic situation. Still, given the uncertainty around the manner of determining the exchange rate in the Polish economy (i.e. the form of the exchange rate function reflected in the specification of the model estimated later), it should be stated that the estimation of the real zloty equilibrium exchange rate with the application of the BEER concept is very difficult while the outcome of potential estimates has a big dose of uncertainty. This means that mutual conviction of the parties to the decision-taking process as to the setting of a EURPLN rate based on formalized analyses is going to be difficult. Though this situation does not block the room for economic deliberations (e.g. predictions as to the structural changes in the economy, or *policy-mix* on the way to and after Poland's entry into the euro zone), it adds to room for political arguments. Looking from this perspective, a question must be asked how the two centers which shape jointly the FX policy in Poland view the issue of the optimum zloty exchange rate. Judging by the statements of prime minister Kazimierz Marcinkiewicz mentioned earlier, when considering a potential fixation of the zloty rate still before increasingly distant euro zone entry, the Polish government will most likely be in favor of a relatively weak zloty exchange rate (focusing its attention on the fate of exporters while forgetting the importers, a numerous group of individuals and business entities repaying FX loans, as well as forgetting about the growth in the cost of servicing the public debt in the part denominated in foreign currencies incurred by all tax payers). The most important is, however, that in an effect of political developments chances for ambitious fiscal reforms considerably diminished which not only delays euro zone entry, but also lowers a need perceived by politicians to fix the zloty against the euro in order to avoid excessive appreciation of the domestic currency. As regards the central bank's stance, one may expect that it will stick to its current approach assuming that as long as it is not necessary for Poland to enter EMR2, the zloty exchange rate should be shaped by market forces, and thus a free-float exchange rate regime should be maintained in Poland. It cannot be ruled out, however, that the central bank will change its approach to this matter after a new person takes over the office of the NBP governor in early 2007, if this is accompanied by a change in the constitution consisting in the dissolution of the MPC and take-over of its responsibilities by the NBP Management Board. Nevertheless, the change in constitution seem unlikely with the current composition of the parliament. The change on the post of NBP governor alone will probably not be enough to change majority within the MPC on FX policy.

Technical annexe

In order to estimate behavioural equilibrium exchange rate (BEER) we employed vector autoregressive model (unrestricted VAR). Variables used in the process of estimation are defined in the following way:

REER real effective exchange rate calculated by investment bank JP Morgan (in log terms). An increase in the index means appreciation of the zloty. Data source: JP Morgan.

ToT terms of trade (in log terms). Data source: Statistical Bulletins of the Central Statistical Office;

RIR Relation of real 3-month interest rates in Poland and the euro zone deflated with Consumer Price Index (in log terms). Data source: Reuters, Central Statistical Office, Eurostat.

PROD Relation of annual growth rates in labour productivity in manufacturing in Poland and the euro zone (in log terms). Data source: Central Statistical Office and ECB.

NFA Net foreign assets in relation to current values of Gross Domestic Product (in log terms). Data source: National Bank of Poland, Central Statistical Office.

TNT Relative prices of tradable goods to non-tradable goods in Poland and the euro zone (in log terms). Data source: Central Statistical Office, Eurostat.

The estimated model based on quarterly data from the first quarter of 1996 to the second quarter of 2005.

In the beginning we performed analysis of the following form of the exchange rate determination function:

BEER = f(PROD, RIR, ToT)

Performed statistical tests allowed to state that variables REER and ToT are integrated of order I(1), while variables RIR and PROD are integrated of order I(0). The results of the tests are not listed below due to limited space.

An order of lag in the model was set at 2 as a compromise between low number of degrees of freedom and reasonable specification of the estimated model. On the basis of Johansen procedure for testing the number of cointegrating vectors, we found one cointegrating vector for the above mentioned specification of the model.

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	5 Percent Critical Value	1 Percent Critical Value
None **	0.689819	68.96329	47.21	54.46
At most 1	0.419458	27.99231	29.68	35.65
At most 2	0.193587	8.959524	15.41	20.04
At most 3	0.040005	1.428968	3.76	6.65

*(**) denotes rejection of the hypothesis at the 5%(1%) level

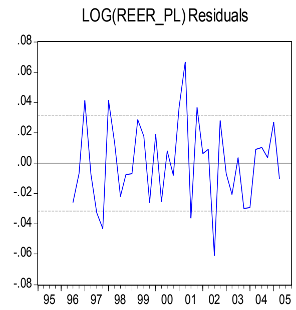
Trace test indicates 1 cointegrating equation(s) at both 5% and 1% levels

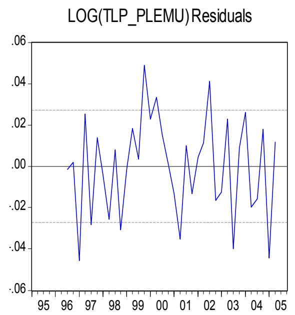
Estimated coefficients of the cointegration vector in the model are presented below:

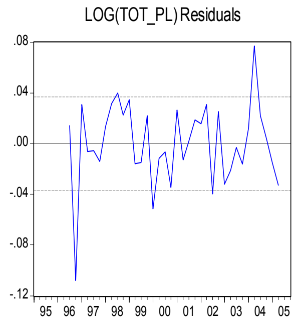
REER	PROD	ToT	RIR	C
1.000000	3.809030	2.864823	0.201116	1.437801
	(0.45978)	(0.52003)	(0.03166)	

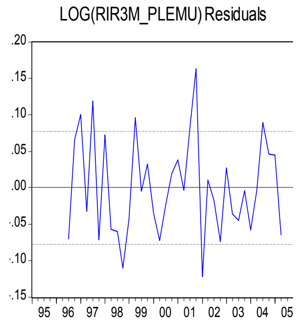
Note: Standard errors in brackets; C is an intercept

The graph below presents residuals from the model, reflecting differences between fitted and actual values of the variables used in the model.









Due to the fact that signs of the estimated coefficients in the long-run equilibrium relation in the basic model are inconsistent with the economic theory and intuition, we made an attempt to estimate a model of real effective exchange rate using alternative specifications of BEER model. The tables below present results of the estimates of the alternative models.

I. Cointegration test for exchange rate function of the following form:

BEER = f(ToT, NFA, TNT, RIR)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	5 Percent Critical Value	1 Percent Critical Value
None **	0.627289	98.24423	68.52	76.07
At most 1 **	0.591916	59.75306	47.21	54.46
At most 2	0.357367	24.79809	29.68	35.65
At most 3	0.172498	7.553037	15.41	20.04
At most 4	0.004314	0.168619	3.76	6.65

*(**) denotes rejection of the hypothesis at the 5%(1%) level

Trace test indicates 2 cointegrating equation(s) at both 5% and 1% levels

II. Cointegration test for exchange rate function of the following form:

BEER = f(ToT, NFA, PROD, RIR)

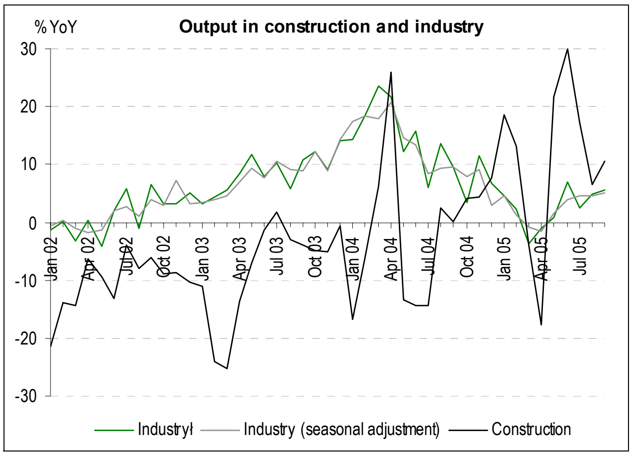
Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	5 Percent Critical Value	1 Percent Critical Value
None **	0.824372	132.5709	68.52	76.07
At most 1 **	0.625710	71.69235	47.21	54.46
At most 2 **	0.482891	37.29697	29.68	35.65
At most 3	0.308065	14.21440	15.41	20.04
At most 4	0.037154	1.325165	3.76	6.65

*(**) denotes rejection of the hypothesis at the 5%(1%) level

Trace test indicates 3 cointegrating equation(s) at both 5% and 1% levels

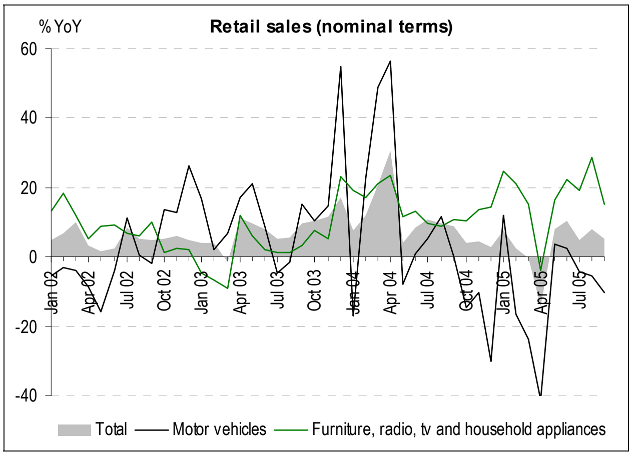
As shown in the table, results of the cointegration tests for the alternative models did not allow for identifying only one long-term relation.

Economic update



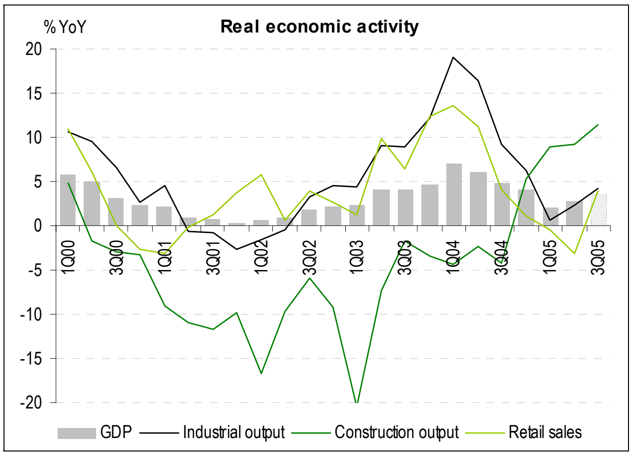
Good results in industry and construction

- Sold industrial output rose 5.5%YoY in September, in line with our forecast and slightly above market consensus. Seasonally adjusted growth reached 5.1%YoY and was the highest this year. The data confirmed expectations that economic activity in industrial sector has been rising steadily from one quarter to another.
- Production rise was recorded in 16 out of 29 industrial branches, the highest in those with high share of exports. Thus, one could deduce that in 3Q05 still an important source of economic expansion was net exports, while rebound in domestic demand was moderate.
- However, hopes for higher investment activity are supported by expansion in construction sector – in September construction output rose 10.5%YoY, and in 3Q05 11.3%YoY.



