

Inflation Report January 2006

National Bank of Poland
Monetary Policy Council

Warsaw, January 2006

The Inflation Report presents the Monetary Policy Council's assessment of the current and future macroeconomic developments influencing inflation. The inflation projection presented in Chapter 4 is based on macroeconomic model ECMOD and has been prepared by a team of NBP economists led by Adam B. Czyżewski, Director of Macroeconomic and Structural Analyses Department. The NBP Management Board has approved the projection to be submitted to the Monetary Policy Council. The inflation projection is one of the inputs to the Monetary Policy Council's decision-making process.

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Summary

In the period August-September 2005, the annual CPI inflation increased to 1.8%, and in the following months it was declining to 0.7% in December 2005, i.e. clearly below the lower tolerance limit for deviations from the inflation target. Throughout 2005 Q3 inflation was higher, while in Q4 it turned out to be consistent with the August *Inflation Report*.

The rise in annual inflation in August and September 2005 was primarily the outcome of the increased growth rate of food and non-alcoholic beverage prices as well as fuel prices. In turn, a decline in the growth rate of these prices was the main factor contributing to the reduction of annual inflation in October-December 2005. Inflation was also reduced by the appreciation of the zloty exchange rate, which lowered prices of imported goods. In the Council's assessment, another factor conducive to the inflation decline was the actual GDP, which continued below the potential output, though its growth in the analysed period was generally consistent with the expectations presented in the previous *Report*. Due to lags in the monetary transmission mechanism, a decline in inflation in the analysed period was also the result of previous monetary decisions, in particular interest rate increases in 2004.

Despite strengthening in the recovery of the Polish economy, in the period under review, all core inflation indices went down. The low 'net inflation' indicated that the demand-driven inflation was limited. Moreover, the recorded growth rate of core inflation measures indicated the so-far limited impact of high fuel prices on the prices of other consumer goods and services.

In August 2005 inflation expectations of individuals reached their lowest value in 2005 (1.3%). They slightly increased in the two subsequent months to reach a level of 1.5% in the period from October to December 2005, i.e. 1 percentage point below the inflation target of the NBP (2.5%). In January 2006, inflation expectations of individuals dropped to the level of 0.9%, i.e. markedly below the target of 2.5%. In the whole of the analysed period, inflation forecasts of bank analysts rose slightly, but also stayed below the NBP's target level.

In August-November 2005 producer prices (PPI) continued to fall in year-on-year terms, while in December they recorded a slight increase. The low level of PPI could be attributed to a moderate growth of domestic demand and a stronger than a year before zloty exchange rate, which offset the impact of high oil prices on producer prices.

Over the period between the MPC meetings in August 2005 and January 2006 the zloty exchange rate appreciated and remained stronger than it had been accounted for in the *August Inflation Report*. The stronger zloty exchange rate had the effect of reducing inflation.

The labour market data indicate that the improvement is larger than expected in the previous *Report*. In 2005 Q3 an acceleration in the number of working persons in the economy was recorded both according to BAEL (Polish Labour Force Survey) (in seasonally adjusted year-on-year and quarter-on-quarters terms) and the GUS data based on corporate reporting. In 2005 Q3 the number of working persons in the economy rose by 2.8% y/y (compared with 1.9% in 2005 Q2). This significant growth in the working persons count was accompanied by a considerable increase in the number of economically active (1.7% y/y). In the second half of 2005, the annual employment growth rate in the enterprise sector was on the rise (reaching 2.5% in December). The unemployment rate was still falling. In December 2005, the rate of unemployment registered by labour offices amounted to 17.6%, i.e. 1.4 percentage point less than a year before.

In 2005 Q3 nominal wages grew slower than in Q2, both in the enterprise sector and in the economy as a whole. Wages in the economy rose by 3.4% y/y in 2005 Q3 in nominal terms (compared with 3.9% in 2005 Q2), and by 2.7% in enterprises (against 3.0% in 2005 Q2). In turn, in 2005 Q4 the growth rate of nominal wages in enterprises accelerated (by 4.8% y/y) and was the highest in 2005.

According to GUS estimates, the year-on-year GDP growth in Poland in 2005 Q3 was higher than in Q2 and consistent with the *August Inflation Report*. Also consistent with the NBP expectations were the growth rates of individual consumption and investments. Net exports - despite a strong appreciation of the zloty - remained the major demand factor of economic growth in 2005 Q3. The contribution of net exports to GDP growth proved significantly larger than expected in the *August Report*. At the same time, however, GUS data pointed to a gradual acceleration in domestic demand, including investments.

According to the GUS estimates, in 2005 Q3 individual consumption grew by 2.7% y/y in real terms, which is significantly faster than in the first two quarters of 2005 and in line with the NBP expectations presented in the *August Inflation Report*. The acceleration in the consumption growth rate was the result of the rise in the growth rate of real disposable income of households. Given the improving sentiment of consumers and the rising growth rate of retail sales, coupled with favourable data on employment and wages in enterprises in 2005 Q4, it can be expected that 2005 Q4 brought a further increase in the annual growth rate of individual consumption.

In line with the NBP expectations, 2005 Q3 saw a continued increase in the growth rate of gross fixed capital formation. In that period, it rose by 5.7% in real year-on-year terms, as compared with 3.8% in Q2 and 1.2% in Q1. In the longer term investments are a key factor in sustaining economic growth. Still, the prospect for a further acceleration in the investment process continued to be uncertain. A very good economic

standing of companies suggested that their financial situation should not be an obstacle to increasing investment outlays. What is more, the conditions of external investment financing were favourable due to relatively low interest rates in Poland and the euro area and an exceptionally good situation in the capital markets. The continuing growth in corporate lending, and especially in foreign credit of enterprises, indicated rising investment activity. On the other hand, the limited growth rate in private consumption and thereupon based assessments of future demand may be conducive to investment slowdown. Moreover, statistical data on the domestic credit market in the second half of 2005 and the findings of survey studies of credit activity of enterprises in 2005 Q4 could rebut the expectations for significant investment acceleration. This could result from fears about further appreciation of the zloty, growing political uncertainty, lack of clarity regarding the future total fiscal burden, the tax system and uncertainty as to higher oil prices. Lack of progress in institutional reforms, on which the investment climate in the country is dependent, has a negative impact on the propensity to invest.

According to the GUS estimates, there was a sizeable build-up in inventories in 2005 Q3, even though it was significantly lower than that observed a year before. As a result, the contribution of inventories to the annual GDP growth rate in 2005 Q3 was strongly negative. According to the NBP estimates, in 2005 Q4 an increase in inventories was slightly lower than in Q3, but the contribution of this category to GDP growth was close to zero due to a similar increase recorded in 2004 Q4.

In light of the GUS preliminary data for October-December 2005, it was estimated that, similarly to 2005 Q3, the 2005 Q4 GDP growth was also in line with the August projection. In the assessment of the NBP, all domestic demand components were rising faster in that period than in 2005 Q3 (in year-on-year terms), with a concurrent decline in the contribution of net exports to GDP growth. Preliminary data on national accounts in 2005 confirm strengthening of favourable growth tendencies in the economy. The data on economic growth in the second half of 2005 indicates that the period of a gradual closing-up of the output gap will be comparable with that anticipated in the *August Report*. However, throughout the horizon of the projection presented in the *Report* the output gap will remain negative, which should be a factor limiting inflation.

In September 2005 the Council published the *Monetary Policy Guidelines for the Year 2006*, in which it maintained its previous understanding of the permanent inflation target set at the level of 2.5% with a symmetrical tolerance range for deviations of +/-1 percentage point. The Council confirmed that the monetary policy would be focused on maintaining inflation as close as possible to the 2.5% target in the mid-term. The Council declared that in 2006 monetary policy would be conducted so as to achieve the target in the horizon of 5 to 7 quarters. However, this period might be shorter or longer depending on the type and strength of shocks affecting the Polish economy. The MPC pointed to the likely favourable changes in the functioning of the labour market, not least an increase in its flexibility, which should be conducive to limiting the impact of shocks on inflation.

In September-December 2005 the Monetary Policy Council kept the NBP's interest rates unchanged. In January 2006 the MPC lowered interest rates by 0.25 percentage point,

and thus at the end of this period the reference rate was at 4.25%, the lombard rate at 5.75%, the deposit rate at 2.75%, and the rediscount rate at 4.50%. Until and including December 2005 the MPC maintained its easing monetary policy bias, thus signalling that interest rate cuts are more probable than interest rate increases. Since January 2006 the Council has ceased announcing monetary policy bias. Instead of making the bias known to the public, the Council will be communicating its assessment of the balance of factors influencing future inflation. This balance is based on the inflation projection, which is an important input into monetary policy decision-process, the assessment of the actual economic developments that may deviate from the scenario presented in the projection, as well as the course of variables and information not directly accounted for in the projection

The NBP inflation projection presented in the *January Inflation Report* was prepared on the basis of data available as of 2 January 2006 and so, among others, it does not account for the GUS estimates of GDP in 2005. The projection indicates that with a 50-percent probability the annual GDP growth should stay in the range of 3.8%-5.1% in 2006, 3.4%-5.2% in 2007 and 3.6%-5.5% in 2008, respectively. The January inflation projection indicates that growth in prices in 2006 will be lower than expected in the August projection. In 2007 inflation will accelerate and at the end of the year should be close to the level from the projection presented in August 2005. Assuming unchanged interest rates, there is a 50-percent probability that inflation will stay within the range of 0.5%-2.3% in 2006 Q4 (compared to 1.0%-3.1% in the *August Report*) 1.1%-3.6% in 2007 Q4 (compared to 1.2%-4.1%) and 0.8%-3.9% in 2008 Q4.

It has to be emphasised that the inflation projection and the distribution of probabilities presented in the *Report* do not account for all sources of uncertainty related to the scale of future rise in employment, the impact of globalisation effects on price processes, the economic policy of the government in the years to come and the path of the exchange rate. Moreover, the projection does not allow for the latest developments which may have great bearing on the forecast growth of prices. On the one hand, oil prices in January 2006 were higher than accounted for in the projection. On the other, the zloty exchange rate in January was stronger and the data on national accounts indicate that the GDP growth in 2005 Q4 and the whole of 2005 was slightly lower, while the rise in investments was significantly higher, than assumed in the January projection.

The Council maintains its conviction that implementing an economic strategy focused on creating conditions that could ensure the introduction of the euro at the earliest possible date would be most favourable for Poland and would contribute to higher long-term economic growth.

Inflationary Processes

1.1 Inflation indicators

In August and September 2005¹ inflation (CPI) reached 1.6% *y/y* and 1.8% *y/y* respectively, while in the subsequent months the annual price growth rate declined to 1.0% in November and 0.7% in December 2005 *y/y*² (Figure 1.1, left-hand panel), i.e. stood clearly below the lower tolerance limit for deviations from the inflation target. The rise in the annual inflation in August and September 2005 was mainly caused by an increase in the growth rate of prices of food and non-alcoholic beverages and fuels. In turn, the fall in the growth rate of prices of those goods was the main factor behind a fall in the annual inflation in the period October-December 2005. The growth rate of prices of consumer goods and services was also driven down by the zloty appreciation and the actual GDP remaining below the potential output, although its growth in the analysed period was in line with the expectations presented in the previous *Report*. Due to lags in the monetary transmission mechanism, the decrease in inflation in the analysed period was also the result of previous monetary decisions, in particular interest rate increases in 2004. In the whole of 2005 Q3 inflation was higher, while in 2005 Q4 it was in line with the expectations presented in the *August Report*.

The annual growth rate in prices of food and non-alcoholic beverages in the period August-October 2005 ranged between 0.5-1.0% while November and December 2005 saw a fall in food prices (by 0.5% *y/y* and 1.3% *y/y* respectively). The scale of the annual fall in food prices in December 2005 was the highest since 2003. The decrease in the growth rate of food prices in the analysed period was driven primarily by a drop in meat prices, caused chiefly by the growing supply of pork. Downward trends in prices of pork meat contributed also to the reduction of poultry prices additionally reinforced by consumer fears of the spread of bird flue. Moreover, a drop in the growth rate of food prices was also caused by the suspension of the imports of Polish food by Russia

¹The time horizon of the analysis presented in the *Report* is conditioned by the availability of macro-economic data. In turn, periodisation of the analysis (breakdown into sub-periods) is conditioned by the developments of particular variables.

²The following abbreviations will be used throughout the *Report*:
y/y - analysed period compared to the corresponding period of the previous year
q/q - quarter compared to the previous quarter
m/m - month compared to the previous month.

Inflationary Processes

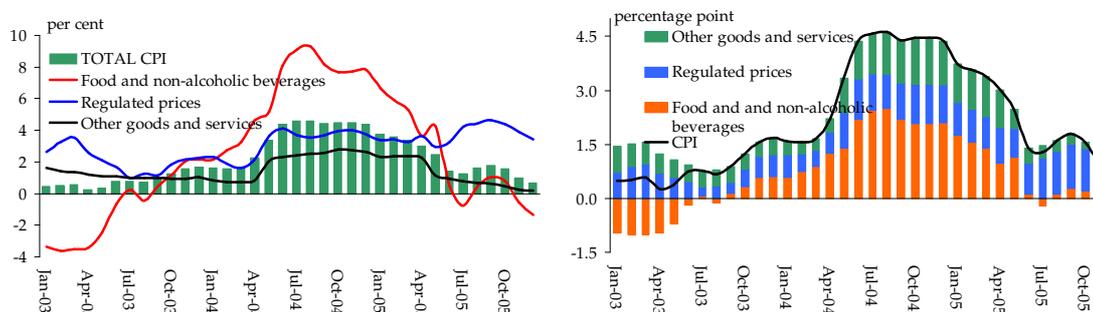


Figure 1.1: Consumer price index CPI. Left panel: CPI and main categories of prices. Right panel: CPI breakdown.

Source: GUS data, NBP calculations.

(since November 2005). Both high crop harvest from 2005 – supplemented with large stocks from the 2004 harvest – and a high livestock production should be conducive to maintaining a low growth rate of food prices at least until mid-2006.

In August and September 2005, the growth rate of regulated prices stood at 4.4 and 4.7% *y/y*, respectively. In the subsequent months, the growth rate of those prices fell to reach 3.4% *y/y* in December 2005 (Figure 1.1, left-hand panel). The main driving force behind the increase of regulated prices in the analysed period taken as a whole was the increase in gas prices (in total by 6.5%). In the period August-September 2005 the higher growth rate of regulated prices was driven also by the increase in fuel prices (by 5.8% in total). It resulted from higher import prices of fuels³ and an increase in the distribution margin in the domestic market, while the reduction of the excise tax on petrol in September 2005 (of 16%) had an effect of reducing fuel prices. In the period October-December 2005 fuel prices on the domestic market started to fall (they fell by 7.6% in total), thus contributing to a lower growth rate of regulated prices. The decrease in fuel prices recorded in those months was mainly the effect of the import price reduction. Additionally, December 2005 brought a reduction in the distribution margin in the domestic market. It may be expected that the beginning of 2006 will see an accelerated growth rate of regulated prices resulting mainly from the introduction of new tariffs for electricity and gas (approved by the Energy Regulatory Office in December 2005) and a higher excise tax on tobacco products.

Despite the increasing growth rate of retail sales and consumer credit, inflation in the group of other consumer goods and services⁴ fell in the analysed period and reached 0.2% *y/y* in December 2005 (Figure 1.1, left-hand panel). The fall in the annual price growth rate in this group was driven by a decline (in annual terms) in non-food product

³Import price of fuels is the product of the world petrol price (which, in turn, depends on crude oil prices) and the zloty exchange rate against the USD. Import price is used to calculate the import parity, which constitutes the basis for determining fuel prices in the domestic market.

⁴The group of other consumer goods and services includes goods and services whose prices are affected mainly by market mechanisms (excluding food), which means that it does not include those goods whose prices are regulated.

prices (intensified since May 2005). In December 2005, the prices of those products went down by 1.2% y/y. In August-December 2005, the price fall (in annual terms) was recorded in most categories in the group of non-food products⁵. The most pronounced fall in prices⁶ was observed in the following categories: clothes, footwear, telecommunications equipment, audio and video equipment, photographic and IT equipment, household appliances, means of transport (including passenger cars). The decrease in the group of non-food prices in the analysed period was influenced by the zloty strengthening (y/y) through the reduction of prices of imported goods. The drop in prices of these products was also driven by a growing share among their suppliers taken by China and other Asian developing countries with low production costs⁷. The lower inflation rate in the group of other consumer goods and services was also driven by a lower growth rate of prices of services, which decreased from 2.8% y/y in August 2005 to 2.2% y/y in December 2005. The main factor behind the decrease in the annual growth rate of those prices was a strong reduction of prices of Internet services in November 2005.