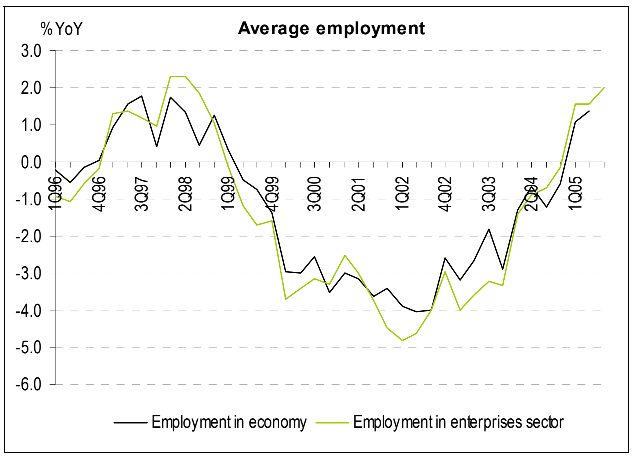
Retail sales below expectations

- Retail sales in September rose 5.4%YoY in nominal terms, which was much below market consensus (ca. 7% on average). In constant prices, it increased 2.9%YoY, i.e. notably slower than 5.6% recorded in August.
- Likewise in previous months, total sales growth was hampered mostly by a breakdown in car sales (-10.2%YoY).
- However, in sales of other goods there was also a deceleration in growth. It could suggest that improvement in consumption demand in 3Q05 could have been smaller than predicted.
- We still believe in gradual pickup in private consumption in subsequent quarters, which will be supported e.g. by rising revenue and optimism of households and low interest rates; however an upward path will be softer than assumed earlier.



Improvement in economic situation in 3Q05

- CSO president Tadeusz Toczyński informed that the stat office had noticed a gradual improvement in domestic demand, and “the economy had entered a path of balanced and stable economic growth”.
- Actually, monthly data released until now really point to a rise in economic activity in 3Q05, however a picture of economic situation will get final confirmation from quarterly GDP data, due for release on November 29; the data also long-awaited by the Monetary Policy Council.
- Not only a scale of acceleration in economic growth will be important, but also its structure – to what extent a revival will be based on domestic demand, and what will be impact of external trade. Gentle rise in domestic demand should not be too dangerous for inflation perspectives.

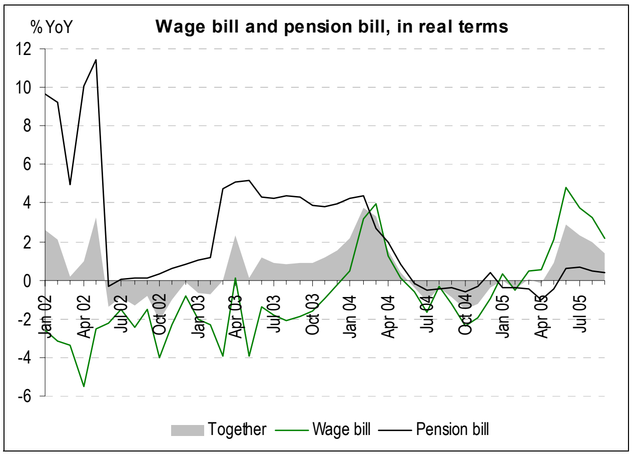


Source: CSO, own calculations

Number of jobs growing, unemployment down

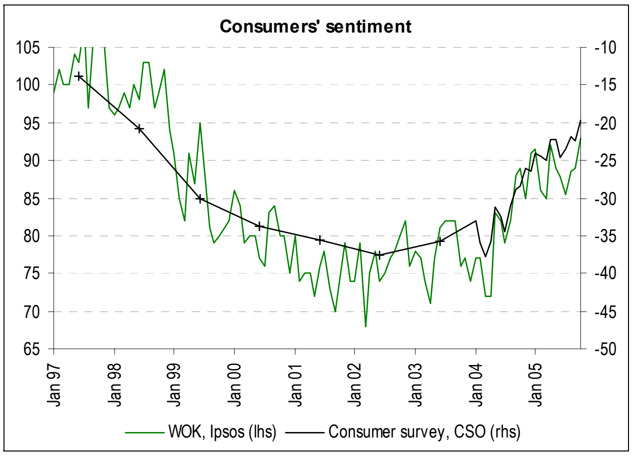
- As an effect of expansion in companies’ activity, demand for labour is steadily strengthening, which is reflected in increasingly fast rise in employment. In September a number of jobs in enterprises sector rose 2.2%YoY.
- It is a decent rate of growth in employment, as for Polish circumstances, as it corresponds to a rise in 1997-98 when Poland’s economy was expanding at annual pace 5-7%, and unemployment rate fell to a record-low 10%.
- Currently unemployment rate is also falling, although at a moderate pace. In September the registered unemployment rate reached 17.6%. The number of unemployed fell 7.1%YoY to 2.76 million, the lowest level for more than 4 years, and new job offers soared 22%YoY.

Economic update



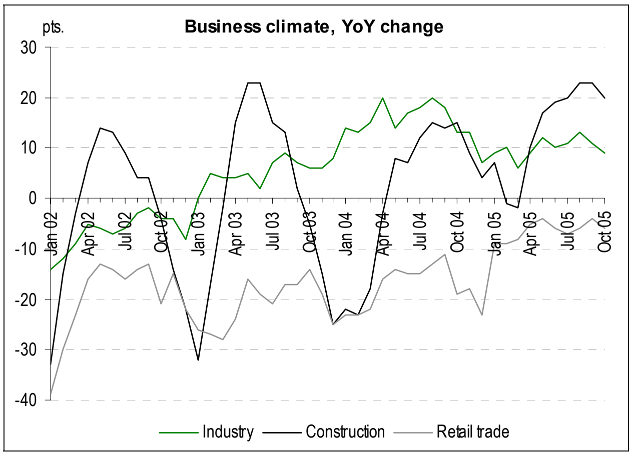
Moderate growth in salaries

- Wage growth in enterprises sector was much lower than forecasted and reached 1.8%YoY against market consensus 3.2%YoY and August's figure 2.8%YoY.
- However, a drop in annual growth rate of wages was strongly influenced by a high base effect in telecommunications where significant hikes in salaries (almost 40%) took place one year ago. In other sectors a rate of pay growth remained moderate (e.g. in industry 4.3%YoY). One could forecast that in October a rate of wage growth would pick up after this one-off effect wanes.
- Thanks to rising employment and decreasing inflation, real wage bill in enterprises sector in 3Q05 was 3.1% higher than last year, which implies improvement in relation to preceding quarters and supports a forecast of steadily improving consumption.



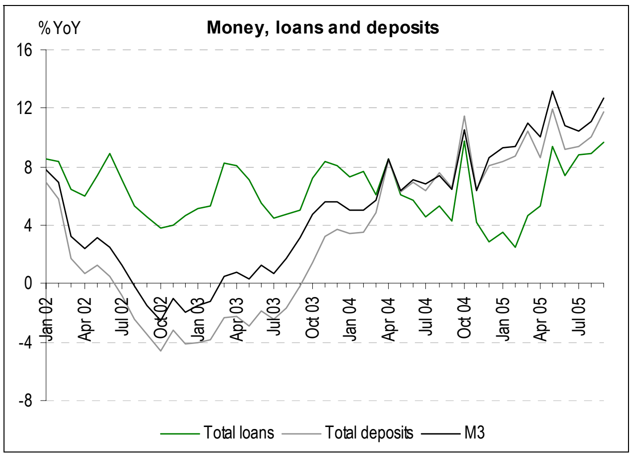
Continuing improvement in households' sentiment

- Opinion polls carried out among households unanimously have been showing a notable improvement in consumers' moods in 4Q05. Most of indices of consumer climate (e.g. computed by CSO, Ipsos, or IRG SGH) increased in recent months to the highest levels since mid 1998.
- One should notice a strong correlation between households' sentiment and situation on the labour market. Thus, if a growing tendency in employment is maintained, it should keep supporting good atmosphere for shopping. However, as long as rise in wages remains moderate, it would be rather a tendency for gradual improvement in consumption rather than a sudden boom.



Business climate in enterprises

- Economic business climate saw a moderate deterioration in October as compared to previous month (2-3 bps). However, it was a typical seasonal phenomenon, and in relation to last year a climate in construction and retail trade was reviewed more positively (up 5 and 13 pts, respectively), while in manufacturing there was a drop by 4 pts (weaker than 7 pts fall last month).
- Notwithstanding this, climate in industry was assessed positively (+9 pts), mainly thanks to optimistic expectations re future orders and production. Interestingly, domestic orders have been increasing faster than export orders. When it comes to construction firms, they are also quite optimistic, although they believe that the most important obstacles for their expansion are high competition and high costs of labour. Climate index in retail trade was still below zero (-6).

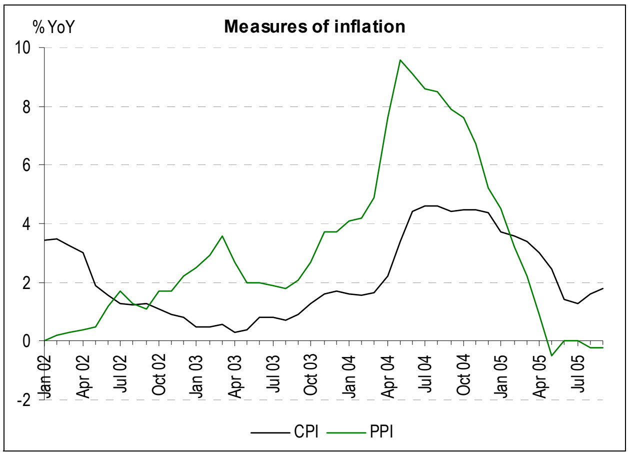


Source: CSO, NBP, Ipsos, own calculations

Accelerating money growth

- Broad money increased 12.7%YoY in September after 11.1%YoY rise in previous month. It resulted from significant acceleration in cash in circulation growth (to 10.4%YoY) and increasingly fast rise in deposits (11.7%YoY). The latter effect came mostly from firms' deposits rising 21.6%YoY, while savings of households increased moderately by 4.6%YoY.
- As regards money counterparts, September saw acceleration in total credit growth to 9.7%YoY from 9.0% in previous month (6.3%YoY in January-August period). It was caused by continuing boom on loans for households (19%YoY), while corporate credit was still growing sluggishly (only 1.5%YoY against 1.0%YoY in August).