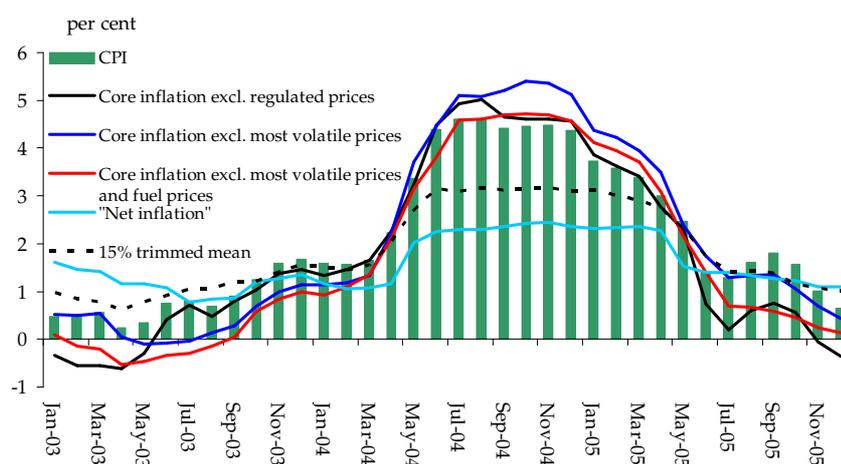


Figure 1.2: CPI and core inflation indices (y/y changes, per cent)

Source: GUS Data, NBP calculations.

In the period August-December 2005 all core inflation measures followed a downward trend (Figure 1.2, Figure 1.1). In November and December 2005 prices of consumer goods and services (with the exception of regulated prices) fell (in annual terms) – mainly as a result of the decrease in food prices. On the other hand, 'net' inflation⁸,

⁵These categories accounted in total for 59% of the group of non-food prices.

⁶In certain categories, prices have been falling since the beginning of 2002.

⁷China's exports in the years 2001-2005 increased threefold. At present, China is the fourth largest world economy in terms of trade (after the United States, Japan and Germany). According to the majority of forecasts (e.g. of the IMF) the two-digit growth rate of China's exports will continue, which means that China's share in the global trade will increase. In consequence, the force exerted by the above phenomena on inflation may grow in the future.

⁸'Net' inflation excludes food and fuel prices.

Inflationary Processes

	y/y change in per cent											
	2005											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CPI	3.7	3.6	3.4	3.0	2.5	1.4	1.3	1.6	1.8	1.6	1.0	0.7
Core inflation indices excluding:												
Regulated prices	3.9	3.6	3.4	2.8	2.3	0.7	0.2	0.6	0.8	0.6	-0.1	-0.4
Most volatile prices	4.4	4.2	4.0	3.5	2.4	1.7	1.3	1.3	1.4	1.1	0.7	0.4
Most volatile prices and fuel prices	4.1	3.9	3.7	3.1	2.2	1.4	0.7	0.7	0.6	0.5	0.2	0.1
Food and fuel prices ("net" inflation)	2.3	2.3	2.4	2.3	1.5	1.4	1.4	1.3	1.3	1.2	1.1	1.1
15% trimmed mean	3.1	3.0	2.9	2.7	2.3	1.8	1.4	1.4	1.4	1.1	1.0	1.0
	m/m change in per cent											
	2005											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CPI	0.1	-0.1	0.1	0.4	0.3	-0.2	-0.2	-0.1	0.4	0.4	-0.2	-0.2
Core inflation indices excluding:												
Regulated prices	0.0	-0.2	0.1	0.2	0.3	-0.4	-0.6	-0.3	0.2	0.4	-0.2	0.0
Most volatile prices	-0.2	-0.1	-0.1	0.2	-0.1	-0.7	0.3	0.2	0.3	0.4	0.1	0.1
Most volatile prices and fuel prices	0.0	-0.2	-0.2	0.0	-0.2	-0.8	0.2	0.1	0.1	0.5	0.2	0.4
Food and fuel prices ("net" inflation)	0.4	0.0	0.0	0.1	0.1	0.1	0.2	0.0	0.1	0.2	0.0	0.0
15% trimmed mean	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0
Core inflation indices – seasonally adjusted (TRAMO/SEATS):												
CPI	-0.1	0.1	0.1	0.1	0.1	-0.1	0.2	0.3	0.1	0.0	-0.2	-0.1
"Net" inflation	0.2	0.1	0.1	0.2	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1

Table 1.1: CPI and core inflation indices in 2004 and 2005

Source: GUS data, NBP calculations.

which from June 2004 stood at the level of 2.3-2.4%, after the disappearance of the statistical base effect in May 2005 actually decreased significantly (by 0.8 percentage point) and has been falling systematically (down to 1.1% y/y in December 2005). The continuing low level of the monthly 'net inflation' (seasonally adjusted) may indicate a limited demand-driven inflationary pressure. Moreover, the observed dynamics of core inflation measures indicates a very limited, so far, effect of high fuel prices on prices of other consumer goods and services.

1.2 Inflation expectations

Inflation expectations of individuals

In August 2005 inflation expectations of individuals reached the lowest value in 2005 (1.3%). They slightly increased in the two subsequent months to stabilise at a level of 1.5% in the period from October to December 2005, i.e. 1 percentage point lower than the inflation target of the NBP (2.5%). In January 2006 inflation expectations of this group of entities decreased to the level of 0.9% (Figure 1.3, left-hand panel).

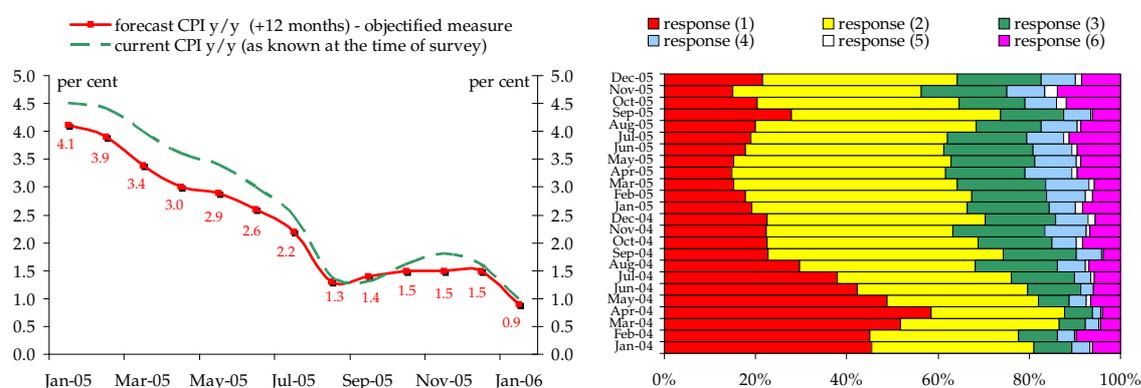


Figure 1.3: Inflation expectations of individuals. Left panel: Inflation expected in 12 months. Right panel: Responses to the question asked by Ipsos.

Source: GUS data, NBP estimates on the basis of Ipsos data.

Ipsos survey question: "Considering the present situation, do you think that prices during the next 12 months: (1) will grow faster than they do now; (2) will rise at the same rate; (3) will grow at a slower rate; (4) will stay the same; (5) will decrease; (6) it is hard to say?"

The rise in inflation expectations in the period from September to December 2005 (of 0.2 percentage point) was fully the result of the increased current inflation rate, which serves as a point of reference for respondents in formulating their estimates of future inflation. A fall in inflation expectations in January (of 0.6 percentage point) was also brought about by the current inflation which decreased in January to 1.0%. Although the second factor responsible for the quantification of the forecast inflation index, i.e. the structure of responses to the survey questions, exhibited rather strong fluctuations in the analysed period (Figure 1.3, left-hand panel), the effect of those fluctuations – given their multidirectional nature, was balanced⁹.

⁹In order to explain the shifts in the structure of responses to the survey questions concerning inflation expectations (mainly, the growth in the number of respondents expecting the prices to continue to rise, observed in September 2005), in October 2005 the regular consumer surveys conducted by Ipsos and GfK Polonia, contained – on a one-off basis – additional questions aimed to detail the reasons behind a possible rise in prices as perceived by respondents. The most common reasons behind a possible rise in prices in the nearest future, as cited by respondents, included higher fuel, gas and energy prices. Other important factors listed by respondents included alignment of the level of prices between Poland and EU countries and the situation on the political arena (the survey was conducted at the beginning of October, i.e. after

Inflation forecasts of bank analysts

In the period from August 2005 to January 2006, bank analysts revised upwards their expectations for annual inflation in 11 months from 1.8% in August 2005 to 2.0% in January 2006. Thus, the expected inflation continued to run below the NBP’s inflation target (2.5%) (Figure 1.4, left-hand panel). The distribution of forecasts in this time horizon was slightly shifted towards a higher price growth rate (Figure 1.4, right-hand panel).

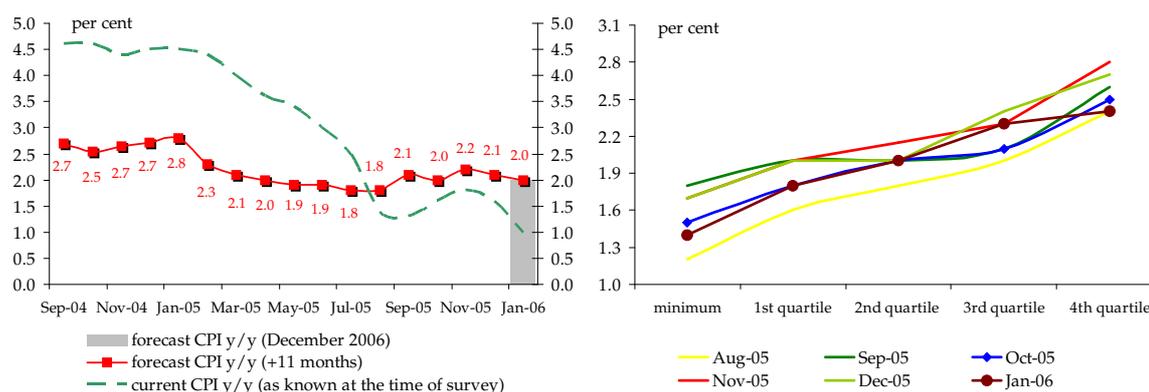


Figure 1.4: Inflation forecasts of bank analysts. Left panel: Inflation forecasted in 11 months and inflation forecast for December 2006. Right panel: Distribution of bank analysts’ inflation forecasts of the annual inflation rate in 11 months.

Source: GUS data, Reuters data, NBP calculations.

1.3 Inflation and the Maastricht criterion

In a country intending to adopt the euro, the average annual inflation as measured by the harmonised index of consumer prices HICP¹⁰ cannot exceed the reference value determined as the average inflation in the three EU countries with the lowest average annual price growth rate plus 1.5 percentage point (see box). As a result of the inflation growth in Poland following its accession to the EU, Poland did not comply with this criterion in the period from August 2004 to October 2005 (Figure 1.5). However, in line with the expectations presented in the previous *Inflation Report*, in the second half of 2005 Poland saw a continued fall of the average annual value of the HICP. As a result, since November 2005 Poland has been complying with the inflation criterion again.

the parliamentary elections).

¹⁰The key difference between CPI and HICP is that the harmonised index additionally includes expenses incurred by foreigners buying goods and services in Poland, estimated expenses incurred by individuals staying at the so-called institutional households (for instance, hospitals, prisons, rest homes) as well as expenditure on lotteries. Despite the fact that HICP and CPI baskets have a different weight structure, in practice the differences between those two indices are insignificant.

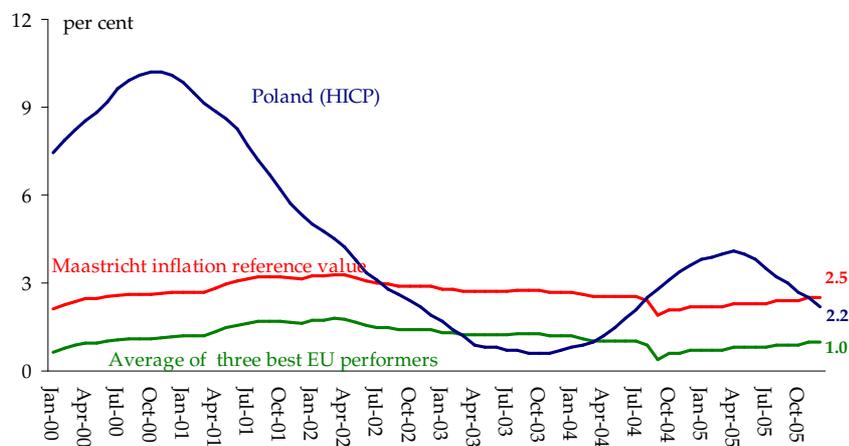


Figure 1.5: Inflation in Poland (HICP annual average) and the Maastricht criterion (y/y changes, per cent)
Source: Eurostat data, NBP calculations.

Maastricht reference value

The assessment whether a given country may be included into the group of countries with the most stable prices or not is made by the European Commission and the European Central Bank (ECB) on a case-by-case basis. According to the position taken by the Commission, presented in the *2004 Convergence Report*, countries which have recorded deflation are excluded from the reference group. It remains unknown, however, whether countries with very low inflation would be included by the Commission into the group with the most stable prices. In turn, the ECB does not condition the exclusion of a given country from the reference group on whether it has experienced deflation but rather on whether its average annual inflation differs significantly from the price growth rate recorded in other countries. As a result, it is unclear whether Finland, where the average annual price growth rate in February and March 2005 stood at the level of 0% and 0.1% respectively, would be included by the European Commission and the ECB into the group of reference countries (Finland was included into the group of reference countries with inflation at the level of 0.4% in August 2004). Figure 1.5 presents estimates of the reference value on the conservative assumption that countries with a zero or very low average annual inflation rate could be included into the group of countries with the most stable prices. For more information about the Maastricht criteria see: *Report on the Costs and Benefits of Poland's Adoption of the Euro*, NBP, 2004.

Determinants of inflation

After the period of slowdown connected with, among other things, the disappearance of the effect of the so-called pre-accession boom, the Polish economy has entered the recovery stage again. The main driving force behind economic growth are net exports. Yet, net exports are accompanied, to a growing extent, with a gradual improvement in consumption and investment demand. From the point of view of sustainability of upward trends, an important role is played by the prospects for the future path of investment outlays. Investments are expected to become gradually the major source of economic growth. The revival in investment demand may also be crucial in sustaining the observed recovery in the labour market, which should favour further acceleration of consumption demand growth.

2.1 Demand

According to the GUS data, in 2005 Q3 GDP increased by 3.7% y/y in real terms, as compared to a rise of 2.8% y/y in Q2 and 2.1% y/y in Q1. This growth acceleration in year-on-year terms was partly caused by the disappearance of the statistical base effect, which had decreased the annual GDP growth rate in 2005 Q1 and Q2. However, the rise in the GDP growth rate also occurred in quarterly terms (seasonally adjusted)¹¹. A gradual acceleration in individual consumption and gross fixed capital formation coupled with a lower (than in the preceding quarter) negative contribution of inventories in the annual GDP growth significantly increased the growth rate of domestic demand. Net exports remained the main demand factor of economic growth, though their contribution to the annual GDP growth was smaller than in the previous quarter and amounted to 2 percentage points (in comparison to 3.4 percentage points in 2005 Q2).

On the basis of the GUS preliminary data for October and November it can be assessed that in 2005 Q4 the annual GDP growth rate continued to rise and, for the third straight quarter, a considerable growth was recorded in quarter-on-quarter terms, as well. According to the NBP estimates, in 2005 Q4 the scale of increase in individual consumption and gross fixed capital formation was further accelerated. As a result of

¹¹Data accounted for in the *Report* are seasonally adjusted national accounts data expressed in average annual prices of the previous year.

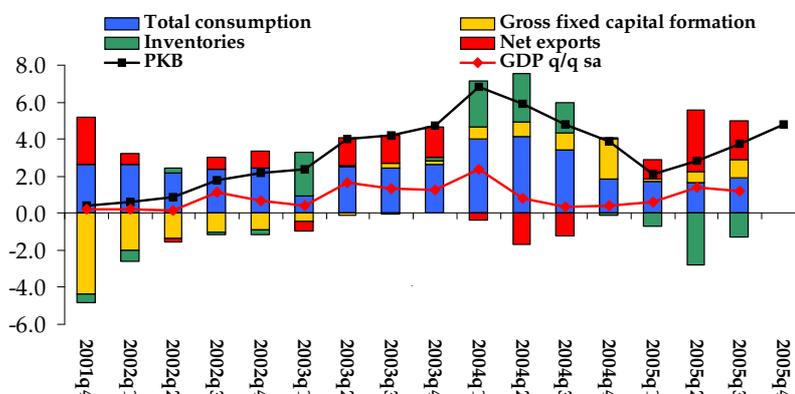


Figure 2.6: Contribution of aggregate demand components to GDP growth
Source: GUS data, 2005 Q4 – NBP estimates.