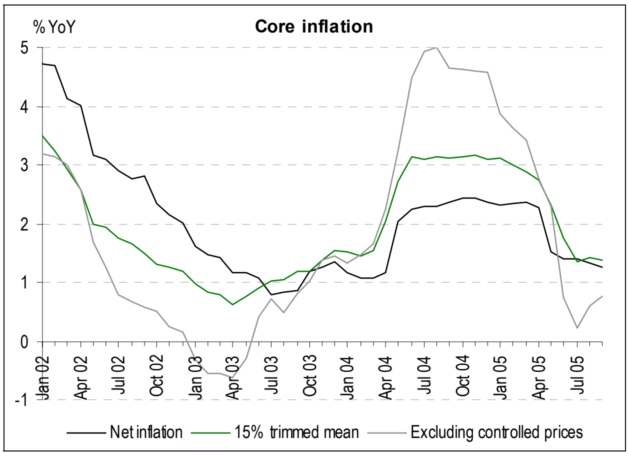
Economic update



Consumer inflation up, producer prices falling

▪ CPI inflation rate inched up in September to 1.8%YoY from 1.6% in August. In line with expectations, a main reason for a rise were hikes in fuel prices (3.4%MoM), and a rise in food prices (0.6%MoM). However, what is important is that one could hardly find signs of pass through from expensive fuels to prices of other goods and services. To the contrary, prices falls in clothing and footwear even deepened, and in other goods and services remained stable, which suggested that demand-side pressure on prices is feeble. In October CPI should get back to 1.5% after a drop in excise on fuels, and return to ca. 2% in 1Q06.

▪ Producer prices fell 0.2%YoY in September, despite 2.7%MoM rise in prices of coke and refinery products. It shows one should hardly talk about direct impact of high oil prices on other prices, not mentioning the so-called second round effects.

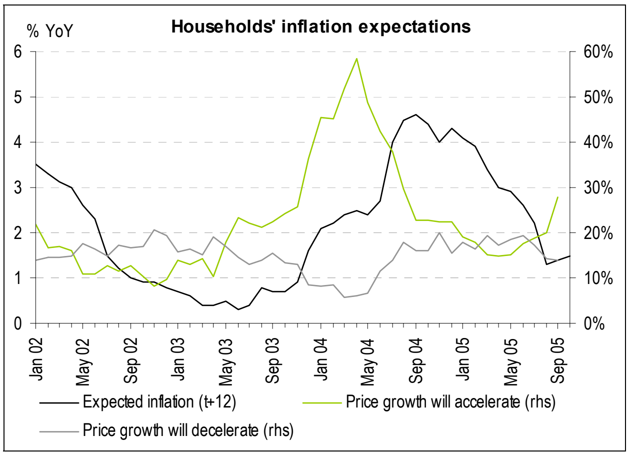


Core inflation shows no threats

▪ Core inflation stayed low in September, showing lack of significant threats for inflation perspectives. Two most important indices for the central bank – net inflation and 15% trimmed mean – remained unchanged at 1.3% and 1.4%YoY respectively.

▪ Two other measures increased slightly (CPI excluding controlled prices and CPI less most volatile prices), while one other decreased a little.

▪ Nevertheless, all five measures of core inflation remained below 1.5% level, i.e. the lower end of allowed band of inflation fluctuations around the target; two measured were even below 1%, which confirms that inflationary tensions in the economy are not particularly strong.



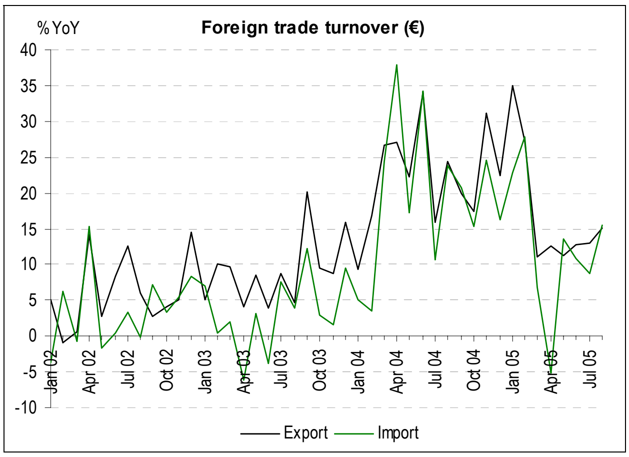
Inflation expectations increased slightly

▪ According to data published by the NBP, inflation expectations formed by households increased slightly in October. Inflation rate anticipated within 12 months horizon reached 1.5% against 1.4% one month earlier.

▪ Moreover, a detailed structure of answers available for September showed a significant rise in share of those predicting acceleration in price growth in future (from 19.9% to 27.8%) and a drop in ratio of respondents anticipating stabilisation or slowdown in price growth.

▪ Still, inflation predicted by households is below inflation target, which means data do not raise excessive concerns as regards inflation perspectives.

▪ The question is, how households' expectations will react to a rise in CPI and zloty depreciation.



Strong rise in foreign trade turnover

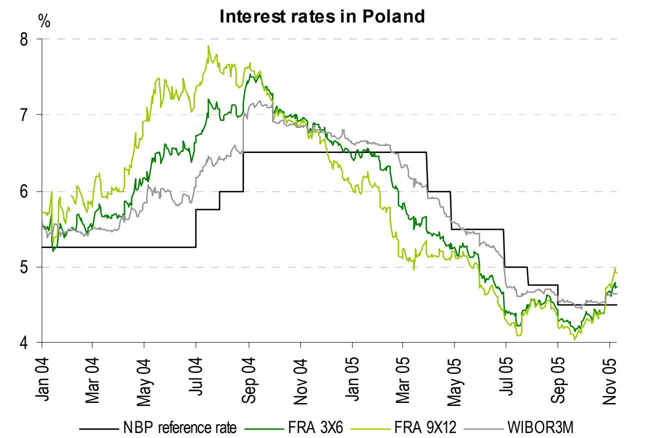
▪ Current account deficit in August was much higher than predicted, reaching €380m, e.g. due to high deficit on income account (€664m), as the central bank took into account estimates of reinvested profits of foreign owners of Poland-based firms.

▪ Nevertheless, the data confirmed that an external imbalance of Polish economy is still at low level. After August, a cumulated 12-month current account deficit remained at 1.9% of GDP.

▪ Both export and import rose over 15%YoY, which suggests that domestic demand is gaining strength, and at the same time Polish firms are doing very well on foreign markets despite unfavourable strong zloty exchange rate.

Source: CSO, NBP, own calculations

Central bank watch



MPC decision - no surprises again

▪ In line with expectations, the Monetary Policy Council maintained interest rates unchanged and kept easing bias in monetary policy.

▪ MPC decision and its statement confirmed expectations regarding future monetary policy decisions. Lack of signals about building inflationary pressure and no second-round effects of previous fuel price hikes make inflation outlook still quite favourable.

▪ The remaining question is how different scenario on the political scene will affect medium-term inflation prospects. The most obvious and the fastest channel affecting inflation is exchange rate, although it is worth to remind that in recent months zloty was stronger than assumed in the projection.

Fragments of the MPC statement from 26 October 2005

October 2005 saw a slight decrease of crude oil prices. As compared with August, Brent oil prices decreased by 7.5 USD per barrel, i.e. by 11.1%. However, both current and forecast oil prices remain high.

The September data do not suffice to assess if economic growth acceleration was actually as large as expected in the August Inflation Report. The more complete assessment will be possible once GUS data on Q3 have been released.

The moderate wage growth, if sustained, would contribute to a further growth in employment and – with labour productivity growth still considerably higher than wage growth – to limiting inflationary pressure. Due to a lack of data on wages outside the corporate sector in Q3 2005, it is difficult to assess the future wage developments in the whole economy.

The Council maintains its opinion that inflation may return to the target sooner than it was forecasted in the August inflation projection. It is expected that having achieved the target, inflation will remain at a level close to the target. The moderate wage growth is an indication than no second round effects have materialised so far. Should there appear signals of increased probability that these effects should occur, the balance of risks might change, which would then affect the future decisions of the Council.

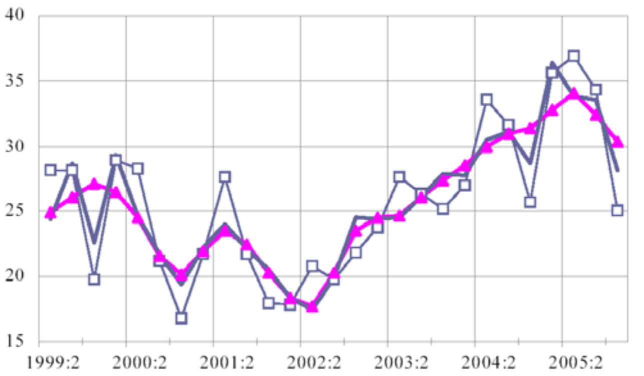
Nothing special in MPC statement as well

▪ The MPC said it still expected inflation rate to come back to the inflation target faster than had been predicted in projection. However, while in September the MPC justified this by higher oil prices, this time there was no explanation and the MPC just mentioned that oil prices fell as compared to August.

▪ The MPC confirmed that recently published economic data gave no clear answer on strength of economic revival and the Council expected that more accurate assessment of situation would be possible after publication of GDP data for 3Q05.

▪ The MPC changed a schedule of publication of *Inflation reports*. The change was made to allow the central bank to take into account the newest available data on national accounts in preparation of inflation and GDP projections. The next Inflation report will be released only in January 2006.

Investment activity indicator i.e. share of firms planning new investments within a quarter - trend (pink line), SA (solid line)



Better business climate, but limited inflation risk

▪ According to NBP survey, at the end of Q3 enterprises showed more optimism as regards economic situation and some improvement is possible in Q4.

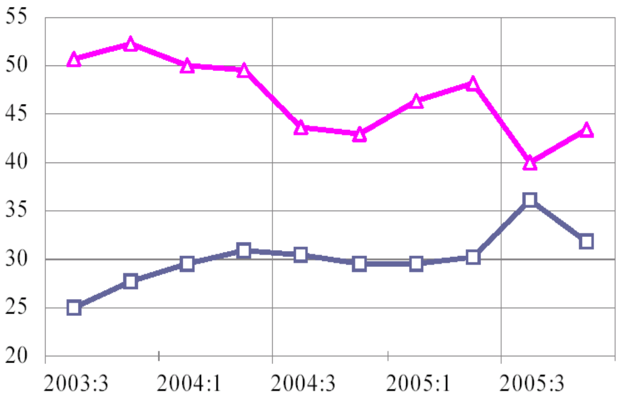
▪ Expectation for higher demand were mostly driven by seasonal factors and there was no strong permanent trend.

▪ Lower investment activity was observed, which was partly seasonal, but more significant downward trend was visible in new investments. The most important barrier for investments was connected with availability of EU funds.

▪ There was no risk of excessive wage growth.