Seasonally adjusted (per cent)	03q2	03q3	03q4	04q1	04q2	04q3	04q4	05q1	05q2	05q3
GDP	1.7	1.4	1.2	2.4	0.8	0.3	0.4	0.6	1.4	1.2
Domestic demand	0.8	1.4	1.4	2.3	1.3	0.0	0.3	0.0	0.0	0.8
Total consumption	1.1	1.0	1.3	1.1	1.0	0.4	0.3	0.6	0.6	0.7
Private consumption	1.3	0.8	1.5	1.2	0.9	0.2	0.2	0.5	0.7	0.9
Gross capital formation	-1.5	3.9	3.3	9.6	2.5	-2.2	-0.5	-2.4	-2.3	1.7
Gross fixed capital formation	1.1	1.3	0.0	4.0	0.4	1.0	2.0	-0.1	1.9	1.5

Table 2.2: GDP and aggregate demand components growth rates (q/q, per cent, seasonally adjusted)
Source: NBP calculations on the basis of GUS data.

the subsiding base effect, related to a very high increase in inventories in the first three quarters of 2004, it can be estimated that 2005 Q4 marked a significant rise in the annual growth rate of capital formation and, consequently, also domestic demand. In the NBP’s assessment, the contribution of net exports to the annual GDP growth rate remained positive, though lower than in 2005 Q3. GDP growth in 2005 Q3 and the NBP-estimated GDP growth rate in 2005 Q4 are both consistent with the expectations presented in the *August Inflation Report*.

2.1.1 Consumption demand

According to the GUS estimates, in 2005 Q3 individual consumption grew by 2.7% *y/y* in real terms, which is significantly faster than in the first two quarters of 2005 and consistent with the NBP expectations presented in the *August Inflation Report*. The acceleration in the consumption growth rate was caused by the increased growth rate of real disposable income due to a drop in inflation recorded in that period. Moreover, the individual consumption growth rate was accelerated by a dynamic climb in consumer loans to households (see Chapter 2.5.3 *Credit and money*).

As a result of a gradual employment growth coupled with a higher than in 2005 Q2 rise in real wages, 2005 Q3 brought a further stepping up in the annual growth rate of household income from work. A more pronounced increase in relation to the previous quarter was also observed in income from property, which was associated, among other things, with sizeably larger dividend payments to individual shareholders than those made in 2004. Also slightly faster than in the preceding quarter was the real growth in the gross operational surplus. Additional payments for old-age and disability pensioners with low income¹² resulted in a slight year-on-year real growth in income from pensions. The rise in income may have been also supported by funds transferred to farmers under the Common Agricultural Policy (payment of direct subsidies started not earlier than 2004 Q4). According to the NBP estimates, in 2005 Q3, similarly to 2005 Q2, the growth rate of gross disposable income of households outstripped the growth rate of individual consumption.

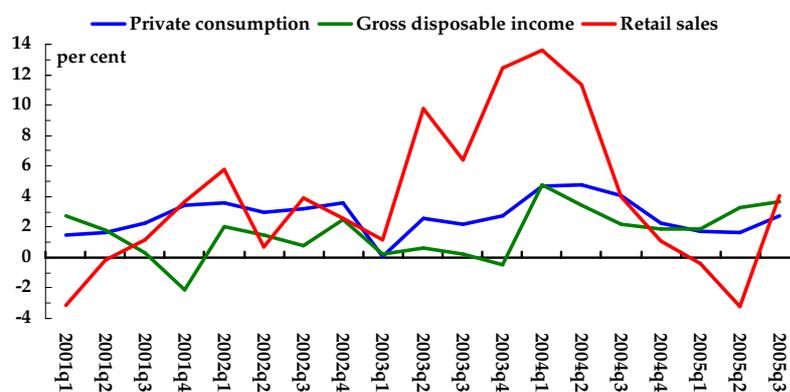


Figure 2.7: Growth of private consumption, gross disposable income and retail sales (y/y, per cent, constant prices)

Source: GUS data.

At the same time, in 2005 Q3 the annual growth rate of public consumption was lower than those in the first two quarters of 2005 (a real growth of 1.1% against 2.8% in Q2 and 3.2% in Q1).

The GUS business tendency surveys suggest that, in comparison to 2005 Q3, Q4 saw an improvement in households' assessment of both their current and future financial standing. The improvement is visible in households' assessments of current purchases, while their assessment of purchasing possibilities in the next 12 months remains unchanged. The surveyed households displayed increased interest in raising their expenditure on flat or house standard improvement, which was probably related to their efforts to take advantage of the renovation tax relief expiring at the end of 2005.

Data from the enterprise sector for 2005 Q4 indicate that the rising trends in employment and wages have accelerated as compared to Q3. Given the improving consumer

¹²These payments resulted from the *Act on extra payment for some old-age and disability pensioners and persons receiving pre-pension benefit or allowance*.

sentiment and the growing rate of retail sales, it can be expected that 2005 Q4 brought further rise in the annual growth rate of individual consumption. Similarly, it may be assessed that in 2005 Q4 the rise in public consumption was higher than that recorded in 2005 Q3.

2.1.2 Government demand

According to preliminary data of the Ministry of Finance, in 2005 the central budget deficit amounted to PLN 28.6 billion (3% of GDP against 4.5% of GDP in 2004) and was the lowest in the past four years. Undoubtedly, it was driven by a good standing of the central budget in the second half of 2005. In this period, the central budget deficit reached PLN 10.3 billion. In the second half of 2005, the high growth rate of the budget revenue was continued (growth of 14.2% y/y, in the whole of 2005 – growth of 15% y/y), which was related to high revenues from income taxes. Also, Value Added Tax revenues were considerably higher than in the previous year. Their high annual growth was mainly the effect of one-off factors experienced in 2004¹³. The driving force behind the increase in central budget revenues was high income from dividends and profit distribution of state-owned enterprises and companies of the State Treasury which resulted from exceptionally good results of those enterprises in 2004. Also revenues of state budget entities were higher than a year before; it concerned mainly domestic debt servicing revenues¹⁴.

At the same time, in the second half of 2005 the central budget expenditure edged up slightly in annual terms (by 0.2%). This resulted, among other things, from a relatively low level of subsidies paid to social security funds and property expenditure and a lower than a year before EU membership fee. In the whole of 2005, the central budget expenditure was 5.4% higher than in 2004.

In the NBP's assessment, other government sector entities (mainly local governments and major social contribution funds) recorded good revenues in the second half of 2005. Yet, changes in the financial standing of those entities differed in this period. The Social Security Fund and Pension Fund, despite good revenues from insurance contributions saw certain worsening in their financial standing due to the fact that they had consumed the greater part of the state budget subsidy envisaged for the whole 2005 in the first half of the year. The Social Security Fund supplemented the shortage of funds with bank loans. In turn, local government accumulated a major part of their revenues in the first half of 2005 which enabled them to increase expenditure dynamically at the end of 2005. This was mainly expenditure associated with investment. Like in the previous

¹³Relatively low VAT revenues in 2004 resulted from changes in the payment of this tax on intra-EU imports introduced with Poland's accession to the EU and changes in the way of accounting VAT returns for December 2004.

¹⁴Revenues from dividends and profit distribution after 11 months of 2005 amounted to PLN 2.7 billion, i.e. were by 80.8% higher than a year before. The revenues of state budget entities until November 2005 amounted to PLN 9.5 billion, marking a growth of 34.3% y/y.

years, this part of the government sector recorded a high deficit in the second half of 2005¹⁵.

In 2005 as a whole, both the central budget and local governments together with social contribution funds recorded a high level of revenues, which was a decisive factor behind lowering of the general government deficit as compared with 2004. Also the expenditure on co-financing EU funds most probably remained at a low level due to a still low EU-fund absorption capacity. Moreover, 2005 brought a moderate increase in social benefit spending, resulting from the lack of indexation of those benefits in 2005 and a drop in the number of people entitled to receive work-disability pensions. As a result of the above factors, the cash deficit of the general government sector in 2005 – according to the NBP's estimates – amounted to 3.3% of GDP, and thus was considerably lower than expected (4.5% of GDP) and also significantly lower than recorded in the preceding year (4.6% of GDP).

The 2006 Budget Bill assumes a widening of the general government deficit to the level of 3.6% of GDP. However, there is a risk that the general government situation could worsen in 2006 as a result of a lower level of budget revenues than the one assumed in the Budget Bill. The prospects for public finance are negatively affected by certain bills increasing public spending permanently, passed by the previous and current Parliament. This will significantly hinder the indispensable reduction of the public finance deficit and curbing of the public debt growth. The implementation of fiscal reforms is necessary to meet the convergence criteria and accelerate the long-term economic growth.

2.1.3 Investment demand

According to the GUS estimates, 2005 Q3 saw a continued increase in the growth rate of gross fixed capital formation which rose in this period by 5.7% y/y in real terms as compared with 3.8% in Q2 and 1.2% in Q1. This growth was consistent with the NBP expectations from the August *Inflation Report*.

In the non-financial enterprise sector (enterprises employing more than 49 people) the annual growth rate of gross fixed capital formation amounted to 7.4% y/y, in real terms, in the first three quarters of 2005 as compared to 4.6% in the first half of 2005. In turn, the nominal calculated value of started investments rose by 3.9% y/y in the first three quarters of 2005 (against 4.5% y/y in the first half of 2005).

According to the data of the Ministry of Finance, 2005 Q3 brought a decline in the investment activity of the general government sector. In this period, state budget entities spent 25% less, in nominal terms, than a year before, while the local governments spent 11% more. 2005 Q4 probably saw certain improvement in the investment activity at state budget entities.

¹⁵In 2005, local governments increased their debt in the form of municipal bonds by 10%. Most bond issues, both in 2004 and 2005, took place in the last quarter of the year. Funds obtained in this way are allocated for investment and are mainly associated with road construction and modernisation.

The recovery in housing construction has been gaining momentum. The number of flats for which construction permits were issued grew in July-November 2005 by 12.4% y/y (against 7.9% y/y in the first half of 2005); the number of completed dwellings in the whole of 2005 rose by 5.8% y/y compared to -4.5% in the first half of 2005; in the first eleven months of 2005 the volume of housing loans taken out by households increased by PLN 12.7 billion (35.5% y/y), in nominal terms.

Since May 2005 the growth rate of imports of investment goods has remained at a relatively high level. In 2005 Q3 the value of imports (excluding means of transport) rose by 15.5% y/y (in the euro) against 10.1% in 2005 Q2 and 1.4% in 2005 Q1. In October-November 2005 the rise in imports of those goods accelerated to 30% y/y (see Chapter 2.1.4 *External demand and current account of the balance of payments*).

The findings of the NBP business tendency surveys in 2006 Q1 signal further improvement in investment conditions. The intention to undertake new investments in 2006 was declared – similarly to last year – by half of the enterprises surveyed by the NBP, 70% of which planning to commence investments in the first half of 2006. Moreover, enterprises assess the possibility of continuing already started investments more optimistically. The rise in investment activity of enterprises is also heralded by the continual growth in corporate loans mainly foreign ones (for more details see Chapter 2.5.3 *Credit and money*)¹⁶. The investment growth should be additionally supported by the very good financial situation of enterprises.

In the course of the coming quarters, investment in enterprises may also be stimulated by the inflow of EU structural funds, but only provided that the capacity for their absorption improves. Another positive stimulus for investments is offered by the continuously good condition in the construction sector and, in particular, the extremely rapid output growth in construction site development companies. Increased investment outlays can also be expected in view of a very high and still growing level of production capacity utilisation in enterprises, which is the effect of economic recovery (Figure 2.8).

On the other hand, statistical data on the domestic credit market and findings of the surveys concerning corporate borrowing indicate a heightened uncertainty about the scale of the expected investment revival¹⁷. Moreover, among the uncertainty factors affecting investment growth, a major role will be played by the effectiveness of the co-financing system of investment projects from EU funds. The risk factors that may negatively affect the 2006 investment activity include the uncertainty as to the direction of the economic policy pursued by the government and the political situation in Poland. There still persists uncertainty about the impact of volatile prices of fuel and other commodities on investment activity.

¹⁶Currently, information on foreign debt of enterprises covers the data until 2005 Q3.

¹⁷see: chapter 2.5.3. *Credit and money*.

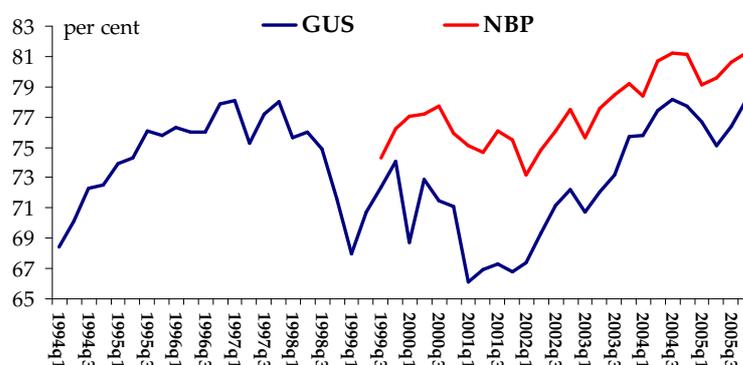


Figure 2.8: Production capacity utilisation in industry (GUS) and in the corporate sector (NBP) (per cent). The difference in production capacity utilisation obtained from the GUS business survey and from the NBP business survey is due to the fact that the two surveys are based on different enterprise samples. The GUS sample includes ca. 2500 enterprises and covers only three sections of industry. The NBP sample, in turn, includes ca. 770 enterprises (December 2005) from the whole corporate sector. The difference may also reflect the over-representation of big enterprises in the NBP sample, while the GUS sample is representative with respect to enterprise size.

Source: GUS data, NBP business survey.

Inventories

According to GUS estimates, there was a sizeable build-up in inventories in 2005 Q3, even though it was significantly lower than that observed a year before. As a result, the contribution of inventories to the annual growth rate of GDP in 2005 Q3 was strongly negative. According to the NBP estimates, in 2005 Q4 the growth in inventories was slightly lower than in Q3, but the contribution of this category to GDP growth was close to zero due to a similar increase recorded one year before.

2.1.4 External demand and current account of the balance of payments

According to the NBP data, the period July–November 2005 saw further improvement in the current account balance as compared with the corresponding period of the previous year¹⁸, although at a considerably lower rate than in the first half of 2005 (in the period January–June 2005 the current account deficit fell by EUR 3.7 billion, and in the period July–November 2005 by EUR 0.8 billion.). The narrowing of the deficit in annual terms was driven by changes in all components of the balance of payments, apart from the balance of transfers which had the opposite effect (Figure 2.9, left-hand panel). This was mainly the result of an improvement recorded again in the trade balance in goods. The continuing higher growth rate of exports than imports not only decreased the external imbalance¹⁹, but was also an important demand factor behind economic

¹⁸September 2005 saw a revision in the current account data presented in the previous *Reports* – see: Box ‘Data revision of the balance of payments’.

¹⁹In January–September 2005, the current account deficit in relation to GDP stood at 1.4%, and in the corresponding period of 2004 – at 5.1%.

growth. The continued improvement in the current account balance may favour the zloty appreciation and, as a result, drive inflation down.

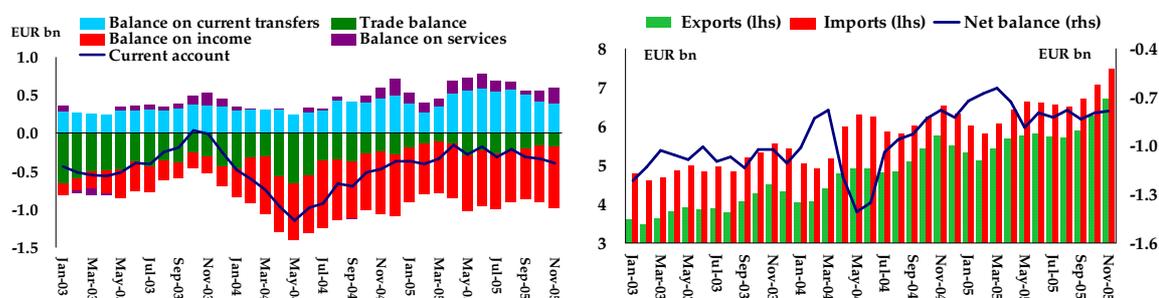


Figure 2.9: Polish foreign trade (three-month moving average). Left-hand panel: Current account balance. Right-hand panel: exports and imports of goods.

Source: NBP data – left-hand panel, GUS data – right-hand panel.

Data revision of the balance of payments

In September 2005, the NBP revised its balance of payments data for 2004 and 2005 Q1. The revision of the balance of payments data was associated with the information on the value of reinvested profits obtained from Polish direct investment enterprises. In accordance with the principles of recording transactions in the balance of payments, incomes generated by direct investors (including dividends and interest on liabilities and reinvested earnings) are recorded in the current account as follows: incomes on Polish direct investments abroad are recorded on the credit side and incomes on foreign direct investments in Poland are recorded on the debit side. In 2004 reinvested profits generated by foreign investors were very high due to good financial results and had an effect – on the one hand – of worsening the current account balance, and – on the other hand (in accordance with the double-entry accounting principle in the balance of payments) – of increasing the value of capital inflows from foreign direct investments in Poland on the financial account. Due to the above revision, the data presented in the Table 2.4 differ considerably from the data presented in the previous *Report*. This concerns, in particular, the 2004 current account deficit, whose value was estimated at EUR 3.0 billion (i.e. 1.5% of GDP) before the revision, and at EUR 8.4 billion (i.e. 4.1% of GDP) after the revision. It should be noted, however, that the value of capital inflows in the form of foreign direct investment to Poland increased simultaneously and at the same scale in 2004. Thus, taken as a whole, the degree of the external imbalance and the contribution of net exports to GDP in 2004 – in the economic sense – are close to those before the revision.

According to GUS preliminary data, the value of exports in the period July–November 2005 increased by 16.5% y/y in EUR (as compared with an increase of 20.8% y/y in the first half of 2005) – Figure 2.9, right-hand panel). The data on the geographical structure of foreign trade indicates that the increase in the value of Polish exports

resulted mainly from increased sales to euro area countries and the new EU member states, while the slowdown in export growth was driven by a lower growth rate of sales to non-EU countries.

The acceleration of economic growth in the euro area in 2005 Q3 (to 1.6% y/y from 1.2% y/y in the first half of 2005) was accompanied by a revival of import demand in these countries. Imports of the euro area increased in this period by 14.1% y/y continuing the upward trend started in 2005 Q2. The imports growth rate in the euro area (as compared with the first half of 2005 when the value of imports increased by 9.8%) was accelerated by both higher domestic demand (mainly investment demand) and continued growth of exports in the euro area²⁰. According to the Eurostat data, in the period July-September 2005 the value of euro area imports from Poland rose by 12.6% y/y, compared to a slight growth of 0.5% y/y recorded in the first half of 2005. A relatively high demand in the new EU member states (economic growth in those countries weighed by the structure of the Polish exports stood at 5.9% in 2005 Q3) was also reflected in the accelerated growth of Polish exports to those countries.

The accelerated growth in the value of Polish imports (from 10.9% y/y in the first half of 2005 to 13.6% y/y in the period July-November 2005) was mainly driven by higher fuel prices²¹ and the revival in investment demand²². As a result of crude oil hikes, the highest growth rate among major groups of goods continued to be observed in imports of supply goods. However, a drop in the imports growth rate was observed in other goods in this group (the most pronounced drop was observed in the case of parts for machines and means of transport, from 13.1% y/y in the first half of 2005 down to 6.3% y/y in the period July-November 2005) which is likely to slow down the growth rate of exports of finished goods in the coming months.

As compared with the first half of 2005, an increase was recorded in the imports of investment goods. In October and November 2005, the average growth of imports in this group amounted to 30% y/y. This was the effect of increased supplies of machinery and industrial equipment (primarily for the paper industry), agricultural machinery (as a result of the inflow of transfers within the Common Agricultural Policy) and IT and telecommunications products – which was associated with a revival in this industry on a global scale²³ (which was accompanied by the rising share of China and other Asian developing countries among suppliers of those goods and the reduction of unit prices).

The period July-November 2005 saw certain acceleration in the imports of consumer goods. This acceleration concerned mainly food imports. In 2005 Q3 the volume of

²⁰The strengthening interdependence between exports and imports growth indicates a stronger trend towards the internationalisation of production processes (see: *ECB Monthly Bulletin – December 2005*).

²¹In the period January-September 2005 transaction prices of imported fuels expressed in the euro increased by 27.9% y/y

²²The total value of imported fuels and investment goods increased in the period July-November 2005 by 30.9% y/y (against 18.6% y/y in the first half of 2005) while the value of imports of other commodities increased by 8.4% (against 8.8% in the first half of 2005).

²³See, for example, *Global economic prospects 2006: economic implications of remittances and migration*, World Bank 2005.

durable goods imports increased significantly, as well, yet, as a result of a considerable reduction of unit prices²⁴ it was not reflected in a correspondingly high increase in the value of imports (also in this case, China's share of imports increased).

Global imbalances

The past few years have seen a growing global imbalance. It is manifested, among other things, by a very high current account deficit in the United States, which in 2005 exceeded 6% of GDP, a considerable growth in real estate prices in the United States and other Anglo-Saxon countries, negative household savings in those countries and a very strong growth in foreign currency reserves in the central banks of many Asian countries and oil exporting countries. At the same time, long-term interest rates in the main financial markets remain at historically low levels. According to many economists, the foundations of the current growth of the world economy are unstable. The continuing US current account deficit at a level exceeding 5% of GDP will drastically increase the American net foreign debt whose value may exceed the level acceptable by financial markets.

The appearance and increase in the global imbalance is explained by a number of – partly competitive and partly complementary – hypotheses which indicate the combination of overlapping and interdependent economic factors.

The first theory indicates the export-oriented macroeconomic policy pursued by Far East countries, i.a. by China. This policy involves keeping the domestic currency undervalued which is associated with maintaining fixed exchange rate regimes or conducting currency interventions. Under the adopted exchange rate regime, central banks purchase foreign currency and issue domestic currency. The currency, mainly US dollars, acquired in this way is invested primarily in US treasuries. Such a strategy pursued by central banks of Asian countries is conducive to keeping American interest rates at a low level (this effect is estimated in the literature at 50-200 basis points) and – thus – decreases the savings of American households.

The second theory behind the global imbalance indicates the decrease in American domestic savings caused by the growing fiscal expansion (in the years 2000-2004 the budget balance deteriorated by almost 6% of GDP), loose monetary policy causing an increase in negative household savings in the United States. It is estimated that as a result of higher real estate prices in this country, households might have increased their consumption considerably taking out new loans secured by mortgage.

The third factor behind the global imbalance, related with the second one, is the increased productivity in the American economy and thus larger investment opportunities in this country. Investment growth coupled with low savings results in growing external imbalance.

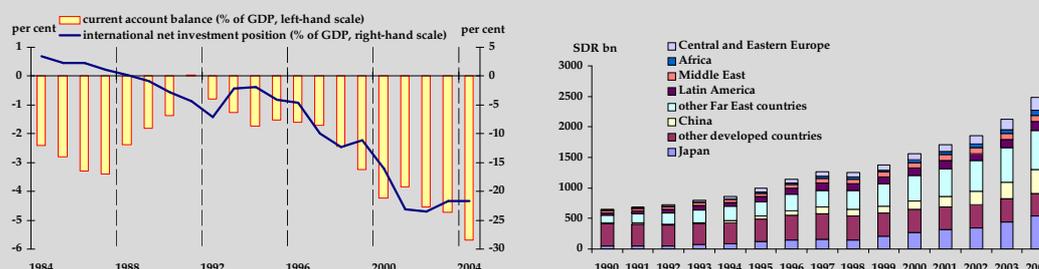
Fourthly, it is pointed out that the imbalance in the world economy is also driven by the global savings glut which results, among other things, from the restructuring of enterprises, demographic changes, strong economic growth in countries with a

²⁴See "Foreign Trade January-September 2005", GUS, Warsaw 2005.

structurally high savings level (which in China, for instance, reaches almost 50% of GDP) or higher income of oil exporting countries.

The fifth factor believed to cause the imbalance is a drop in investment demand on a global scale. The lower contribution of investment to GDP is mostly visible in those countries which have faced an economic crisis in the last 10 years.

Like in the case of the causes behind the global imbalance, there is no consensus as to the future developments, either. There are studies indicating the likelihood of the global imbalance being sustained in the longer run, however the majority of studies indicate the inevitability of adjustment in the coming years.



Left-hand panel: Current account balance and international net investment position of the United States in the years 1984-2004. **Source:** Bureau of Economic Analysis.

Right-hand panel: Changes in the level of world currency reserves in the years 1990-2004 (as at the end of the period). **Source:** IMF, IFS

The process of narrowing of the US current account deficit, and consequently, the reembarment of the world economy on the path of stable and sustainable development, would be less turbulent under a coordinated macroeconomic policy. Relevant adjustments require measures aimed, inter alia, at narrowing the US budget deficit, increasing domestic demand in Japan and EU countries, making the exchange rate regime in China and other Asian countries more flexible and the departure of those countries from the export-driven model of growth towards a sustainable growth model based, to a larger extent, on domestic demand growth. In practice, the global coordination of macroeconomic policy may prove difficult to pursue. This increases, in turn, the risk of the so-called 'hard landing scenario' which means considerable tensions in the financial markets, a possible dollar depreciation, a considerable increase of long-term interest rates and – in consequence – a considerable fall in global economic growth.

In 2005 Q3 the competitive position of domestic exporters measured with the ratio of transaction export prices to unit labour costs remained unchanged; yet, measured with the real effective exchange rate deteriorated slightly as compared with the previous quarter (Table 2.3), which resulted mainly from the appreciation of the nominal effective zloty exchange rate (see chapter 2.5.2 *Exchange rate*). According to the NBP estimates, in 2005 Q4 the real effective exchange rate of the zloty depreciated which was associated with a relatively low growth rate of unit labour costs in manufacturing in Poland.

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	03q3	03q4	04q1	04q2	04q3	04q4	05q1	05q2	05q3	05q4
Export prices / Unit labour costs*										
y/y	11.2	21.0	25.7	32.6	12.8	7.7	-8.1	-16.5	-6.6	b.d.
q/q	5.3	6.8	2.0	15.6	-10.5	2.0	-12.9	5.0	0.1	b.d.
Import prices / domestic producer prices										
y/y	5.0	5.8	6.4	1.7	-8.2	-10.5	-17.9	-19.6	-9.6	b.d.
q/q	0.4	0.0	3.4	-2.0	-9.4	-2.5	-5.3	-4.0	1.9	b.d.
REER ULC*										
y/y	-12.7	-22.8	-22.4	-16.8	-2.5	9.1	24.0	17.5	9.4	3.4**
q/q	-6.9	-8.1	1.5	-4.1	9.2	2.7	15.4	-9.2	1.6	-2.8**

Table 2.3: Polish export and import competitiveness measures (change in per cent)

Notes:

* – Unit labour cost index is calculated as the ratio of payroll growth per employee to the labour productivity dynamics, measured as output (volume) in manufacturing per person employed in this sector, REER ULC – real effective exchange rate deflated with unit labour costs in manufacturing. Minus denotes depreciation.

** – estimation based on monthly GUS data; additionally data and estimations of EC, NBP and ECB were used.

Source: Own calculations based on NBP, GUS, EC, ECB and Eurostat data.

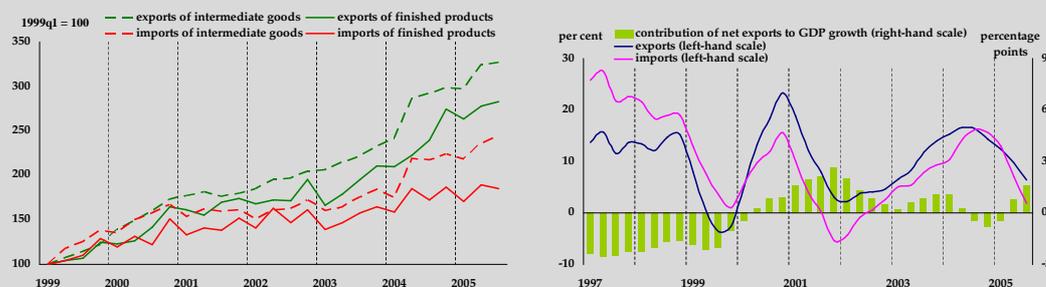
Polish foreign trade

The inflow of foreign direct investment and Poland's integration with the European Union have, since the beginning of the 1990s, contributed to the acceleration of the internationalisation process of the Polish economy. It has been reflected both in the acceleration of the Polish foreign trade and profound changes in its structure.

The Polish foreign trade rose in the past ten years markedly faster than the world trade which is reflected in a twofold growth of Poland's share in the international trade: from 0.4% to 0.8% in exports and from 0.5% to 0.9% in imports. Also the share of foreign trade in Poland's GDP increased considerably in this period. In the years 1995-2005, the exports share in GDP increased from 23% to 38%, while the imports share increased from 21% to 38% and now both stay at a slightly higher level than the EU average¹.

Structural changes experienced by Polish exports involve primarily an increased share of highly processed manufacturing products and, consequently, closer resemblance to the EU trade. Sales of machines and road vehicles in the years 1993-2005 saw the highest growth rate – more than two times higher than the average. This was mainly driven by foreign investment in electro-engineering and automotive sectors² and high external demand for their products. These industries, considered among the most internationalised ones, integrated Poland with the world economy through their international production and distribution chains. As a result of this process, changes in the exports structure were strongly correlated with changes in the imports structure. A systematically growing share in imports of the same industries as in

exports was conducive to increasing the importance of the Polish intra-industry trade – a phenomenon characteristic of the contemporary world economy.



Left-hand panel: Increase of Polish exports and imports of intermediate goods compared with exports and imports of finished products (data in EUR). **Source:** Calculations based on Eurostat data.

Right-hand panel: Changes in the volume of exports and imports and contribution of net exports to GDP growth (annual flexible average). **Source:** GUS – national accounts.

The inclusion of the Polish economy into the international division of labour across countries via multinational corporations leads to a growing share, in both exports and imports, of intermediate goods, namely, parts, elements and sub-assemblies of various kinds – which now account for almost 50% of exports of machines and transport equipment. Their continually growing share indicates the increasing importance of the intra-firm trade conducted in globally or regionally integrated production networks. The increased importance of this trade leads to international trade becoming less and less sensitive to exchange rate fluctuations and changes in demand.

The higher import absorption of export production, which causes the value added included in finished products to decrease in particular countries, is a global phenomenon³. It results from the division of the production process across countries and renders changes in imports and exports almost parallel. In Poland, like in the international trade, the growth rate of exports of intermediate goods considerably exceeds the growth rate of sales of finished products.

¹In 2005 (Q1-Q3) the average share of exports in GDP in the 25 EU countries amounted to 37%, and the average share of imports – to 36% (Eurostat data).

²In 2004, enterprises with foreign capital participation accounted for 77% of exports of plant and machinery, and for 89% of exports of motor vehicles and their parts. In 2004, foreign companies accounted for 57% of exports and 61% of imports, against 25% and 33% in 1994 (see: *Foreign Investment in Poland - Annual Report*, Foreign Trade Research Institute, Warsaw 2005).

³*Competitiveness and the export performance of the euro area*, ECB Occasional paper series No. 30, June 2005.

According to the NBP business tendency surveys, in 2005 Q4 the zloty exchange rate against the dollar and the euro was running at a level which was favourable for most exporters from the point of view of export sales. However, the downward revision of export forecasts in the NBP surveys – both compared with the previous quarter and

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the corresponding period of the previous year – may indicate a slowdown in export growth in 2006 Q1.

2005 Q3 saw, for the first time in six quarters, a slight improvement in the competitive position of domestic market producers which is signalled by an increase of 1.9% (q/q) in the ratio of the index of transaction import prices to the index of domestic producer prices in manufacturing.

Yet, according to the NBP business tendency surveys, in 2005 Q4 the price competitiveness of imported goods was boosted by the strengthening of the nominal exchange rate of the zloty against the euro.

In 2005 Q3 the majority of warning indicators used to assess the external imbalance improved and stayed at a safe level (Table 2.4).

Warning indicator	04q1	04q2	04q3	04q4	2004	05q1	05q2	05q3
$\frac{\text{Current account balance}}{\text{GDP calculated annually}}$	-2.5%	-3.4%	-4.1%	-4.1%	-4.1%	-3.3%	-2.1%	-1.5%
$\frac{\text{Current account balance} + \text{capital account balance}}{\text{GDP calculated annually}}$	-2.5%	-3.4%	-3.8%	-3.7%	-3.7%	-2.7%	-1.6%	-1.2%
$\frac{\text{Trade balance}}{\text{GDP calculated annually}}$	-2.4%	-2.7%	-2.6%	-2.2%	-2.2%	-1.8%	-1.3%	-1.1%
$\frac{\text{Direct investment}}{\text{Current account deficit}}$	138.0%	74.4%	35.4%	310.6%	112.4%	214.0%	94.9%	184.0%
$(\text{Current account balance} + \text{capital account balance} + \text{direct investment})/\text{GDP}$	1.9%	-1.4%	-1.6%	4.1%	0.9%	2.8%	0.1%	1.5%
$\frac{\text{Foreign debt service}}{\text{Revenue from export of goods calculated annually}}$	35.5%	33.0%	34.9%	41.0%	41.0%	47.2%	47.1%	-
Foreign reserves expressed in terms of monthly import of goods and services	5.2	4.3	4.3	3.8	4.0	4.4	4.6	4.4

Table 2.4: Main warning indicators

Source: GUS data, NBP data, NBP calculations.

Note: 2005 Q2 – preliminary data and NBP estimates

2.2 Output

In view of preliminary data for October-December 2005 it can be assessed that 2005 Q4 brought further acceleration in the annual value added growth rate. The stepping up in the annual growth rate of value added was favoured by a faster increase in value added in industry and further revival in market services (Figure 2.10). According to the NBP estimates, 2005 Q4 was the third consecutive quarter when the level of the (seasonally adjusted) quarterly value added growth rate significantly exceeded 1%.