▪ Enterprises saw higher costs as a barrier of their activity, but in spite of much higher prices of materials and commodities, there were no planned hikes in retail consumer prices.

Share of investors financing development from different sources: banking credit (blue line), own funds (pink line)



Source: NBP

Expected growth in demand for loans

▪ NBP survey on credit market situation showed that in 3Q05 banks did not change their loan terms and conditions as well as credit standards for the corporate, while a weak tendency was still present towards easing the lending policy with regard to both housing and consumer loans.

▪ Banks reported an increase in the corporate sector (mostly for investment and current assets financing), but apart from long-term loans for SMEs it was slightly less pronounced than in the previous quarter.

▪ After some weakening banks expect that demand for consumer loans will increase in Q4. Banks probably also count on increase in corporate lending, as they plan to ease credit standards as well as loan terms and conditions for enterprises, particularly with regard to the large enterprise sector.

Central bank watch

Comments of the central bank representatives	Our remarks
Leszek Balcerowicz, NBP governor, MPC chairman **Reuters, MPC press conference, 26 October** GDP growth in the third quarter was substantially higher than in the second quarter, It will be close to what was assumed. According to NBP analyses, such low wage growth [1.8%YoY] was biased down by a high base effect in one of the sectors, while after eliminating this effect a rate of growth should be at ca. 2.8%YoY.	In September statement the MPC wrote that GDP growth in Q3 was higher than in 2Q. In October statement it was stressed that NBP president Leszek Balcerowicz said during the press conference that it was difficult to asses whether acceleration was at expected pace. However, NBP president presented (as usual) more optimistic view. Was the opinion of the whole Council? As regards wage growth, it is worth to ask whether such increase (2.85) is dangerous for inflation. MPC said that moderate wage growth support higher employment and low inflationary pressure.
Jan Czekaj, MPC member **PAP, 21 October** After joining the EU unilateral euroisation is in practice impossible and Poland should follow a normal path of euro adoption. A commitment to join the single currency area is an integral part of the Accession Treaty. I am surprised by politicians comments on euro referendum, as we already decided to join the euro zone when we accepted the Accession Treaty. Possibly we are not ready politically for euro adoption, Until both policies, monetary and fiscal, will be conducted in different way we will have some difficulties.	Possibly, professor Czekaj meant that “euroisation” means any change of foreign exchange regime towards fixing zloty against the euro (currency board, fixed exchange rate – mentioned by PO-PiS representatives). As regards proposals of politicians to hold the referendum on euro adoption, possibly politicians would like to ask Poles not on “whether to join the euro zone”, but on the timing of euro adoption, as Poland is obliged to do so sooner or later. Results of parliamentary and presidential elections and recent comments of politicians influencing macroeconomic policy in the coming years showed that this is rather long perspective.
Dariusz Filar, MPC member **PAP, 26 October** In the situation, in which everybody pay attention to politics, the re may be an opinion that the MPC is also focused on politics. This is not true. We pay attention that in the perspective of many quarters inflation may be back within the target and may stabilise at this level. **PAP, 19 October** Current level of interest rates is close to the level allowing for stabilisation of inflation close to the inflation target over 5-7 quarters. If data on economic growth for 3Q05 fail expectations reflected in August *Inflation report* we could think about what is the room for monetary easing. In that sense full data for Q3 are important.	How current political situation will affect monetary policy decisions? This question was appearing very often in recent weeks. Until now, the Council did not refer to the political situation and this was not the main factor driving its decisions. However, everything suggests that we have to do with different political scenario as compared to expectations formed before elections. First of all, we may see more expansionary fiscal policy and secondly, higher political risk is reflected on financial market (weaker zloty). These will be the factors limiting room for monetary easing. Especially, as professor Filar said, among others, that a rate cut would be possible in case of sharp zloty appreciation. As for now, substantial capital inflow is not very likely. However, at the same time, one should remember that GDP data for Q3 will be crucial for the MPC. In our opinion, rate cut would be justified if we exclude political factors.
Marian Noga, MPC member **PAP, 19 October** The balance of risks for future inflation has changed to such extent that probability of inflation acceleration becomes higher. Inflation is still low but we see a trend change. If the trend maintains, and all the factors suggest this is the case, a small monthly change may increase CPI inflation to 2.5%, which could fuel inflation expectations and limit room for rate cuts.	Professor Noga usually voted together with the hawkish faction (i.e. was outvoted a few times) and thus it should not be surprising that in his opinion balance of risks has changed unfavourably for inflation. However, this is not the view of the whole Council, which decided to maintain easing bias again. However, it is worth to notice that even a “hawk” in the Council said that room for cut would be limited and not that there would be no room. On the other hand, this comment may not represent current view, as political situation changed considerably.
Stanisław Owsiak, MPC member **PAP, 21 October** First months of high oil prices give no reason to think that they will boost inflationary pressure. Maybe this would be the case if extreme situation happens with sharp upward trend in oil prices. If oil prices stabilise at current level, or rise moderately by some 5%, I see no risk. It also depends on the zloty exchange rate against the dollar, the strong zloty should help us fight inflation. I see no threat of the so-called second-round effects with current situation on the labour market and with such unemployment rate.	View of professor Owsiak is important from the point of view of balance of power within the Council (once his view determined “hawks” victory in the voting). His comments showed that after publication of inflation and wages data he did not share the concerns about the second-round effects. Such statement is not surprising given that both CPI and PPI inflation data did not show signs of demand-side pressure on prices and wages rose by a mere 1.8%YoY in September. It is worth to remind that the risk of high oil prices and its effects was the only hawkish element in the official MPC communiqué in both September and October.
Mirosław Pietrewicz, MPC member **Reuters, 14 October** If economic growth in the third quarter is only just above 3 percent, investments not more than 5 percent higher, and the growth of consumption not more than 2 percent, we will need to ease monetary policy. **PAP, 9 October** High oil prices are the only real danger for inflation, but their influence on inflation is relatively low in Poland and inflation should not increase in the nearest future. NBP analyses show that rise in oil price by 10 USD per barrel leads to CPI inflation increase by 0.1-0.1 pp. High oil price leads to weaker economic growth to much larger extent, and this leads to lower inflation.	Majority of MPC members speaking public emphasised the importance of GDP data for the third quarter. One can say, that next rate cut would be possible if the data surprise on the downside as compared to the central bank’s expectations. The problem is, however, that we do not know projections of the NBP. *Inflation report* showed GDP growth projection of some 3.5-4.0%, but its breakdown will be more important. with this regard, comment of professor Pietrewicz were quite interesting. In our opinion, it is possible that investment growth exceeds 5%, private consumption growth exceeds 2%, although there is no doubt that the risk is on the downside. Other MPC member, Stanisław Nieckarz, said that if data for 3Q05 confirmed delay in economic recovery and weak investment growth, and the new government assured that fiscal consolidation would be carried out, monetary policy may be relaxed. Well, the most important question today is whether fiscal consolidation will take place.

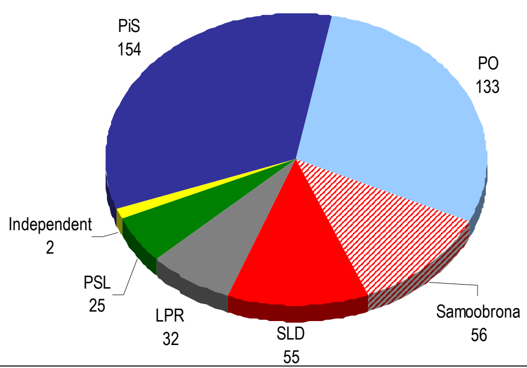
Government and politics

Profiles of ministers in charge of economic issues

Teresa Lubińska, Finance Minister	Head of the finance department at the University of Szczecin She has published research on public finances and last year was appointed member of the macroeconomic council advising the outgoing finance minister. Lubińska favours a gradual approach to reducing the budget deficit..
Piotr Woźniak, Economy Minister	Geologist and economic expert of the Law and Justice party. Served as a diplomat in Canada in 1992-1996. Advised a previous right-wing cabinet on infrastructure issues and was a deputy chief of gas group PGNiG.
Andrzej Mikosz Treasury Minister	Lawyer specialising in capital market issues and former member of the Securities Commission. He fought for minority shareholders' rights in several high profile cases.

Source: Reuters

Distribution of seats in Sejm

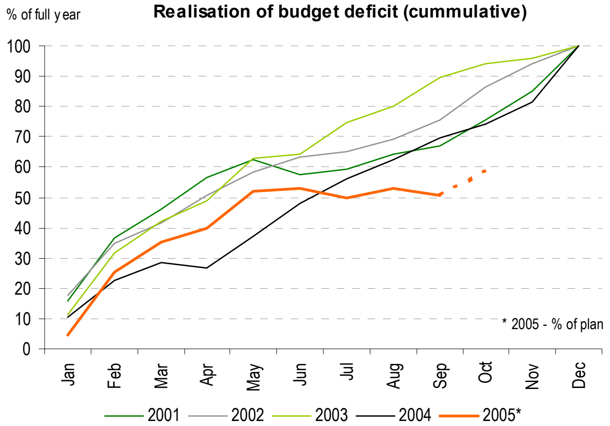


Main economic assumptions of cabinet's programme

	2006	2007	2008	2009
GDP growth (%YoY)	4.5	5.0	5.5	6.0
CPI avg. (%YoY)	2.0	2.5	3.0	3.0
Unemployment (%)	-	15.5	12.8	9.0
Budget revenue (PLNbn)	191	200	208	227
Budget spending (PLNbn)	221	230	238	257
Budget balance (PLNbn)	30	30	30	30

Source: Reuters, Ministry of Finance

Realisation of budget deficit (cummulative)



Source: Ministry of Finance, State Election Commission

Cabinet sworn in. What next?

▪ Minority cabinet of PiS was sworn in. Ministers responsible for economic affairs were not widely known for financial markets, but there is a question what will be their influence on economic policy.

▪ Economic programme of the new cabinet raises doubts as regards changes planned for 2006, as the government will have to solve the problem of how to achieve lower deficit with higher spending and lower revenues. Revenues may be lower as the government planned to resign from the increase of excise tax on fuels. Higher expenditures were promised in electoral campaign.

▪ Additionally, comments of new finance minister (see next page) were quite controversial and led to higher costs of public debt servicing.

Who will support minority government?

▪ The remaining question is who will support the government during the vote of confidence. The cabinet may reach the absolute majority only if Samoobrona supports it together with LPR **or** PSL. Or with support of both LPR **and** PSL if Samoobrona's deputies leave the proceedings. One can expect a number of deals in Sejm, so we present once more the distribution of parliament's seats (chart on the left).