The moderate recovery in industry which had begun in 2005 Q2 accelerated steadily over the next few months. As a result, the annual growth rate of industrial output in the final months of 2005 reached a level that had not been recorded for almost a year.

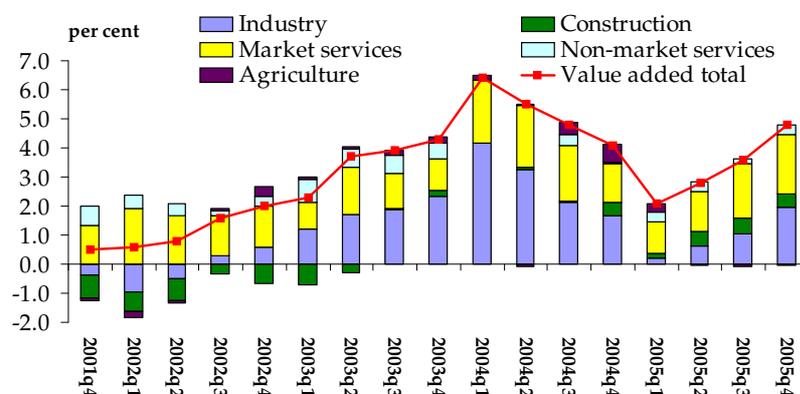


Figure 2.10: Sector contribution to annual gross value added growth (per cent)

Source: NBP calculations on the basis of GUS data (2005 Q4 – NBP estimates).

Seasonally adjusted (per cent)	03q2	03q3	03q4	04q1	04q2	04q3	04q4	05q1	05q2	05q3
Value added – total	1.5	1.2	1.1	2.4	0.7	0.5	0.4	0.5	1.4	1.3
Industry	2.5	4.1	2.7	6.3	0.7	-1.0	1.0	0.1	2.4	0.7
Construction	0.6	1.0	-0.5	1.2	0.0	1.3	3.0	0.8	3.0	1.9
Market services	1.2	0.5	1.0	1.6	0.7	0.4	0.4	0.9	1.0	1.3

Table 2.5: Value added and its components (q/q seasonally adjusted)

Source: NBP calculations on the basis of GUS data.

Ever since the beginning of 2005 there have been firm rising trends in industries with a high share of export sales, in particular in manufacture of machinery and equipment, manufacture of rubber and plastic products, fabricated metal products, and since the middle of 2005 also in the section: manufacture of radio, television and communication equipment. After the output of automotive industry had remained stable for over a year, it increased again in 2005 Q4, which, in the first place, may be attributed to the increase in this section's production capacity. In 2005 Q4 the output of the food industry was continuing on its dynamic upward path. Output falls in the coke and petroleum refining industry were halted, and, after a period of strong drops in metallurgy, a dynamic growth can be observed. There is a continuation in the stabilisation in manufacture of electrical machinery and apparatus, on the one hand, and in the stagnation in textile industry, on the other. To some extent, the high growth rate in industrial output in 2005 Q4 was fed by the renovation tax relief expiring at the year-end, which was conducive to raising sales in enterprises manufacturing construction materials in this period. To sum up, the structure of output suggests that, even though exports remain the main growth factor in industry, sales in the domestic market may be gaining more and more ground.

The GUS business tendency surveys indicate a high probability of a continued recovery

in industry. In the near-term, some obstacles to further rises may be offered by an extremely high level of production capacity utilisation in manufacturing. This factor, however, should be gradually subsiding as the expected investment increase will be materialising.

According to the GUS data, 2005 Q3 marked a further stepping up in value added growth in market services, particularly in trade and repair companies. On the basis of preliminary data for October-November 2005 it may be presumed that the recovery in market services was continued in 2005 Q4. High increases were recorded in wholesale and retail sales, which were positively affected by a heightened demand associated with the expiring renovation relief. Similarly, there was a significant acceleration in the sales of transport services.

The GUS business tendency surveys indicate a favourable situation in trade enterprises but, due to the evaporation of the above-mentioned one-off factors, the first months of 2006 may be weaker than the end of 2005. In the case of other market services, the GUS business tendency surveys signal the continuation of the trends observed so far.

Following a steep acceleration in 2005 Q2, the next months of Q3 and Q4 brought a moderate weakening in the rising trends in construction. The reduction in the annual construction and assembly production growth rate referred both to the investment-type and renovation works. Nevertheless, given the still optimistic signals flowing in from business tendency surveys and a continuously steep growth in the workload of construction-site development enterprises, the prospect for construction output growth in the coming months seems favourable. An important factor supporting the construction revival will be infrastructural investments implemented in the framework of projects co-financed by the EU.

2.3 Labour market

2.3.1 Employment and unemployment

In 2005 Q3 the growth of the number of working persons in the economy accelerated both according to BAEL²⁵ (in seasonally adjusted year-on-year and quarter-on-quarter terms) and the GUS data prepared on the basis of corporate reporting. Therefore, the number of working persons is steadily increasing not only in small enterprises (with up to 9 employees), which has been indicated by the BAEL data for the past seven quarters, but also in larger ones (employing more than 9 people), which has been signalled by GUS data for four quarters now.

According to the BAEL data, in 2005 Q3 there were 385 thousand working persons more than one year before (this represents a rise of 2.8% as compared to 1.9% in 2005 Q2) and almost 720 thousand people more than in the corresponding quarter of 2002, when

²⁵For the definition of a working person adopted in BAEL (Badanie Aktywności Ekonomicznej Ludności – Survey of Economic Activity of Population) see: *Quarterly Information on the Labour Market*, GUS.

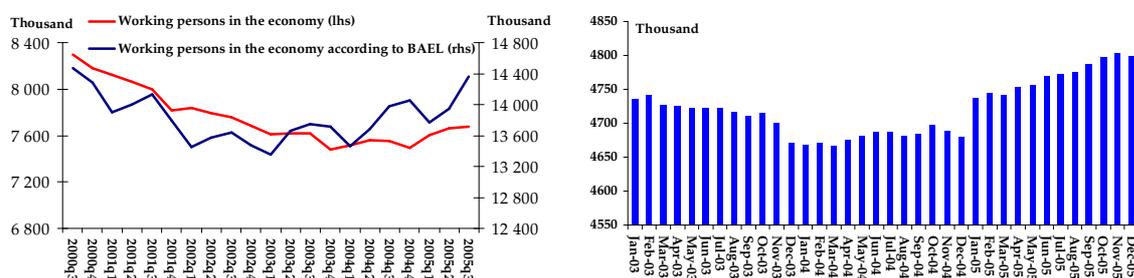


Figure 2.11: Employment. Left panel: working persons in the economy (according to BAEL) and in entities with more than 9 employees (thousands). Right panel: employment in the enterprise sector (thousands). Source: GUS data.

	Number of working persons in 2005q3 (thousands)	Growth in 2005q2 (y/y)	Growth in 2005q3 (y/y)	Growth in 2005q2 (q/q) seasonally adjusted	Growth in 2005q3 (q/q) seasonally adjusted
Total	14 359	1.9%	2.8%	0.6%	0.9%
Place of residence					
urban areas	8 673	1.2%	1.7%	0.4%	0.5%
rural areas	5 686	3.1%	4.3%	0.8%	0.5%
Economic sector					
agriculture	2 674	-1.0%	-0.4%	0.5%	1.7%
industry	4 166	4.3%	2.8%	1.1%	0.4%
services	7 514	1.5%	3.8%	0.7%	1.1%
Ownership sector					
public	4 181	0.0%	1.3%	0.1%	0.1%
private (excluding farms)	7 700	4.3%	5.0%	0.3%	1.8%
private (farms)	2 478	-1.8%	-1.5%	0.5%	1.5%
Employment status					
hired employees	10 551	3.3%	4.6%	0.6%	1.6%
employers and self-employed	2 965	-1.5%	-2.6%	-0.5%	-0.6%
contributing family workers	842	-3.0%	0.1%	-1.7%	1.4%
Type of job contract					
fixed-term contract	2 785	16.8%	16.2%	3.1%	5.5%
permanent contract	7 766	-0.7%	0.9%	-0.2%	0.4%

Table 2.6: Working population according to BAEL in selected sections

Source: BAEL data, NBP calculations.

the recovery in the labour market had begun²⁶. According to BAEL, excluding private farming, the number of working persons increased in 2005 Q3 by 422 thousand y/y (i.e.

²⁶After Poland's accession to the EU there was a surge in the number of Poles leaving the country to work abroad. It is not known, however, how people working abroad temporarily are classified in BAEL (LSF) and so it is difficult to assess the extent to which this development impacts labour market processes, which constitutes a source of uncertainty in the assessment of the situation in the labour market.

a rise of 3.7% y/y as compared with 2.7% y/y in 2005 Q2). According to the data reported to the GUS by enterprises (with over 9 employees), the number of working persons rose by 123 thousand (a rise of 1.6% against 1.3% in 2005 Q2) (Figure 2.11, left-hand panel). According to BAEL, the growth in the number of working persons accelerated in services (Table 2.6), but slightly decreased in industry. In quarter-on-quarter terms, the number of people working in agriculture went up as well, though it was smaller than a year before. Moreover, the tendency of a rapid increase in the number of people working on a fixed-term contract was continued, although the number of those employed on a permanent contract basis also edged up for the first time since 1998. In this way, as the employment level is rising so is the share of people working on a fixed-term contract in the overall number of hired employees (from 23.8% in 2004 Q3 to 26.4% in 2005 Q3).

The steady growth of employment in the enterprise sector has been sustained. Between July and December 2005 the average employment level in enterprises increased by 27 thousand (Figure 2.11, right-hand panel), and since the beginning of 2006 – by 62 thousand, i.e. 1.3%. In December 2005, the annual growth of average employment in the corporate sector amounted to 2.5%.

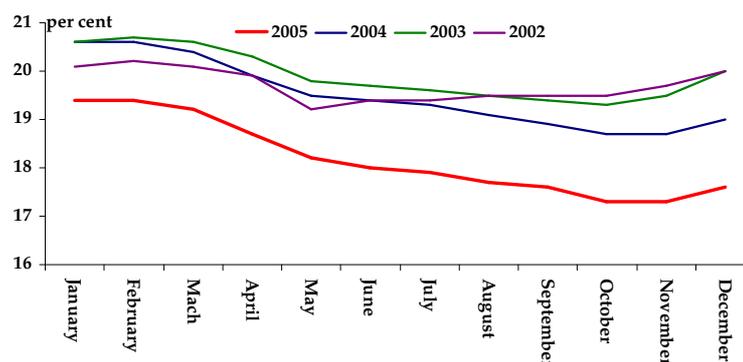


Figure 2.12: Registered unemployment according to labour office data (thousands)
Source: GUS data.

The year 2005 brought a deeper drop in unemployment than the previous years (Figure 2.12). In December 2005, the rate of unemployment registered by labour offices amounted to 17.6%, which constitutes a decrease of 1.4 percentage point in year-on-year terms. Among the unemployed who have deregistered from job offices the majority has done so for reasons other than finding employment (the average for August-December 2005 was 57%). The unemployment rate according to BAEL fell in 2005 Q3 to 17.4% down from 18.2% one year earlier. At the same time, in 2005 Q3 the economically active figure rose significantly (by 1.7%). This rise indicates that positive trends in the labour market are beginning to draw hitherto economically inactive people into the market. This may be conducive to increasing the economic potential but, at the same time, implies that the rise in the working population does not have to be accompanied with an equally rapid decline in unemployment.

The NBP business condition surveys show that in 2006 Q1 the rise of employment in enterprises will be sustained, as the net balance of employment forecasts²⁷ – in seasonally adjusted terms – in this period was a positive and the highest value in the survey history (since 2001). The GUS business tendency surveys also indicate further employment growth in enterprises.

To sum up, the data on the labour market indicate that the scale of improvement in the labour market situation is larger than expected in the previous *Report*.

2.3.2 Wages and productivity

In 2005 Q3 the annual growth of nominal wages in the economy was at the lowest level since the beginning of 2004 and amounted to 3.4% (compared with 3.9% in the previous quarter). Similarly, the rise in average nominal wages in the corporate sector was lower than in the preceding quarter, at 2.7% y/y (against 3.0% y/y)²⁸ In the first two months of 2005 Q4 the wage growth rate in enterprises reported a significant expansion (up to 6% y/y). To some extent, the rise in the wage growth rate in those months resulted from time shifts in the payment of additional remunerations in some sections (post and telecommunications and mining). These shifts also reduced the wage growth rate in enterprises in December (down to 1.5% y/y). In the whole of 2005 Q4, the wage growth rate in enterprises was at 4.8% y/y, which was higher than in the first three quarters of 2005.

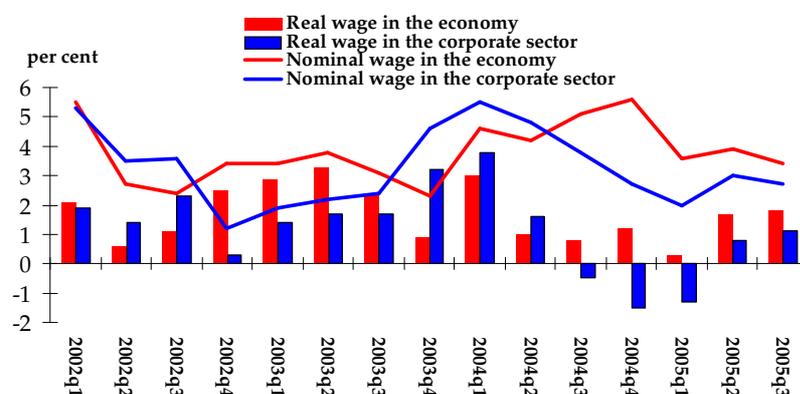


Figure 2.13: Annual percentage growth of wages in the economy and in the corporate sector (nominal and real)

Source: GUS data, NBP calculations.

²⁷The net balance of employment forecasts stands for the difference between the percentage of companies declaring to raise employment and the percentage of those declaring its reduction.

²⁸The deceleration in the growth rate of wages in 2005 Q3 – both in the economy and enterprises – in comparison to the preceding quarter was partly the outcome of shifting additional payments of remunerations in the section *post and telecommunications* from Q4 (in 2004) to Q3 (in 2005). On the other hand, the shift was conducive to increasing the level of wages in 2005 Q4.

In 2005 Q3 the acceleration in the employment growth rate both in the corporate sector and the economy was conducive to increasing – in relation to the preceding quarter – the growth rate of nominal aggregate wages in the economy (rise of 5.2% y/y in the economy as compared to 5.0% y/y in the previous quarter) and stabilising its growth rate in the enterprise sector (rise of 4.7% y/y against 4.8% y/y in the preceding quarter). In turn, due to significant pay rises in enterprises, Q4 brought a sizeable acceleration in the growth rate of aggregate wages in that sector (increase of 7.3% y/y).

In real terms, the annual wage growth was in 2005 Q3 slightly higher than in the previous quarter – both in enterprises and in the economy as a whole (Figure 2.13). An important contribution to this rise was the inflation drop in this period.

NBP economic climate surveys²⁹ indicate a moderate pay rise in enterprises in 2006 Q1. According to these data, in 2006 Q1 the pay rises actually intended by enterprises are lower than it was planned one year ago³⁰.

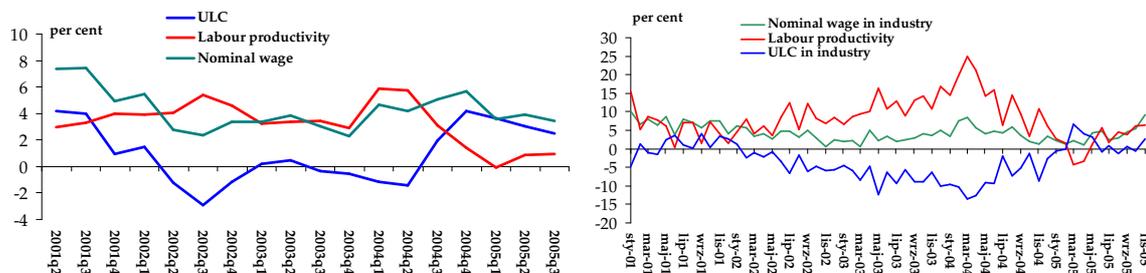


Figure 2.14: Annual percentage growth of unit labour costs (ULC), labour productivity and nominal wages – seasonally adjusted. Left-hand panel: Economy. Right-hand panel: Industry. **Source:** GUS data, NBP calculations.

Ever since the beginning of 2005 Q3 the acceleration in labour productivity was accompanied with an increasing wage growth rate (Figure 2.14, right-hand panel). As a result, the annual growth rate of unit labour cost in industry³¹ was close to zero. Only in November 2005, due to earlier payments of additional remunerations in some sections, the rise in nominal prices significantly outstripped the rise in labour productivity, which caused unit labour cost to rise by 2.6% y/y.

In the economy as a whole, between 2002 and 2004 Q2 a drop of unit labour costs in year-on-year terms was observed³². In turn, since 2004 Q3 unit labour costs have been

²⁹See *Preliminary information concerning the condition of the corporate sector and the business tendency in the first quarter of 2006*, NBP.