▪ If the cabinet does not reach majority, we will see the beginning of the second step in the three-steps constitutional procedure. Then Sejm will propose PM, who will have to reach absolute majority. Possibly, in such scenario there would be a chance for talks between PiS and PO again, but the uncertainty period will extend. Well, as for now there are no positive scenarios from financial market's point of view.

What will be the programme of new government?

▪ At the end of October, PM Marcinkiewicz presented a modified economic programme of the government he was going to lead. The programme assumed that deficit of the state budget would remain stable at PLN30bn for the next four years, which is above targets from the Convergence Programme.

▪ Substantial receipts from privatisation in the coming years are planned at PLN6-10bn per year. PIT tax rates were supposed to be reduced to 18% and 32% (since 2007), and CIT to 18%. Some simplification in VAT has been announced, but without details.

▪ The programme is based on optimistic economic assumptions (see table) and on hope hat the Eurostat will change definition of Polish pension fund, classifying them as part of public sector. Budget for 2007 will be a real test for the cabinet.

This year budget under control

▪ Mirosław Gronicki, who stepped down from finance minister post, said that budget gap in the whole 2005 should not exceed 80% of the planned PLN35bn, or should not be higher than PLN28bn.

▪ Also, according to the ministry, the deficit stood at 59% of the plan in October (in September the shortfall was 50.8%).

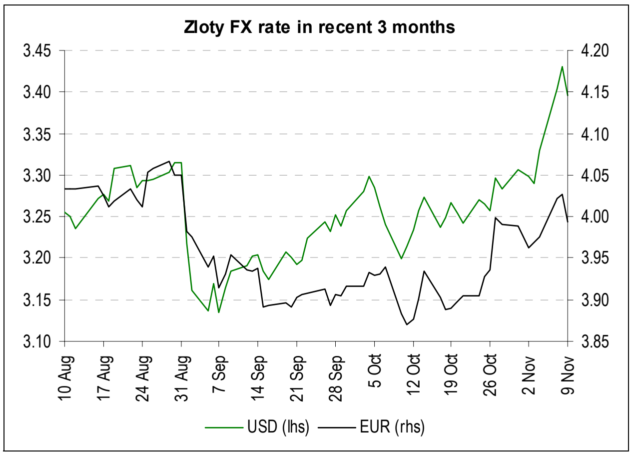
▪ Excellent this year's budget realisation may be a problem for the new cabinet. The public finance law says that since in 2004 public debt exceeded 50% of GDP, the deficit-to-income ratio in 2006 must be capped at the level recorded in 2005.

▪ New minister has a couple of possibilities of "manoeuvring" (paper never refuses ink), but there is also a question of credibility of government's plan.

Government and politics

Comments of government representatives and politicians	Our remarks
Lech Kaczyński, President elect **Newsweek (Polish edition), 6 November** I do not expect to have conflicts with PiS government, but I can use the power of veto. For example, when there would be an attempt to strike trade unions or to liberalise the labour code.	The minority government and the President will co-operate and speak one voice in many cases. It is interesting, however, that the president elect announced he would veto bills connected with liberalisation of the labour code. We remember announcements that new administration will be friendly towards entrepreneurs, but we also remember that trade unions supported Kaczyński In presidential campaign.
Kazimierz Marcinkiewicz, Prime Minister **PAP, 29 October** The key for economic development in Poland is higher employment and higher investments, especially investments co-financed by EU funds. **PAP, 31 October** The first thing to do is to start preparing budget amendment for 2006. (…) we see no reason to change our previous promises to keep budget deficit at PLN30bn. (…) Amendment will be prepared at the end of November or at the beginning of December. Budget for 2006 will be slightly improved, macroeconomic indicators as well. We will keep public finance in check to calm down the markets.	It is interesting whether Prime Minister knew about President's plans to veto bills connected with labour code liberalisation when he talked about higher employment, as such veto could be counter-productive. As regards investments co-financed by EU funds, this may be in risk if the Polish government does not realise the plan of general government deficit reduction, as it was planned in the convergence programme. In such case, in the extreme scenario cohesion funds may be blocked. Budget amendment should be ready soon, but it is still not entirely clear whether budget deficit will be maintained at the level of PLN30bn. There were a couple of comments suggesting that deficit should be anyway, if a famous anchor breaks even before a ship is launched, it would not bode well for other government's promises and would undermines its credibility.
Teresa Lubińska, finance minister **PAP, 31 October** Q: Where to find budgetary savings? A: No spending cuts. Deficit will be probably the same. It seems the fate of the so-called Belka tax [tax on savings] is already settled. I would like to have a look at VAT, but a proposal of VAT reduction is dangerous, in my opinion. Keeping higher competitiveness of the Polish economy as compared to other countries is the most important. **PAP, 3 November** Prime Minister wants PLn30bn [budget deficit], but my opinion is a bit different . I would like to increase budget deficit in 2006 to PLN31-32bn and allocate additional spending on education and high technology. This is my personal request to PM, but he asks to stay with 30bn. I think there is little room for manoeuvre as regards changes in public debt management strategy. I will know the details in December. In this issue we should be very careful. **Financial Times, 5-6 November** It's not the level of social spending that's the problem, it's the level of poverty that we see. (…) Poland must protect social welfare spending. Hypermarkets like Tesco are not welcome in Poland. They are no investment, they are not vital for economic growth.	New finance minister had no good start as regards her official statements in the media. It is exceptionally surprising that a finance minister wants higher budget deficit than Prime Minister. Especially as her desire to increase budget gap in 2006 stands at odds with the concept of "budget anchor" promoted by PiS, although it is not really clear whether the anchor is still binding. Anyway, finance minister should try to avoid similar statements, as this may be very costly for taxpayers (and her credibility as a finance minister). This is enough to note that her comments led to a rise in bond yields. Another surprising comment of Lubińska was connected with public debt management strategy. While a few weeks earlier PiS economic expert Cezary Mech announced U-turn in strategy, she said there was no room for major changes. One can ask: does exist one, coherent economic programme of new administration? Financial markets reacted really abruptly when the comment of new finance minister appeared in international press. On top of all above-mentioned comments, she gave an interview stressing a need to boost social spending in Poland and saying that foreign supermarket branches like Tesco are unwelcome in Poland, as they do not contribute to economic growth. Such comments will certainly not increase investors' confidence in Polish economic policy.
Cezary Mech, PiS economic expert **Gazeta Wyborcza, 28 October** The cost of child benefit is ca. PLN 2.9bn annually in constant prices. Additional transfers to the poorest families with many children is another PLN2.1bn. Additional PLN1bn would come from faster amortisation for enterprises paying PIT. Housing credits, which are expected to be co-financed by the state would cost some PLN150m in the first year. However, in the same period a rise in VAT and PIT revenues connected with the housing programme would amount to PLN2.1bn. the realisation of this programme should lead to higher employment – if this was one million people with salary of 60% of average wage, budget revenues would rise permanently by PLN8bn per annum. **PAP, 18 October** If the [Eurostat's] stance is unchanged, the question is where to find PLN15bn. We would have to cut spending because of OFE,so there is a question how this will affect the economy. I do not see where to cut budget spending by PLN15bn. Rising inflation is a precondition for wage growth. **PAP, 14 October** We will not roll-out foreign debt. We will repay this debt and the issue will take place on the domestic market. With this regard, we can expect a U-turn policy in public debt management.	Statements of Law and Justice's economic expert clearly show that the only idea that PiS has, which would bring the fiscal deficit down, is to increase GDP growth and "outgrow" from deficit and the same time to convince the EU side to treat OFE as a part of public finance. Let's remind that according to current Eurostat's stance, Polish general government deficit will have to be increased over the next four years because each year amounts arising out of the open pension funds would have to be factored in (these will increase gradually to represent ca. 2% of GDP in 2010). PiS does not seem to be prepared for such scenario. On the other hand, during the electoral campaign PiS declared a number of spending, which would cost billions of zloty. If we add demands of other parliamentary caucuses - tax exemptions for pensioners and those with minimum wage (Samoobrona) and one-off payment for baby birth (LPR) – there is a question how to finance this without increasing the deficit. Is it really possible to cut administrative spending by PLN5bn without risking a paralysis in administration? Should we really believe in Mech's assumptions as regards increase in budgetary revenues as an effect of housing programme? We are quite sceptical, especially when we see his opinions on other subjects. We are particularly surprised by his comment that inflation increase is a precondition for wage growth. As one can see, deputy finance minister has controversial views as well. He was nominated on November 8.

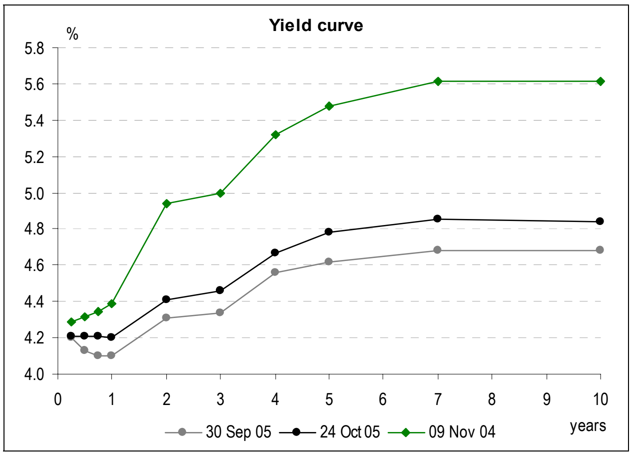
Market monitor



Post-elections mess

▪ Advantage of promarket Civic Platform (PO) candidate in preelection polls and expectations on MF currencies sale caused zloty remained strong and fluctuated on U.S. and EMU data as well as investors sentiment. Polish currency lost 1% on Lech kaczyński win in presidential elections, though much speedier exchange rate soar resulted from coalition talks crisis, controversial statements of finance minister and European Commission's critique on willingness to rise budget deficit and delay euro adoption by Marcinkiewicz's government.

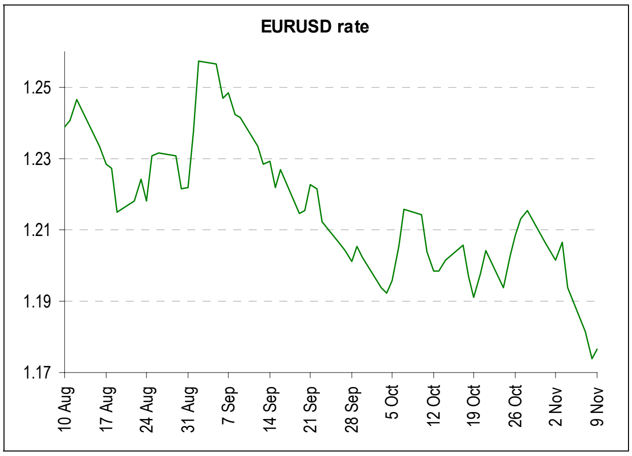
▪ On PO going into opposition, success in confidence voting depends on populists and programme concessions towards them may result in costly bills, which will strengthen pressure on further zloty depreciation.