³⁰Due to a short history of surveying the wage rate (which started with the beginning of 2005) it is difficult to unequivocally assess its predictive power.

³¹Unit labour costs in industry: average nominal wages in industry in relation to productivity in industry (productivity in industry: sold industrial output in constant prices in relation to average employment in this sector).

³²Unit labour costs in the economy: average nominal wages in the economy in relation to labour productivity in the economy (labour productivity in the economy: GDP in constant prices in relation to the average number of people working in the economy according to BAEL).

growing. In 2005 Q3 their annual growth rate was positive and slightly lower than in the preceding quarter (Figure 2.14, left-hand panel).

2.4 Other costs and prices

2.4.1 External prices

2005 Q4 saw a decrease in commodity prices in the international markets (as compared with the previous quarter) (Table 2.7). In annual terms, the commodity price growth rate in Q4 remained positive, albeit lower than in Q3. The main driving force behind this fall in commodity prices was an oil price decrease in quarterly terms. In turn, prices of non-ferrous metals continued to rise³³.

	y/y change in per cent				q/q change in per cent			
	05q1	05q2	05q3	05q4	05q1	05q2	05q3	05q4
Total	29.7	27.9	33.1	23.1	7.8	7.2	11.1	-4.1
Non-energy raw materials	8.7	7.4	11.5	13.0	10.2	-0.7	-0.3	3.6
food	-8.4	-6.5	7.6	10.1	9.2	5.8	-3.4	-1.4
industrial raw materials	16.7	14.2	13.0	14.1	10.5	-3.1	1.0	5.5
agricultural	2.6	0.3	0.3	2.1	4.2	-2.7	-1.1	1.8
non-ferrous metals	15.6	14.8	14.2	19.2	5.3	-0.7	2.5	11.1
Energy raw materials	40.8	37.6	42.0	27.1	6.8	10.5	15.3	-6.5
crude oil	44.8	44.3	49.1	32.4	8.1	11.1	17.0	-5.8

Table 2.7: World prices of main raw materials' groups in USD (y/y change in per cent)

Source: HWWA – Hamburg Institute of International Economics.

In September 2005 oil prices reached their highest level in history, and then decreased in October and November (Figure 2.15). This fall in oil prices was driven by a lower demand conditioned mainly by high fuel prices, economic disruptions in the area of the Gulf of Mexico and a warmer beginning of the heating season in the United States³⁴. In December 2005, the drop in temperatures in the United States³⁵ had an effect on increasing the demand for heating fuels and contributed to further price increases of this commodity. At the beginning of January 2006, a further oil price increase was driven by the heightened political risk associated with the resumption of Iran's nuclear programme³⁶ and attacks on the oil infrastructure in Nigeria.

The lower oil demand mitigated the consequences of the disruption in oil production caused by hurricanes in the Gulf of Mexico. The lower supply in non-OPEC countries

³³Mainly due to copper, whose average price in 2005 Q4 hit the highest level in history (in 2005 as a whole copper prices increased by over 40%).

³⁴In comparison to the previous *Inflation Report* the estimates of the global demand for oil in 2005 have been significantly reduced. The International Energy Agency (IEA), which in August 2005 expected crude oil demand to increase by 2% (y/y) in 2005, adjusted its forecasts in December 2005 down to 1.4%. Apart from the United States, this revision concerned mainly Asian developing countries where oil prices are

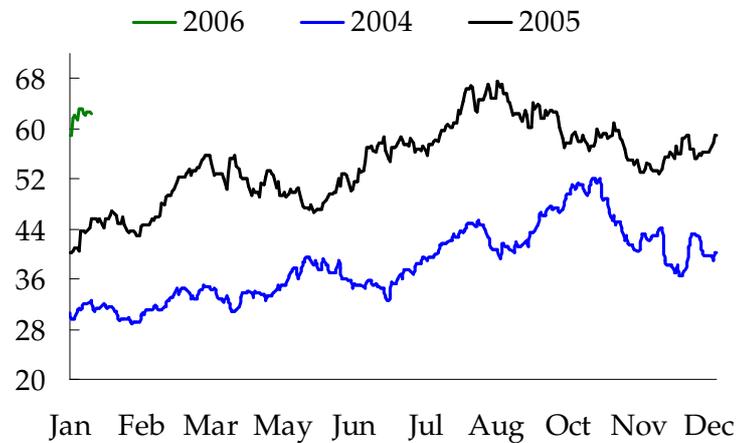


Figure 2.15: Brent crude oil prices in 2004-2006 (USD/barrel)
Source: Bloomberg data.

drove up the demand for OPEC oil. Since the majority of OPEC countries produce oil within their production capacities, the possibilities of boosting oil production any further are presently very limited.

Despite the decrease in oil prices as compared with August and September 2005, many institutions left their forecasts of oil prices unchanged. Also forward market quotations show that oil prices may stay close to their current level in the coming two years. This results mainly from the analysis of fundamental factors which show that there are no significant premises justifying a significant fall or rise in oil prices in 2006. According to current forecasts of the main analytical centres³⁷ the increase in the demand for crude oil in 2006 will be higher than in 2005 (by 1.9%-2.3% y/y). According to the US Department of Energy, the United States will be responsible for most of the world oil demand (36% of demand increase), which results from favourable growth forecasts for the US economy. Moreover, oil prices will be affected by weather conditions and the persisting political risk in major oil producing countries.

The drop in crude oil prices in the world markets in August-December 2005 was conducive to decreasing world fuel prices. Thus, it was also reflected in the developments

centrally regulated.

³⁵December 2005 was the coldest December in the United States since 1998.

³⁶Iran is, after Saudi Arabia, the second largest oil producer among OPEC countries. Oil production in Iran amounts to 4 million barrels per day, which accounts for 5% of the world supply of this commodity. There are concerns that a potential failure of the negotiations between the International Atomic Energy Agency (IAEA) and Iran may persuade the UN Security Council to impose economic sanctions on this country. In view of the fact that world spare production capacities are currently estimated at approx. 1.5 million barrels per day, a potential loss of supplies from Iran could not be compensated by increased output in other countries.

³⁷*Monthly Oil Market Report*, December 2005, OPEC; *Oil Market Report*, December 2005, International Energy Agency and *Short-Term Energy Outlook*, December 2005, U.S. Department of Energy.

of fuel prices in Poland (see Footnote 3). Nevertheless, the developments of fuel prices were additionally affected by other factors, i.e. the rise in the domestic distribution margin, the zloty exchange rate against the dollar and the cut in the excise tax rate (see Chapter 1.1 *Inflation indicators*).

High oil prices brought about an acceleration in inflation in two world's largest economies – in the United States and the euro area – in the second half of 2005³⁸. In September 2005, in the United States the annual index of consumer goods and services (CPI) increased to the level of 4.7% (from 3.6% in August), i.e. the highest level since June 1991, while in the euro area the harmonised index of consumer prices (HICP) increased to 2.6% (from 2.2% in August) (previously, a similar increase was observed in June 2001). However, subsequent months saw a decrease of annual inflation indicators coupled with a fall in fuel prices³⁹. The lower share of taxes in retail prices of gasoline in the United States (just below 20%) in comparison to the euro area (in most euro area countries it exceeds 60%) creates a situation where oil price fluctuations in the United States have a greater impact on the level of CPI (as compared with the euro area) and, consequently, increase its volatility. The level of core inflation measures, which has continued almost unchanged⁴⁰ may indicate a, so far, very limited influence of high energy prices on other consumer goods and services. Fuel price developments should not lead to inflation growth in the world's major economies in 2006, which is shown by forecasts of external institutions, according to which the average increase in prices of consumer goods and services in the United States and in the euro area in 2006 will be lower than in 2005.

2.4.2 Producer prices

In line with the expectations presented in the previous *Inflation Report*, in the second half of 2005 the annual growth rate of producer prices in industry remained stable, with a slight fall observed since August 2005 (the largest fall – of 0.9% y/y – was recorded in November 2005). In turn, at the end of 2005 the PPI amounted to 0.5% y/y. In October and November 2005, falls were recorded both in domestic producer prices and export prices (Figure 2.16, left-hand panel). The fact that the growth rate of producer prices remained low may be attributed to the zloty strengthening (y/y) in the second half of 2005, which brought about a fall in both import and export prices. Moreover, the low level of PPI was influenced by a moderate growth of domestic demand.

The most significant impact on the PPI growth rate in August-December 2005 was exerted by a drop in manufacturing prices. In turn, as a result of rising prices in other

³⁸The increase in oil prices affects directly two components of the CPI basket – energy (from the group housing) and fuels (from the group transport). In the United States these two components account for 8% of the CPI basket, and in the euro area for 8.5%.

³⁹In December 2005 they reached 3.4% in the United States, and 2.2% in the euro area.

⁴⁰Core inflation in August-December 2005 remained in the range of 2.0-2.2% y/y in the United States, and 1.3-1.4% y/y in the euro area. The difference in the level of core inflation measures in these two economies results, among other things, from their different rates of economic growth.

sectors, those sections made a positive contribution to PPI developments. (Figure 2.16, right-hand panel).

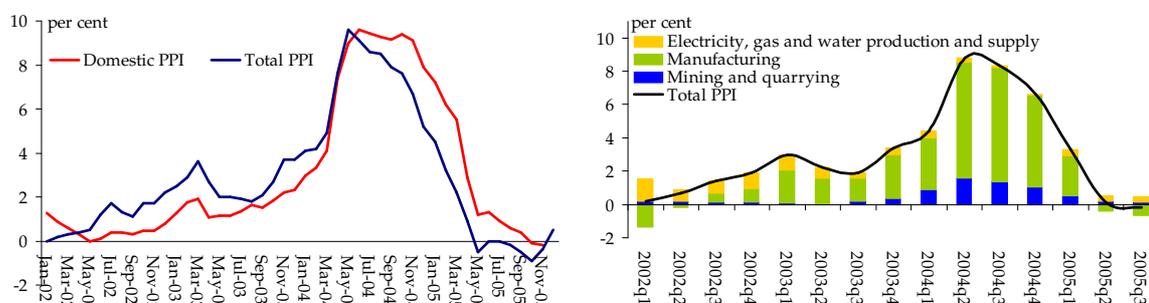


Figure 2.16: Producer prices in industry (PPI). Left panel: Total PPI and domestic PPI. Right panel: Contribution of producer prices growth in PPI total annual growth.
Source: GUS data.

The PPI growth rate in the first half of 2006 may be expected to remain stable. The zloty appreciation observed in recent months will be conducive to reducing producer prices in that period. The factors behind the higher growth rate of producer prices in industry include a potential increase in commodity prices (in particular prices of crude oil and copper)⁴¹.

2.5 Financial markets

2.5.1 Asset prices/Interest rates

Short-term interest rates⁴²

In the period from August 2005 to January 2006 short-term interest rates were subject to increased volatility (Figure 2.17). This was, among other things, due to fluctuations of inflation and real sector data, and also due to political factors associated with parliamentary and presidential elections as well as the first months of office of the new government.

The August 25-basis-point cut of the reference rate by the MPC to the level of 4.5% was consistent with market expectations. At the same time, the maintenance of the easing monetary policy bias matched with a similarly easing message of the press release from the MPC meeting (as interpreted by market analysts) and the lowered NBP projections of inflation and the GDP growth rate as compared to those presented in the May *Inflation Report* all encouraged market expectations of further interest rate

⁴¹The price increase of import commodities used in production (e.g. crude oil) results in the increase of the domestic PPI and, consequently, the PPI total. The rise in prices of export commodities (e.g. copper in the case of Poland) also boosts the PPI by contributing to export price increases.

⁴²The cut-off date for the data presented in this chapter is 23 January 2006.

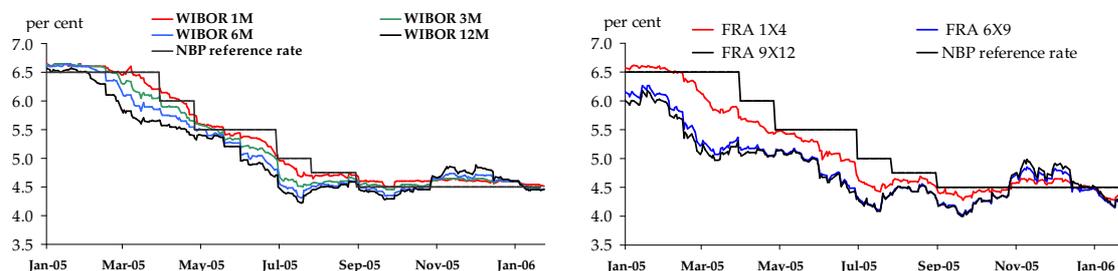


Figure 2.17: NBP reference rate and interest on interbank deposits (left-hand panel) and NBP reference rate and interest on FRA contracts for 3M WIBOR (right-hand panel).

Source: Reuters data.

cuts. This tendency was further strengthened by the release of weaker data from the real sector (retail sales, manufacturing) than expected by the market and due to a low level of current inflation. Consequently, in the second half of September 2005 FRA contract quotations reached their historical lows (Figure 2.17, right-hand panel), pricing the total amount interest rates cuts in one year's horizon at another 50 basis points. A Reuters survey published in that period revealed that as many as 84% of analysts expected a reference rate cut of 0.25-0.5 percentage point by the end of 2005.

Between mid-September and mid-November 2005 there occurred a change in the direction of money market rate movements. The rise in short-term interest rates was encouraged by data signalling a stronger than expected by the market economic recovery and inflation growth (in September the CPI increased to 1.8% y/y and manufacturing production rose by 9.8% y/y), rising political risk in Poland and the September MPC press release, which indicated a possible returning of inflation to the target faster than it had been envisaged in the August inflation projection. While the rise in forward rates at the beginning of November had priced in an interest rate rise of up to 5.0% in the horizon of 9 months, analysts anticipated that the NBP's rate would be maintained at the unchanged level of 4.5%. This may indicate that a significant part of the increase in FRA rates resulted from heightened uncertainty as to the political developments and macroeconomic data which – in the opinion of the markets – could potentially affect the MPC's interest rate decisions.

The easing of political tensions (i.a. vote of confidence won by the new government) coupled with lower than expected data on inflation in November and December 2005 (1.0% y/y and 0.7% y/y) resulted in a reduction in FRA rates to the levels below the NBP's reference rate. At the end of the analysed period, FRA rates priced in one 25-basis-point cut in NBP rates in the 3-month horizon, after which the reference rate was to stabilise at an unchanged level till the end of 2006 (Figure 2.18). According to the Reuters survey of 23 January 2006, 53% of the sample anticipated a reduction in NBP rates of 0.25 percentage point, and 27% of analysts forecast a cut of 0.5 percentage point by the end of 2006 (Figure 2.18 – right-hand panel).

Determinants of inflation

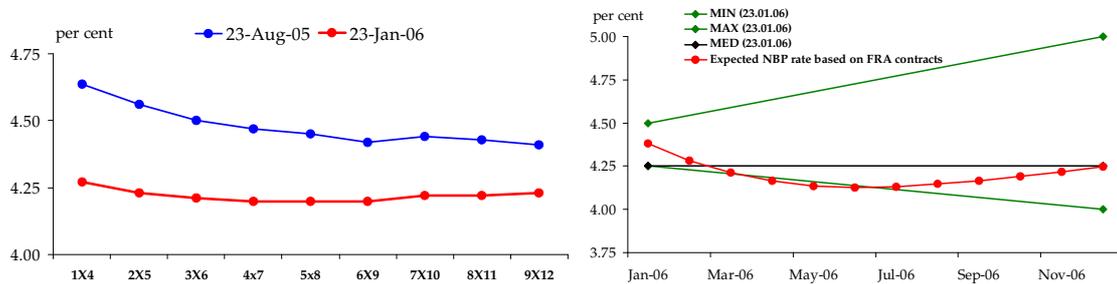


Figure 2.18: Three month forward curves (left-hand panel) and expected changes in NBP reference rate on the basis of FRA contracts and Reuters survey of 23 Jan 2006 (right-hand panel).
Source: Reuters data.

Trends in international financial markets

Since the end of August 2005 the Federal Fund Rate has been raised on three occasions by the total of 75 basis points to the level of 4.25% at the end of December 2005. The decisions of the Federal Open Market Committee (FOMC) were consistent with market expectations. Currently, analysts brace for the fourteenth rate increase to be effected at the Fed's January meeting. They also point at an approaching end of the monetary policy tightening cycle in the United States, which finds more and more support in comments of Fed representatives, and particularly in the contents of the minutes released after the December meeting of the FOMC.

In a Reuters survey carried out in January, the majority of analysts expected the Fed to raise its interest rates by 50 basis points to the level of 4.75% by the end of 2006. The experts' forecasts seem to find support in the market expectations of the Fed interest rate changes as reflected in the prices of Fed Funds Futures.

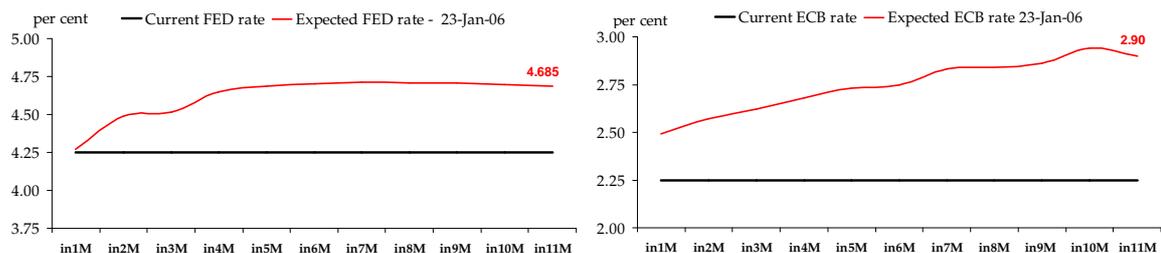


Figure 2.19: Expectations on the FED interest rate changes (on the basis of Fed Funds Futures) (left-hand panel) and expectations on the ECB interest rate changes (on the basis of EONIA swaps – overnight index swaps) (right-hand panel).
Source: Bloomberg data.

The European Central Bank (ECB) raised its repo rate for the first time in 5 years, by 0.25 percentage point to the level of 2.25% at the meeting on 1 December 2005. The Reuters survey from January indicates that analysts expect an interest rate increase of 50 basis points in 2006, to the level of 2.75% (median of expectations). At the same time,

market expectations as measured on the basis of EONIA swap contracts indicate an increase of the ECB interest rate at 0.5-0.75 basis points in 2006.

Long-term interest rates⁴³

Up to the middle of September 2005 there had continued a falling trend in the yields on Treasury bonds (Figure 2.20). From then on, just like in the case of money market rates, the debt market saw an emergence of a strong rising trend in yields. This was primarily associated with the domestic political developments and also with the uncertainty surrounding the future economic policy of the new government. Rising trends in the domestic debt market were additionally strengthened by a rise in the yields in the so-called core markets (in the euro area, the prices of debt instruments had already begun to account for expected ECB interest rate rises) and in some new EU countries (i.a. selling off bonds in the Hungarian market in response to a dampening fiscal outlook for this economy).

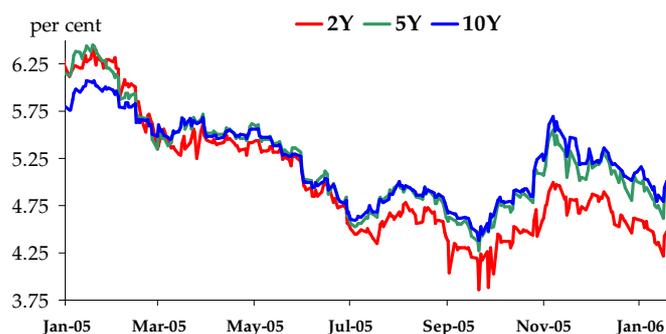


Figure 2.20: Change in the yields of the benchmark bonds
Source: NBP data.

Since the middle of November 2005 there has been a gradual improvement of the domestic debt market situation. This was associated with the formation of a new government and the publication of data on lower-than-expected inflation in November and December, which moulded market expectations for interest rate reductions thus leading to bond price increases. Towards the end of the analysed period fears of investors associated with the possibility of early parliamentary elections translated into falls in Treasury bond prices. Throughout the reviewed period yields on debt securities decreased, though in January 2006 they were still higher than their historical low level recorded in September 2005.

Although prices in the bond market showed greater volatility, yields on long-term Treasury securities continued to fall in average annual terms. As a result, ever since August 2005 Poland has again been complying with the interest rate criterion (for the first time

⁴³The cut-off date for the data presented in this chapter is 23 January 2006

since March 2004), which is one of the conditions for the euro area membership⁴⁴ (Figure 2.21).

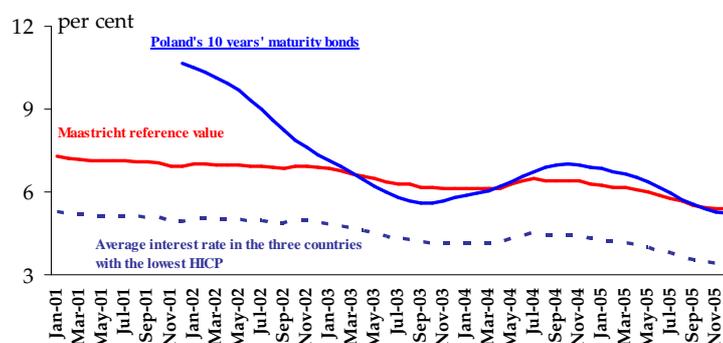


Figure 2.21: Average annual yield (12-month moving average) for long-term Treasury bonds in Poland versus the reference value for the Maastricht criterion
Source: NBP estimates based on Eurostat data.

In the analysed period the Treasury bond portfolio of non-residents has shrunk. At the end of November 2005, non-residents' participation in the bond market decreased by approx. PLN 5.2 billion (to PLN 69.6 billion, i.e. 24.5% of market share) in relation to the historically highest level of their investment in Polish Treasury bonds in late August 2005 (PLN 74.8 billion, i.e.27.5%).

Equity market

Between 23 August 2005 and 23 January 2006 WIG20 rose by 27.2%. This was the largest rise in all the stock exchanges of the Central Europe. The Czech PX50 rose by 15.11%, Hungarian BUX by 8.79%, while the Slovak SAX dropped by 18.78%. In major world stock markets the largest increases were recorded by the Japanese NIKKEI (20.89%) and German DAX (8.4%).

The persistent growth in major Warsaw stock exchange indices in 2005 was primarily related to the rising profits of Polish companies, large capital inflows to domestic investment and pension funds, and growing prices of commodities in the world market. The last factor increased investors' interest in commodity companies. The rising stock exchange indices were accompanied in 2005 by a rise in equity turnover – the average session turnover amounted to over PLN 700 million against PLN 430 million in 2004. In the analysed period, enterprises that gained most on the Warsaw Stock Exchange were construction companies (a rise of almost 50%) and IT companies (a rise of 32%). The banking sector index rose by 21%.

⁴⁴A country complies with the criterion when its (12-month moving) average yield on long-term Treasury bond does not exceed the average arithmetic yield on bonds of three EU countries with the most stable prices by more than 2 percentage points. For more information about the Maastricht criteria see: *Report on the Costs and Benefits of Poland's Adoption of the Euro*, NBP, 2004.

The beginning of 2006 was marked with new records on the Warsaw Stock Exchange. On 20 January 2006 WIG20 reached its all-time high at 2921 points. According to fund managers this was the effect of portfolio capital inflows into the markets of the whole region.

In the opinion of market participants an important factor influencing future trends in the Polish stock market, apart from the economic climate, will be the behaviour of domestic and foreign investment funds. According to many analysts, however, the situation on the Warsaw Stock Exchange in 2006 will not be as good as in 2005.

2.5.2 Exchange rate

In August-December 2005 the zloty was strengthening. In this period the average monthly nominal exchange rate of the Polish currency appreciated by 4.1%. Due to the changes in cross rates, the scale of its appreciation was smaller in relation to the American dollar (1.1%) than against the euro (4.9%). Shifts in the nominal exchange rate were accompanied by the appreciation of the real effective exchange rate deflated with CPI (REER CPI), but due to a low producer price growth rate and a low growth rate of unit labour costs in manufacturing, in 2005 Q4 the real effective zloty exchange rate deflated with these price indices depreciated (Figure 2.22, left-hand panel).

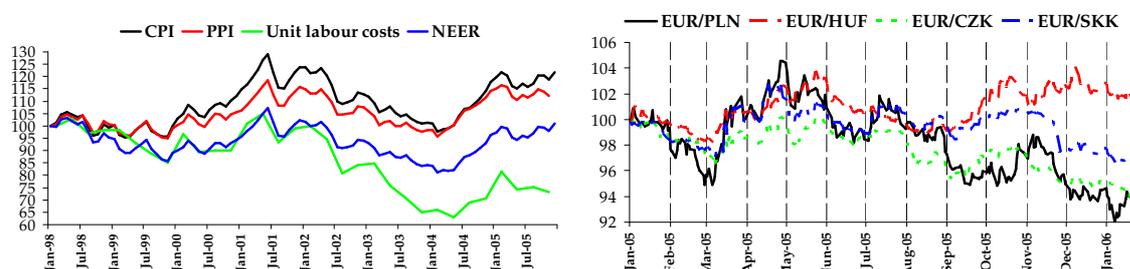


Figure 2.22: Zloty real effective exchange rate (left-hand panel) and nominal exchange rates of Central European currencies against the euro (right-hand panel). Increase denotes appreciation.

Source: NBP, European Commission and EcoWin data.

Note: For unit labour costs (in manufacturing): quarterly data, NBP estimates based on GUS, ECB and European Commission data.

Following a temporary drop in the correlation between EUR/PLN and the exchange rates of euro against other Central European currencies, from November the positive correlation between movements in the value of the zloty and the values of the Czech and Slovak currencies became visible again (Figure 2.22, right-hand panel). In this period, the strengthening of these currencies may have been encouraged by, among other things, the agreement on the EU budget for 2007-2013. Other factors supporting the strengthening of Central European currencies still include the inflow of direct investment and transfers from the EU.

However, the strongest impact on the movements in the value of the zloty in the analysed period was exerted by domestic factors. Signals pointing to the continuation

of a low deficit in trade in goods and services coupled with data indicating an advancing economic recovery and a lower than planned execution of the 2005 budget deficit were conducive to the zloty strengthening. The appreciation was also fostered by the currency exchange effected by the Ministry of Finance in the Polish foreign exchange market and the announcements that similar operations would be repeated in the future. In contrast, the transitory fluctuations of the zloty exchange rate were strongly affected by political developments (general and presidential elections, formation and first decisions of the government), in particular the related uncertainty in regard to the prospects of public finances.

2.5.3 Credit and money

Corporate sector

In the second half of 2005 the nominal value of total indebtedness of enterprises at commercial banks amounted to approx. PLN 120 billion (Figure 2.23). The increase that has been observed since the middle of 2004 in the value of zloty loans to enterprises weakened in the second half of 2005. At the same time, starting from mid-2004 a drop was observed in the zloty value of foreign currency loans to enterprises, mainly due to the concurrent appreciation of the zloty exchange rate. This drop slowed down in the second half of 2005.

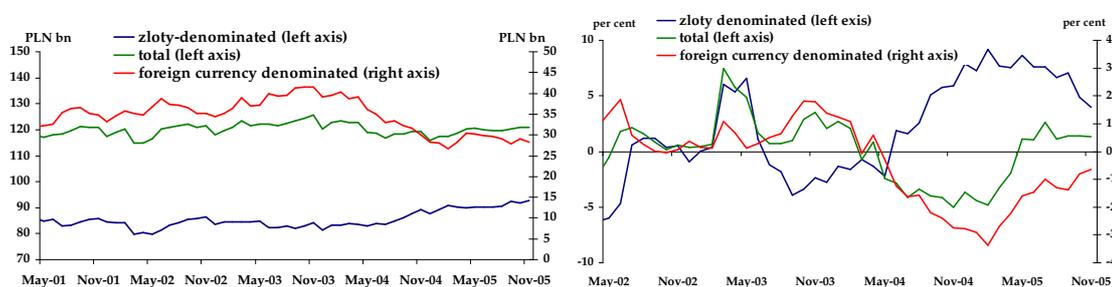


Figure 2.23: Loans to enterprises in nominal terms, with no adjustments for the impact of exchange rate fluctuations. Left panel: outstanding amounts (bn PLN). Right panel: y/y changes (per cent)

Source: NBP data.

On account of the corporate indebtedness structure a more appropriate picture of developments in the loan market emerges from the analysis of data adjusted for the impact of exchange rate fluctuations⁴⁵ (Figure 2.24). They indicate that the annual growth rate of total loans, after rising for about a year decreased slightly in the second half of 2005.

The slight decrease in the corporate loan activity is also supported by the findings of the NBP's survey studies⁴⁶. After a considerable rise in 2005 Q3, in Q4 the net balance of the

⁴⁵In the later part of this section all numerical data on changes in loans to enterprises and their components refer to data adjusted for the impact of exchange rate fluctuations, unless otherwise indicated.

⁴⁶*Preliminary information concerning the condition of the corporate sector and the business tendency in the fourth quarter of 2005* – available at www.nbp.pl.

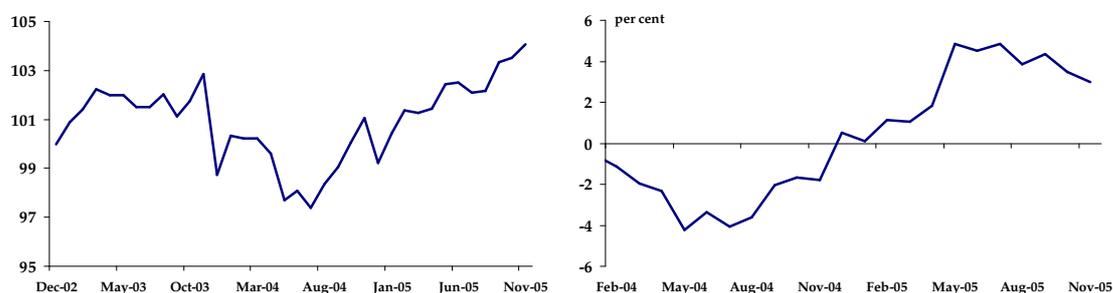


Figure 2.24: Loans to enterprises, data adjusted for the exchange rate fluctuations. Left panel: outstanding loans (index, Dec 2002 = 100). Right panel: y/y changes (per cent).

Source: NBP data.

forecasts of credit indebtedness made by enterprises polled by the NBP (the percentage of forecasts of growth minus the percentage of forecasts of fall) slid to a level close to that recorded in the first half of 2005 and the preliminary results of the poll carried out at the end of December 2005 indicate that this decline will be deepening in 2006 Q1. Also the responses to the survey questions concerning the sources of financing new investments may indicate a decreasing interest in loans. In 2005 Q4 enterprises reported a rise in the importance of own funds and a decrease in the importance of bank loans in comparison to the previous quarter.

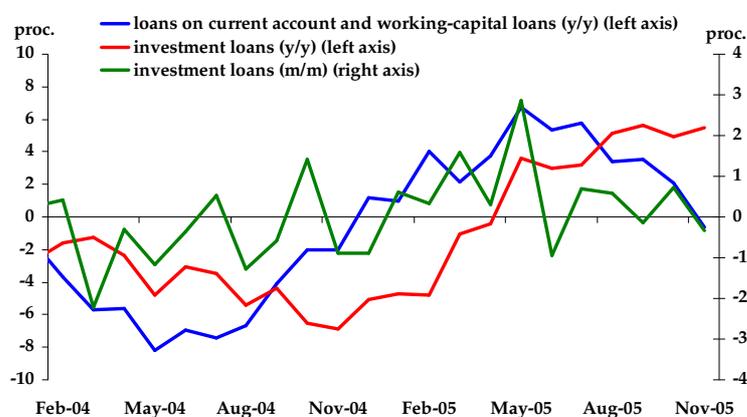


Figure 2.25: Loans to enterprises on current account, working-capital loans and investment loans (y/y growth in per cent), investment loans (m/m growth in per cent). Data adjusted for impact of exchange rate movements.

Source: NBP data.

A slowdown in corporate demand for loans that is visible in surveys submitted by enterprises does not find support in the results of surveys filled out by loan committees at commercial banks⁴⁷, according to which the corporate demand for loans felt by

⁴⁷Senior Loan Officer Opinion Survey on Bank Lending Practices and Credit Conditions (4th Quarter 2005) – available at www.nbp.pl.

commercial banks in the second half of 2005 remains at a moderate level.

The NBP surveys results disclose a rise in uncertainty about the sustainability of the revival in the corporate credit market observed since mid-2004. This uncertainty is supported by banking sector statistics. They indicate that in the second half of 2005 the rising trend of working capital loans and authorised overdraft was halted, which resulted in decelerating this category's growth rate to -0.6% y/y in November down from over 5% y/y recorded in the summer months (Figure 2.25). On the other hand, the rising trend in the value of investment loans has been preserved, though their shrinking month-on-month growth rates attest to its gradual deceleration (Figure 2.25).

The lack of clear recovery in the domestic corporate credit market is matched by an increase in enterprises' foreign debt. The foreign debt of enterprises currently constitutes over a half of their total indebtedness and is characterised by strong concentration⁴⁸. Its value at the end of 2005 Q3 amounted to EUR 43.9 billion⁴⁹, which constitutes a rise of EUR 1.7 billion in relation to the previous quarter (for comparison: the rise in 2005 Q1 was EUR 0.3 billion and in Q2 - EUR 0.9 billion). The main growth component in 2005 Q3 was the rise in borrowing due to loans from direct investors and other (non-trade) loans – a rise of EUR 1.4 billion. The remaining EUR 0.3 billion represents positive exchange rate shifts and valuation differences. The opportunity of foreign financing is mainly taken by enterprises having a strong market position that, in most cases, have a foreign investor, which facilitates access to foreign financial markets.