Rates rocket on political events

▪ At the longer end of the curve yields rocketed within last month by 55-92bp. and 74-124bp. since PiS victory in parliamentary elections, whereas 5x5 spread soared form 87bp. in the mid October to 156bp. The biggest debt market weakening resulted from breaking off coalition talks, perspective of no pro-market PO in the government, controversial statements of finance minister, EC critique, as well as unclear declarations of appointed PM Marcinkiewicz and yields rise on core bonds markets. Slight strengthening occurred on presidential elections and new government appointment, which temporarily stabilized the market along core yields drop.

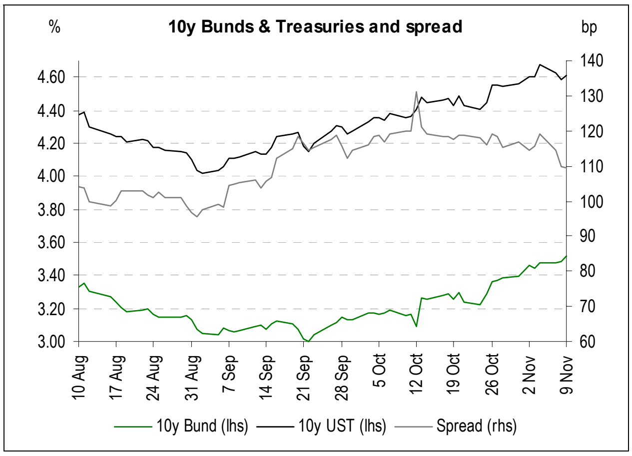
▪ Concessions towards populists for backing, delaying euro adoption, widening budget deficit and unfortunate announcements of new government members as well as core markets weakening may result in further yields rise.



Dollar gains thanks to good data and higher rates

▪ Inflation and net capital flows figures as well as signals of Fed's necessity of further rates hikes favoured dollar. On good EMU data and consumer confidence worsening in U.S., EURUSD rose to 1.217. Ultimately higher than expected advance Q3 GDP, Fed's rate rise, euro zone rate left unchanged, and especially a bit dovish and unclear Trichet's comment as well as Greenspan's statement on inflation pressure uncertainty increased expectations on rates hikes in U.S. to target even to 5% and strengthened dollar near the highest level for the last two years 1.1711.

▪ Rising interest rates disparity and better data from U.S. should still contribute to dollar appreciation. On the other hand 1.19 level will be an important resistance level before potential euro recovery over 1.20.



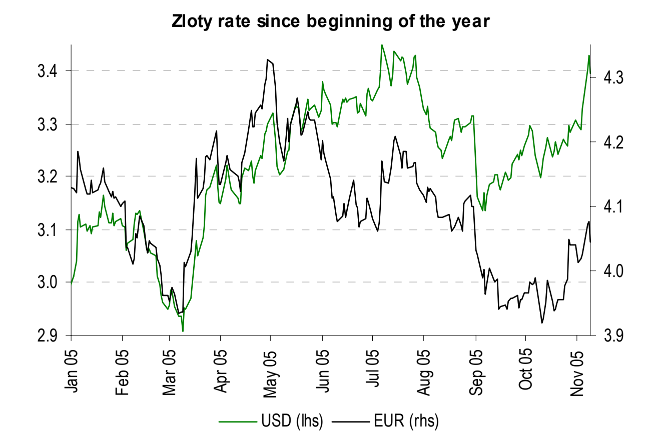
Yields still on rising path

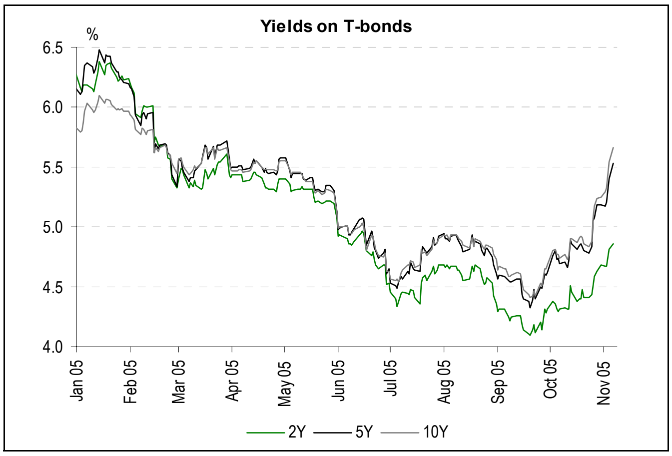
▪ Higher than expected ISM figures, Fed Funds rate increase as well as hawkish statement of A. Greenspan contributed to Treasuries' yields rise over 4,67, the highest level for over a year, followed by correction. Bund's weakened on higher than forecasted IFO index in Germany, hawkish comments of EBC's members and data from German labour market. However unclear and a bit dovish statement of EBC's chairman on monetary policy adequacy caused slight strengthening and drop of faster rates increase expectations.

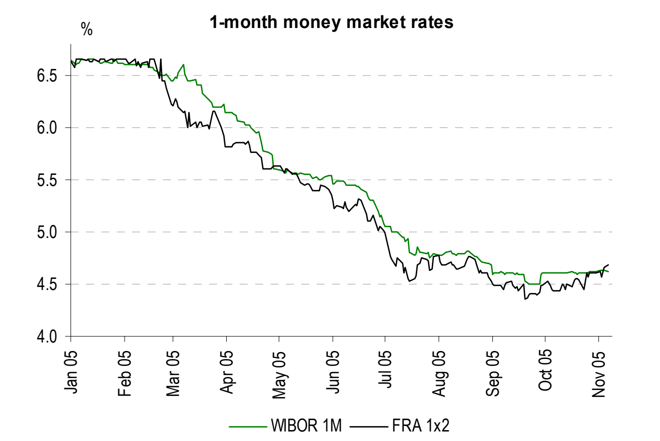
▪ U.S. economic data and tone of Fed's announcements is much more explicit and directed on speedier rates hikes in USA rather than euro zone. Trend of rising rates should hold on with relatively stable spread between Bunds and Treasuries.

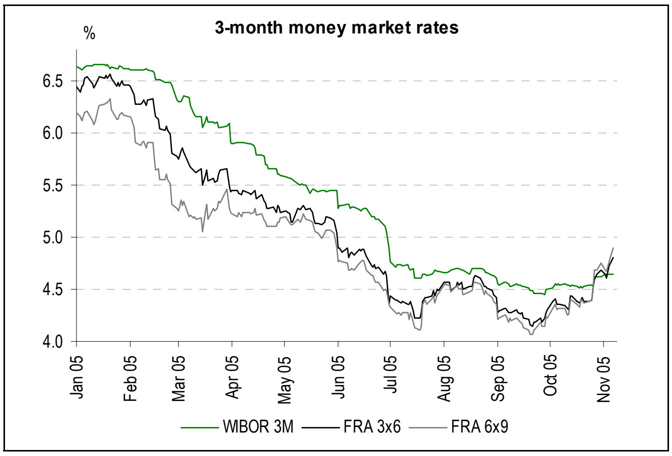
Source: Reuters, BZ WBK

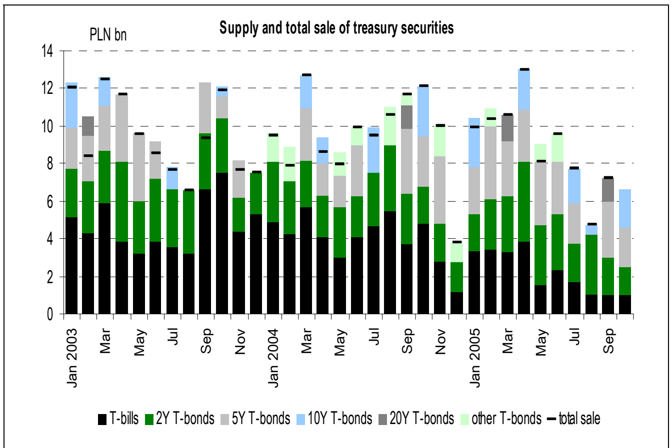
Market monitor











Treasury bill auctions (PLN m)

	OFFER / SALE		
Date of auction	13-week	52-week	Total
05.09.2005	100/100	400/400	500/500
19.09.2005	100/100	400/400	500/500
Total September	**200 / 200**	**800 / 800**	**1 000 / 1 000**
03.10.2005	100/100	400/400	500/500
17.10.2005	100	400/400	500/500
Total October	**200**	**800**	**1 000 / 1000**
07.11.2005	-	400/400	400/400
21.11.2005	-	400-800	400-800
Total November*	**-**	**800 - 1 200**	**800 - 1 200**

* estimations based on Ministry of Finance preliminary information

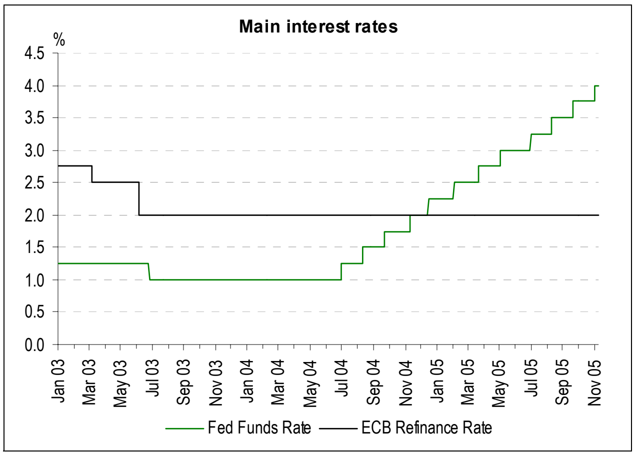
Treasury bond auctions in 2005 (PLN m)

month	First auction				Second auction				Third auction			
	date	T-bonds	offer	sale	date	T-bonds	offer	sale	date	T-bonds	offer	sale
January	05.01	OK0407	2 000	2 000	12.01	DS1015	2 600	2 130	19.01	PS0310	2 500	2 500
February	02.02*	OK0407	2 760	2 760	09.02*	IZ0816	960	960	16.02*	PS0310	3 840	3 200
March	02.03*	OK0407	3 000	3 000	09.03	WS0922	1 400	1 400	16.03	PS0310	2 900	2 900
April	06.04	OK0407	3 500	3 500	13.04	DS1015	2 200	2 130	20.04*	PS0310	2 750	2 750
May	04.05*	OK0807	3 120	3 120	11.05	IZ0816	1 000	0	18.05*	PS0310	3 360	3 360
June	01.06*	OK0807	3 000	3 000	08.06*	WZ0911	1 440	1 440	15.06	PS0310	2 800	2 800
July	06.07	OK0807	2 000	2 000	13.07	DS1015	1 800	1 800	20.07	PS0310	2 200	2 200
August	03.08*	OK0807	3 240	3 240	10.08	IZ0816	500	500	-	-	-	-
September	07.09	OK1207	2 000	2 000	14.09*	WS0922	1 200	1 200	21.09*	PS0310	3 000	3 000
October	05.10	OK1207	1 500	1 500	12.10*	DS1015	2 025	2 025	19.10	PS0310	2 100	2 100
November	02.11	OK1207	1 500	1 500	09.11	IZ0816	500	491,5	16.11	DS1110	-	-
December	07.12	3&7Y float	-	-	-	-	-	-	-	-	-	-

* with supplementary auction

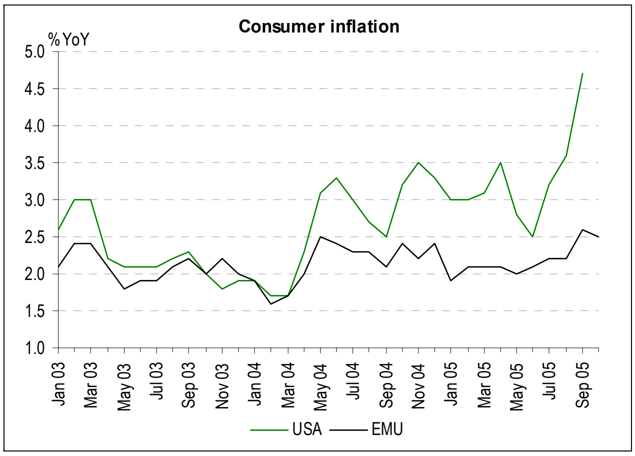
Source: Ministry of Finance, Reuters, BZ WBK

International review



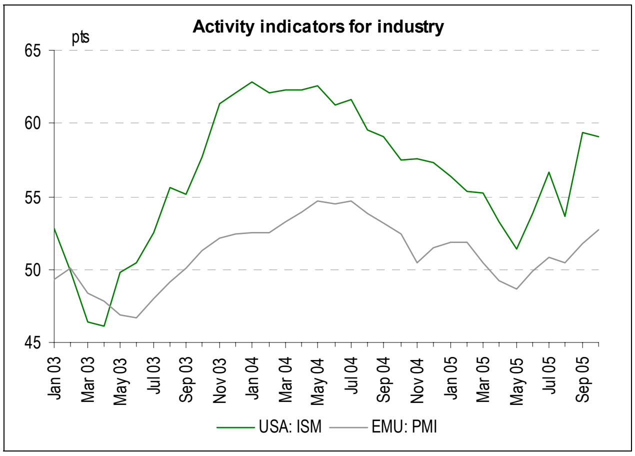
Fed Funds rate raise continue, possible hikes in EMU

- Fed increased main rate in November once again by 25 bp to 4% as expected. Fed's communiqué was similar to previous ones, suggesting that Fed will continue rate hikes at a "measured" pace. The main reason was business climate, high PPI, ISM, Q3 GDP and average hourly earnings rise. Last statement of Alan Greenspan and economic data strengthened expectations on rate hikes even to 5%.
- European Central Bank did not change interest rates in November leaving refinance rate at 2.0%. There appeared opposing comments from ECB members on data from euro zone. Ambiguous and unclear statement of EBC's chairman Jean Claude-Trichet, that current monetary policy is adequate though rate hike is possible any time had a bit dovish effect on markets.



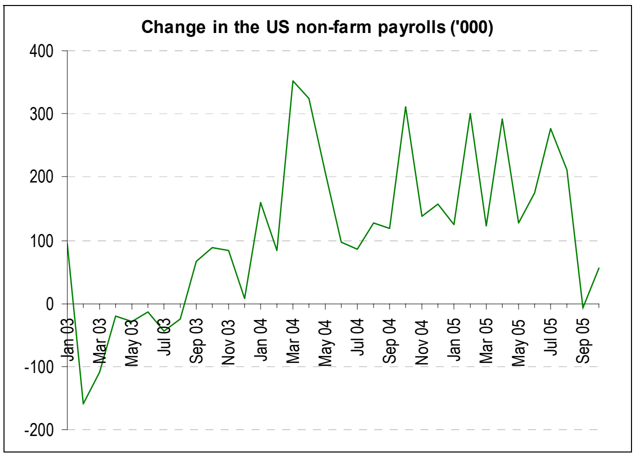
Energy prices still affect inflation

- CPI inflation in U.S. soared in September by record high 1.2%MoM and 4.7%YoY, which was the highest inflation rise for 25 years and caused mainly by energy prices rise by 12%MoM. Core inflation, which excludes food and fuel prices amounted 0.1%MoM and 2%YoY and was lower than expected 0,2%MoM. PPI increased by 1.9%MoM and 6.9%YoY, core PPI by 0.3%MoM and 2.6%YoY, and intermediate goods rose by 2.5%MoM. Data was higher than market consensus and showed stronger inflation pressure.
- According to preliminary estimates, consumer inflation in October rose by 0.5%MoM and 2.5%YoY from 2.6%YoY in September. Producer prices in EMU increased by 0.5%MoM and 4.4%YoY, mainly as a result of high energy prices, as excluding them core PPI rose by 0.2%MoM and 1.3%YoY.



High levels of activity indices

- Manufacturing ISM dropped from 59.4pts. to 59.1pts in October, but was much above expectations at 57pts. ISM for non-manufacturing sector showing the condition of services sector in American economy soared in October to 60.0pts form 53.3pts last month. Analysts expected indicator at 57.0pts and much higher figure contributed to rate rise to the highest level for the last 7 months.
- PMI index showing production rise in euro zone increased in October to 52.7 from 51.7 in September with expectations slightly below at 52.6. PMI for services sector in EMU rose in October to 54.9 as compared to 54.7 in the previous month and was close to forecast at 55.0. Data were quite neutral to the market, though the figures were at the highest levels for over a year.



Smaller employment drops, mixed data from labor market

- After revised smaller drop in non-farm payrolls by 8k in September (against previously reported drop of 35k) the number of jobs in the US economy increased by 56k in October, which was lower than market expectations at 100k.
- Department of Labor report included signs of high rise in average hourly earnings and this information had strong impact on the market showing inflation pressure. Unemployment rate fell in October to 5.0% from 5.1% in September. Rise in non-farm productivity by 4.1% and fall in unit labor costs by 0.5% in Q3, with expected increases of 2.5% and 2.0%, respectively, showed better situation on the labor market.

Source: Reuters, ECB, Federal Reserve

Economic calendar

Monday	Tuesday	Wednesday	Thursday	Friday
7 November ***POL: Treasury bills auction*** EMU: Retail sales (Sep)	**8**	**9** ***POL: 12Y CPI-indexed bond auction*** USA: Wholesale inventories (Sep)	**10** USA: Foreign trade (Sep) USA: Foreign trade prices (Oct) USA: Preliminary Michigan index (Nov) USA: Budget deficit (Oct)	**11** ***POL: Independence day***
14 ***POL: CPI (Oct)*** ***POL: Money supply (Oct)***	**15** ***POL: Balance of payments (Sep)*** GER: ZEW index (Nov) USA: PPI (Oct) USA: Retail sales (Oct)	**16** ***POL: 5Y bond auction*** EMU: Final HICP (Oct) USA: CPI (Oct) USA: Net capital flows (Sep)	**17** ***POL: Wages (Oct)*** ***POL: Employment (Oct)*** EMU: Industrial output (Sep) USA: Capacity utilisation (Oct) USA: Industrial output (Oct)	**18** ***POL: Output in industry and construction (Oct)*** ***POL: PPI (Oct)***
21 ***POL: Treasury bills auction*** EMU: Trade balance (Sep)	**22** ***POL: Core inflation (Oct)*** ***POL: Business climate (Nov)***	**23** ***POL: Switch bond auction*** USA: Michigan index (Nov)	**24** USA: Holiday EMU: Current account (Sep) GER: IFO index (Nov)	**25** ***POL: Retail sales (Oct)*** ***POL: Unemployment rate (Oct)***
28	**29** ***POL: MPC meeting*** ***POL: GDP (Q3)*** EMU: Money supply (Oct) USA: Durable goods (Oct) USA: Consumers' confidence (Nov)	**30** ***POL: MPC meeting – decision*** EMU: Consumers' confidence (Nov) EMU: GDP revised (Q3) EMU: HICP flash (Nov) USA: Preliminary GDP (Q3) USA: Chicago PMI (Nov) USA: PCE inflation (Q3)	**1 December** EMU: PMI manufacturing (Nov) EMU: Unemployment (Oct) EMU: ECB meeting – decision USA: Personal income (Oct) USA: ISM manufacturing (Oct)	**2** EMU: PPI (Oct) USA: Average hourly earnings(Nov) USA: Non-farm payrolls (Nov) USA: Unemployment (Nov)
5 EMU: PMI non-manufacturing (Nov) EMU: Retail sales (Oct) USA: ISM non-manufacturing (Nov)	**6** USA: Unit labour costs, productivity revised (Q3) USA: Factory orders (Oct)	**7**	**8**	**9** USA: Preliminary Michigan index (Dec) USA: Wholesale inventories (Oct)
12 USA: Budget deficit (Nov)	**13** GER: ZEW index (Dec) USA: Retail sales (Nov) USA: Fed meeting – decision	**14** ***POL: CPI (Nov)*** USA: Foreign trade (Oct) USA: Foreign trade prices (Nov)	**15** ***POL: Wages (Nov)*** ***POL: Employment (Nov)*** USA: CPI (Nov) USA: Net capital flows (Oct) USA: Capacity utilisation (Nov) USA: Industrial output (Nov)	**16** EMU: Final HICP (Nov) USA: Current account (Q3)

Source: CSO, NBP, Finance Ministry, Reuters

MPC meetings and data release calendar for 2005

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
MPC meeting	25-26	24-25	29-30	26-27	24-25	28-29	26-27	30-31	27-28	25-26	29-30	20-21
GDP*	31	-	11	-	31	-	-	29	-	-	29	-
CPI	17	15[a]	14[b]	14	16	14	14	16	14	14	14	14
Core inflation	25	-	22[b]	22	24	22	22	24	22	24	22	22
PPI	20	17	17	19	20	17	19	18	19	19	18	19
Industrial output	20	17	17	19	20	17	19	18	19	19	18	19
Retail sales	24	23	23	25	25	23	25	23	21	25	25	21
Gross wages, employment	17	15	15	15	18	15	15	16	15	17	17	15
Unemployment	24	23	23	25	25	23	25	23	21	25	25	21
Foreign trade	about 50 working days after reported period											
Balance of payments*	-	-	31	-	-	30	-	-	30	-	-	-
Balance of payments	31[c]	28	31	29	31	30	12	11	12	13	15	-
Money supply	14	14	14	14	13	14	14	12	14	14	14	-
NBP balance sheet	7	7	7	7	6	7	7	5	7	7	7	-
Business climate indices	21	21	22	22	20	22	22	22	22	21	22	22

* quarterly data, [a] preliminary data, January, [b] January and February, [c] November 2004, [d] January, [e] February

Source: CSO, NBP

Economic data and forecasts

Monthly economic indicators

		Oct 04	Nov 04	Dec 04	Jan 05	Feb 05	Mar 05	Apr 05	May 05	Jun 05	Jul 05	Aug 05	Sep 05	Oct 05	Nov 05
Industrial production	%YoY	3.5	11.4	6.8	4.6	2.3	-3.7	-1.1	0.9	6.9	2.6	4.8	5.5	5.7	6.7
Retail sales [c]	%YoY	4.0	4.4	2.8	7.5	2.4	-0.3	-14.4	8.0	10.5	5.0	7.9	5.4	5.7	6.6
Unemployment rate	%	18.7	18.7	19.1	19.5	19.4	19.3	18.8	18.3	18.0	17.9	17.8	17.6	17.4	17.4
Gross wages [b c]	%YoY	2.4	2.7	3.2	2.6	1.4	2.2	1.8	3.0	4.5	3.2	2.8	1.8	2.5	2.6
Employment [b]	%YoY	-0.4	-0.3	0.2	1.5	1.6	1.6	1.7	1.6	1.7	1.8	2.0	2.2	2.2	2.2
Export [d]	%YoY	17.5	31.0	22.5	35.0	27.3	11.0	12.6	11.3	12.9	12.9	15.1	11.9	10.6	6.1
Import [d]	%YoY	15.3	24.5	16.3	22.7	27.9	6.8	-5.2	13.5	10.8	8.7	15.5	12.4	15.3	11.5
Trade balance [d]	EURm	-160	-238	-442	100	-60	-359	-19	-495	-172	-286	-368	-420	-480	-600
Current account balance [d]	EURm	-407	-199	-489	-408	-317	-275	157	-754	77	-438	-380	-520	-610	-550
Current account balance [d]	% GDP	-4.6	-4.5	-4.3	-4.2	-3.9	-3.5	-2.8	-2.6	-2.2	-1.9	-1.9	-1.8	-1.8	-2.0
Budget deficit (cumulative)	PLNbn	-30.8	-33.8	-41.5	-1.6	-8.8	-12.3	-13.9	-18.3	-18.5	-17.5	-18.5	-17.8	-20.7	-23.3
Budget deficit (cumulative)	% realisation	74.1	81.4	100.0	4.5	25.2	35.2	39.6	52.3	52.9	49.9	52.8	50.8	59.0	66.5
CPI	%YoY	4.5	4.5	4.4	3.7	3.6	3.4	3.0	2.5	1.4	1.3	1.6	1.8	1.5	1.5
PPI	%YoY	7.6	6.7	5.2	4.5	3.2	2.2	0.9	-0.5	0.0	0.0	-0.2	-0.2	-0.5	0.1
Broad money (M3)*	%YoY	10.5	6.4	8.7	9.3	9.4	11.0	10.0	13.2	10.8	10.4	11.1	12.7	8.4	11.9
Deposits*	%YoY	11.5	6.5	8.1	8.4	8.7	10.4	8.7	11.9	9.2	9.4	10.1	11.7	6.4	10.1
Credits*	%YoY	9.7	4.2	2.9	3.5	2.4	4.6	5.3	9.4	7.4	8.8	9.0	9.7	4.0	8.8
USD/PLN	PLN	3.46	3.28	3.09	3.11	3.06	3.04	3.21	3.29	3.34	3.40	3.29	3.20	3.26	3.38
EUR/PLN	PLN	4.32	4.26	4.14	4.08	3.99	4.02	4.16	4.18	4.06	4.10	4.05	3.92	3.92	4.02
Reference rate [a]	%	6.50	6.50	6.50	6.50	6.50	6.00	5.50	5.50	5.00	4.75	4.75	4.50	4.50	4.50
WIBOR 3M	%	6.89	6.81	6.72	6.63	6.54	6.15	5.78	5.48	5.22	4.66	4.67	4.57	4.50	4.65
Lombard rate [a]	%	8.00	8.00	8.00	8.00	8.00	7.50	7.00	7.00	6.50	6.25	6.25	6.00	6.00	6.00
Yield on 52-week T-bills	%	7.00	6.81	6.44	6.28	5.95	5.51	5.36	5.19	5.09	4.30	4.33	4.15	4.19	4.40
Yield on 2-year T-bonds	%	7.04	6.81	6.39	6.24	5.82	5.43	5.39	5.27	5.14	4.50	4.60	4.22	4.42	4.85
Yield on 5-year T-bonds	%	7.03	6.78	6.29	6.31	5.80	5.56	5.50	5.38	5.25	4.70	4.84	4.51	4.85	5.45
Yield on 10-year T-bonds	%	6.75	6.43	6.02	5.98	5.72	5.57	5.49	5.36	5.24	4.72	4.87	4.57	4.90	5.50

Source: CSO, NBP, Finance Ministry, BZ WBK own estimates

[a] at the end of period [b] in corporate sector [c] in nominal terms [d] balance of payments data on transaction basis

* Since January 2005 the NBP changed methodology of monetary statistics (definition of Monetary Financial Institutions has been extended with cooperative savings and credit unions (SKOK)). Before January 2005 the table presents growth rates in old methodology, not fully comparable with recent data.

Quarterly and annual economic indicators

		2003	2004	2005	2006	1Q04	2Q04	3Q04	4Q04	1Q05	2Q05	3Q05	4Q05
GDP	PLNbn	816.1	885.3	935.8	992.8	204.1	216.3	219.2	245.7	218.5	226.1	230.7	260.5
GDP	%YoY	3.8	5.4	3.3	4.3	7.0	6.1	4.9	4.0	2.1	2.8	3.6	4.4
Domestic demand	%YoY	2.6	5.0	1.8	4.0	6.0	5.8	5.2	3.3	1.1	-0.3	1.7	4.4
Private consumption	%YoY	3.1	3.4	2.3	3.6	4.1	4.0	3.6	1.9	1.7	1.5	2.8	3.3
Fixed investments	%YoY	-0.9	5.3	5.5	8.2	3.7	3.9	4.3	7.4	1.0	3.8	6.0	8.0
Industrial production	%YoY	8.4	12.3	3.4	4.8	19.0	16.4	9.2	6.2	0.7	2.3	4.3	6.5
Retail sales (real terms)	%YoY	3.6	7.1	1.2	5.0	13.6	11.3	4.0	1.1	-0.4	-3.2	3.9	4.6
Unemployment rate [a]	%	20.0	19.1	17.7	16.6	20.4	19.4	18.9	19.1	19.3	18.0	17.6	17.7
Gross wages (real terms)	%YoY	2.0	0.8	0.2	1.2	3.8	1.6	-0.5	-1.5	-1.3	0.8	1.0	0.7
Export [b]	%YoY	9.1	22.3	14.0	8.5	17.9	27.7	19.7	23.6	23.1	12.2	13.3	9.0
Import [b]	%YoY	3.3	19.5	12.1	12.3	11.4	29.9	18.0	18.7	17.8	5.7	12.2	13.6
Trade balance [b]	EURm	-5 077	-4 552	-3 860	-7 186	-910	-1 693	-1 115	-834	-316	-690	-1 074	-1 780
Current account balance [b]	EURm	-4 108	-8 401	-4 727	-7 186	-2 245	-2 962	-2 102	-1 092	-1 001	-528	-1 338	-1 860
Current account balance [b]	% GDP	-2.2	-4.3	-2.0	-3.0	-2.6	-3.5	-4.3	-4.3	-3.4	-2.2	-1.8	-2.0
Budget deficit (cumulative) [a]	PLNbn	-37.0	-41.5	-29.0	-30.0	-11.8	-19.9	-29.0	-41.5	-12.3	-18.5	-17.8	-29.0
Budget deficit (cumulative) [a]	% GDP	-4.5	-4.7	-3.1	-3.0	-5.8	-3.7	-4.1	-5.1	-5.6	-2.7	0.3	-4.3
CPI	%YoY	0.8	3.5	2.3	2.0	1.6	3.3	4.5	4.4	3.6	2.3	1.6	1.6
CPI [a]	%YoY	1.7	4.4	1.7	2.1	1.7	4.4	4.4	4.4	3.4	1.4	1.8	1.7
PPI	%YoY	2.6	7.0	0.9	2.1	4.4	8.8	8.3	6.5	3.3	0.1	-0.1	0.4
Broad money (M3)* [a]	%YoY	5.6	8.7	10.0	8.3	5.7	7.2	6.5	8.7	11.0	10.8	12.7	10.0
Deposits* [a]	%YoY	3.7	8.1	8.4	8.5	4.8	6.9	6.6	8.1	10.4	9.2	11.7	8.4
Credits* [a]	%YoY	8.1	2.9	10.0	15.0	6.0	5.7	4.3	2.9	4.6	7.4	9.7	10.0
USD/PLN	PLN	3.89	3.65	3.25	3.31	3.82	3.89	3.62	3.27	3.07	3.28	3.30	3.34
EUR/PLN	PLN	4.40	4.53	4.04	4.08	4.78	4.69	4.43	4.24	4.03	4.13	4.02	4.00
Reference rate [a]	%	5.25	6.50	4.25	4.50	5.25	5.25	6.50	6.50	6.00	5.00	4.50	4.50
WIBOR 3M	%	5.69	6.21	5.30	4.70	5.47	5.87	6.68	6.81	6.44	5.49	4.63	4.62
Lombard rate [a]	%	6.75	8.00	5.75	6.00	6.75	6.75	8.00	8.00	7.50	6.50	6.00	6.00
Yield on 52-week T-bills	%	5.33	6.50	4.93	4.50	5.75	6.24	7.26	6.75	5.91	5.21	4.26	4.33
Yield on 2-year T-bonds	%	5.38	6.89	5.06	4.90	6.28	6.86	7.66	6.75	5.83	5.27	4.44	4.71
Yield on 5-year T-bonds	%	5.61	7.02	5.30	5.45	6.67	7.10	7.59	6.70	5.89	5.38	4.68	5.25
Yield on 10-year T-bonds	%	5.77	6.84	5.29	5.50	6.70	7.00	7.25	6.40	5.76	5.37	4.72	5.30

Source: CSO, NBP, Finance Ministry, BZ WBK own estimates

[a] at the end of period; [b] balance of payments data on transaction basis

* Since January 2005 the NBP changed methodology of monetary statistics. Before January 2005 the table presents growth rates in old methodology, not fully comparable with recent data.

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