	Loans			Deposits		
	total	households	enterprises	total	households	enterprises
Dec-04	10.4	12.1	8.3	3.7	3.8	3.4
Jan-05	10.3	12.0	8.4	3.7	3.8	3.4
Feb-05	10.2	11.9	8.2	3.7	3.8	3.3
Mar-05	10.0	11.7	8.0	3.7	3.8	3.3
Apr-05	9.6	11.5	7.4	3.4	3.5	3.1
May-05	9.6	11.4	7.3	3.1	3.1	2.9
Jun-05	9.2	11.0	6.8	3.0	3.1	2.8
Jul-05	8.9	10.7	6.6	2.9	3.0	2.5
Aug-05	8.9	10.6	6.5	2.9	3.1	2.3
Sep-05	8.8	10.5	6.4	2.7	2.8	2.2
Oct-05	8.6	10.3	6.3	2.7	2.8	2.2
Nov-05	8.7	10.3	6.3	2.7	2.8	2.2

Table 2.8: Average weighted interest rate on loans and deposits in commercial banks
Source: NBP data.

Commercial banks retained their loan margins practically unchanged in the second half of 2005, and thus the interest on corporate loans was decreasing in this period at a pace similar to the NBP's rate shifts (Table 2.8). The NBP's survey studies suggest

⁴⁸About 30% of the foreign debt of non-government and non-bank sectors represents the liabilities of 28 enterprises, and a half of it represents the debt incurred by 104 enterprises.

⁴⁹Available data on non-government and non-bank sector indebtedness cover the period through 2005 Q3.

that the cost of credit does not impede the development of corporate activity – in 2005 Q4 only 2.6% of the surveyed enterprises named interest on loans as one of the factors limiting their activity (in 2005 Q3 the percentage was 3.4%).

The growth in corporate deposits is continuing. After a short period of deceleration in 2005 Q2, in the second half of the year the annual growth rate in corporate deposits accelerated to approx. 20%. Due to the very good current financial situation of enterprises, in particular a significant amount of own funds, it can be expected in line with the pecking-order theory (see Box) that companies will finance their new investment first of all from own funds. Thus, in view of the expected investment recovery some slowdown should be anticipated in the corporate deposit growth.

Pecking-order theory

Pecking-order theory – Myers, S.C., *The capital structure puzzle*, Journal of Finance 39/1984 and Myers, S.C., Majluf, N., *Corporate financing and investment decisions when firms have information that investors do not have*, Journal of Financial Economics, 13/1984 - claims that, due to the information asymmetry in the assessment of the actual state of the enterprise between new investors and its current owners, the quality of good companies' liabilities is sometimes undervaluated. This asymmetry is most pronounced in case the additional capital is raised by issuing new shares. In this situation the asymmetry leads to disproportional increase in the new investors' share in the profit at the expense of the "old" ones. To a lesser extent, this phenomenon occurs in case of debt issuance, but it does not occur at all in case of own fund financing. That's why these funds are deemed as the basic financing source for the enterprise's undertakings, while the other sources are only resorted to once own funds have been drained, in the order presented above. More recent research studies demonstrate that enterprises may tend to keep considerable own funds even after the completion of bigger investment projects. In light of new empirical research, the pecking-order theory copes extremely well with accounting for short-term financial decisions of enterprises. Large empirical literature (Mayer C., Sussman, O., *A New Test of Capital Structure*, Said Business School, University of Oxford, March 2002, Rajan R. Zingales L. *What do we know about capital structure? Some evidence from international data*, Journal of Finance, 50/1995) also confirms that own funds are the main financing source of "normal" investment activity.

Both the data on changes in the volume and structure of corporate indebtedness in the second half of 2005 and the findings of survey studies on crediting enterprises' activities by banks indicate rising uncertainty as to the scale of the expected enlargement of corporate investment activity in the nearest future. However, the moderate growth rate of domestic corporate lending may also stem from the scale of financing investment and current operations of enterprises with own funds and the rising foreign debt of enterprises. Nevertheless, as the anticipated investment recovery is consolidating, a stepping up may be expected in the growth rate of corporate indebtedness, which may

be additionally encouraged by strong competition between banks and their easing of requirements for borrowers.

Household sector

Loans to households are still building up fast. In the second half of 2005 their nominal growth rate remained at approx. 20% (Figure 2.26, left-hand panel). Housing loans have been on a steep incline. However, as had been signalled in the last two *Reports*, around the middle of 2004 their growth ceased to be the only source of growth for the aggregate as a whole. The increase in consumer loans is similarly important at the moment. Housing loans denominated in foreign currencies have been growing faster than zloty loans (Figure 2.26, right-hand panel), which has been increasing the share of foreign currency loans in total housing loans – at the end of November 2005 their contribution reached 63.4%.

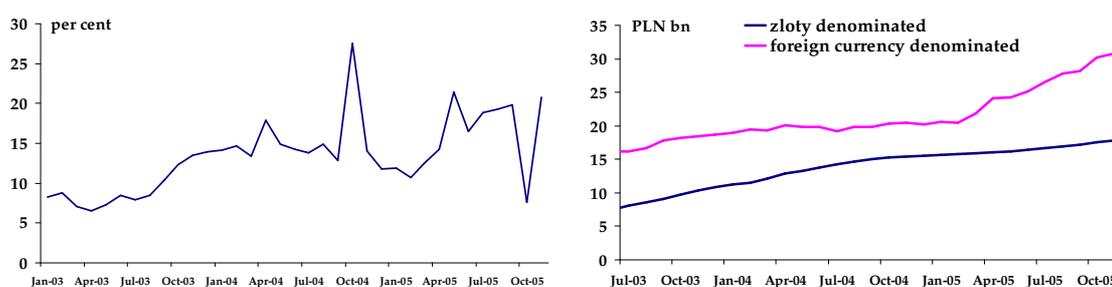


Figure 2.26: Loans to households in nominal terms, with no adjustment for the impact of exchange rate fluctuations. Left panel: total loans to households (y/y growth in per cent). Right panel: outstanding amount of housing loans to households – currency breakdown.

Source: NBP data.

The analysis of loan growth is hampered by fluctuations in the zloty exchange rate. Therefore, Figure 2.27 shows the annual rates of change of total loans to households and also housing and consumer loans adjusted for exchange rate movements⁵⁰. The growth rate of housing loans, following a transient decline to approx. 30% in the middle of 2005, accelerated again over the last few months to reach the level of 39.1% in November 2005. The growth rate of consumer loans also remained on a rising path, reaching 20.0% in November 2005. Absolute increases in both these categories are similar – the value of housing loans rose in the twelve months from November 2004 by PLN 14.4 billion, while the value of consumer loans – by PLN 10.6 billion (Figure 2.28, left-hand panel).

The dynamic growth in housing loans is being stimulated by a strong demand from households and also by banks' endeavours to improve loan availability. The factors that

⁵⁰All considerations in the later part of this section, unless otherwise indicated, refer to series adjusted for the impact of exchange rate fluctuations.

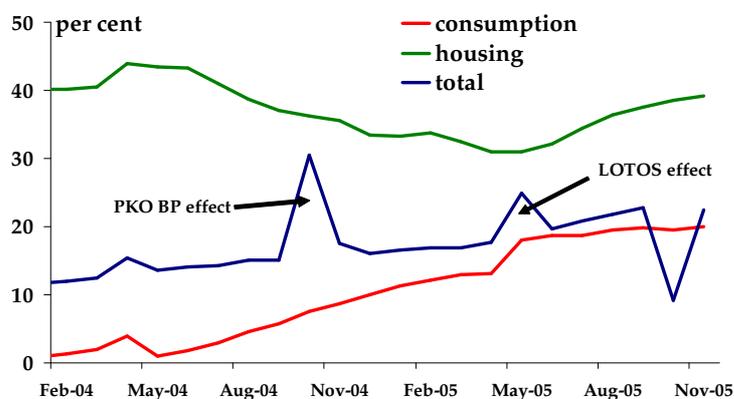


Figure 2.27: Loans to households (y/y growth in per cent, data adjusted for the impact of exchange rate movements)

Source: NBP data.

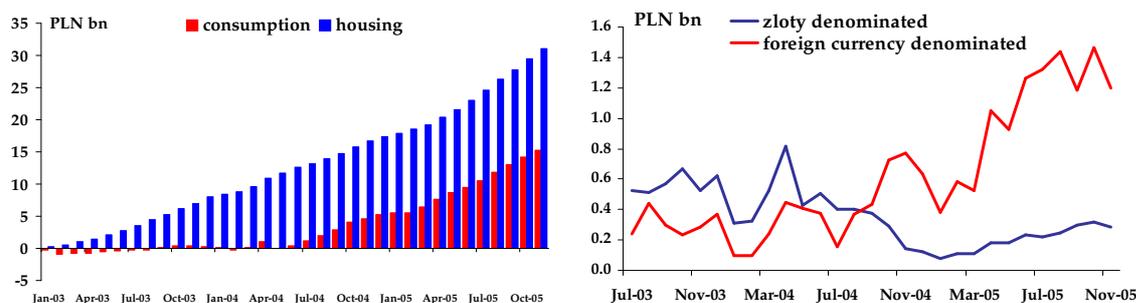


Figure 2.28: Growth structure of loans to households (data adjusted for the impact of exchange rate fluctuations). Left panel: cumulative monthly changes of loans in the period from January 2003. As can be seen, starting from the middle of 2004 the increases of consumer loans are almost equal to those of housing loans. Right panel: monthly changes of zloty denominated and foreign currency denominated housing loans.

Source: NBP data.

have been contributing to consolidating the demand for housing loans include improving financial prospects for households, the anticipated rise in the VAT rate on new flats, Poland's demographic situation⁵¹ and, finally, the expectations for further increases in flat prices, particularly in the largest urban areas. According to the findings of the NBP survey studies⁵² the value of granted housing loans is also increasing due to activities of banks, particularly their easing requirements for borrowers, which is an outcome of a strong competition in the housing loan market, the development of loan intermediation, extending loan maturities and enlarging the offer of foreign currency loans with

⁵¹Young people born in boomer years are currently entering the labour market. The demand is further increased by migrations to the largest cities, mostly in search of employment.

⁵²Senior Loan Officer Opinion Survey on Bank Lending Practices and Credit Conditions (4th Quarter 2005) – available at www.nbp.pl.

relatively low interest. Another factor raising the demand for housing loans are the decreasing interest rates of zloty loans, which are closely following the movements of WIBOR. In November 2005 the average-weighted value of housing loans interest rates stood at 6.0%. The strength of reaction of the demand for housing loans to changes in domestic interest rates is rather limited due to significantly lower interest rates on available foreign currency loans (Figure 2.28, right-hand panel).

Although the interest on consumer loans remains high (at 15.2% in November 2005), they are building up quickly, mainly because the good financial condition of households increases their creditworthiness, and also due to banks' activities aimed at increasing loan availability. Even though banks surveyed by the NBP in 2005 Q3 felt a drop in the demand for consumer loans (which they claim to have resulted mainly from a decrease in the demand for financing durable goods accompanied by some worsening in the economic standing of households), in view of preliminary results of survey studies conducted in 2005 Q4 it seems that this was a one-off observation. This conclusion is also supported by GUS business tendency surveys, which do not suggest any deterioration in either current or expected financial standing of households⁵³.

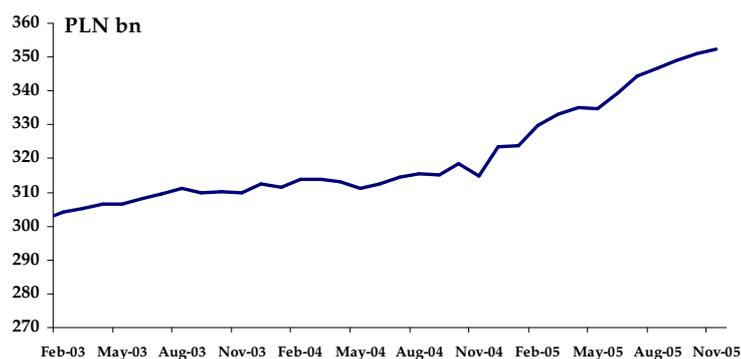


Figure 2.29: Households' financial assets (PLN bn, data adjusted for the impact of exchange rate changes, December 2002 exchange rate relationships).
Source: NBP estimates.

The value of households' deposits at banks has remained stable since 2005 Q2. The annual growth rate in notes and coin in circulation, after a transitory drop in late 2004 and at the beginning of 2005, is climbing up to its previously recorded level. At the same time, since the beginning of 2005 there has been a dynamic increase in the value of substitutes to bank-deposits held by households, such as investment fund units or Treasury securities. Consequently, the sum total of financial assets held by households is growing fast (Figure 2.29). The structure of households' financial assets is constantly shifting as the share of traditional bank deposits is shrinking and the contribution of alternative instruments is expanding at their expense (Figure 2.30).

The prospects for the continuation of high economic growth and, consequently, a good financial standing of households should favour further upsurge in lending to this sector.

⁵³Consumer Sentiment Survey, December 2005, GUS

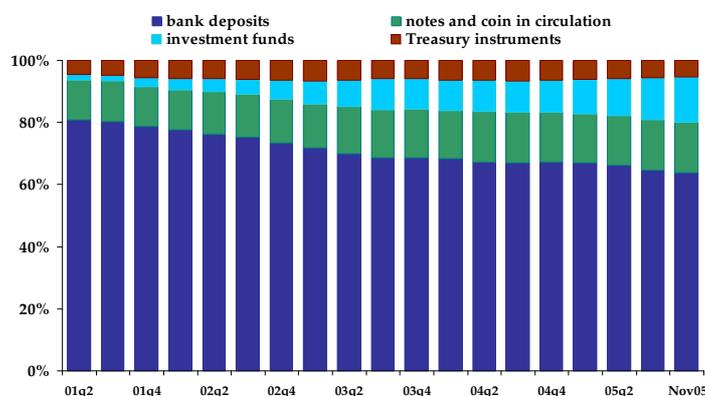


Figure 2.30: Structure of households' financial assets
Source: NBP estimates.

This will apply both to housing and consumer loans, though in the latter case signals from commercial banks indicate possible modifications to the currently observed trend.

Monetary aggregates

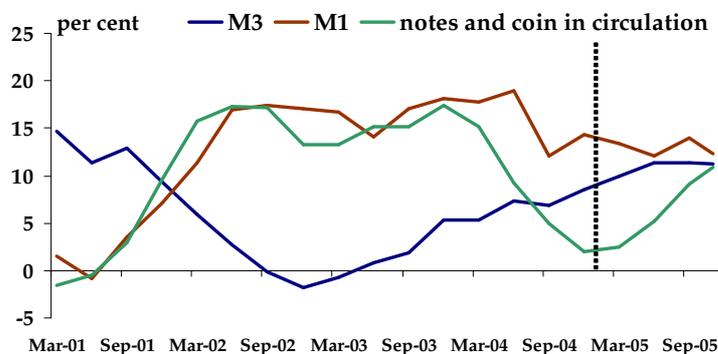


Figure 2.31: M1, M3 and notes and coin in circulation (nominal y/y growth in per cent)
Note: Methodological changes to monetary statistics introduced at the beginning of 2005 make it difficult to compare the 2005 figures with the earlier ones. The vertical line in the chart marks the boundary for data comparability.
Source: NBP data.

The trends in loans in the banking sector find reflection in the developments of the major monetary aggregates (Figure 2.31). The change rate in broad M3 money supply remained on a rising trend and in November 2005 reached the level of 11.3%. Starting from the end of 2004, the narrow monetary aggregate M1 has been growing steadily at the rate of approx. 13% y/y. The annual growth rate of notes and coin in circulation, after a drop to approx. 2% at the beginning of 2005, rose again to 10.9% in November. Its fluctuations result from the shift that has occurred in the structure of the narrow

money supply M1 (Figure 2.32).

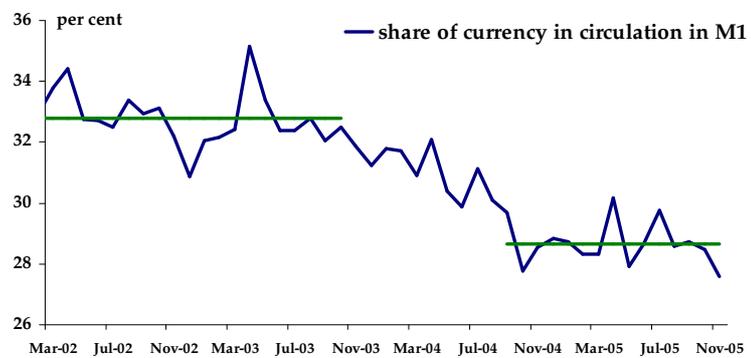


Figure 2.32: Share of currency in circulation in M1 aggregate
Source: NBP data.

Monetary policy in September 2005-January 2006

In September 2005 the Council published the *Monetary Policy Guidelines for the Year 2006*, in which it maintained its previous understanding of the permanent inflation target set at the level of 2.5% with a symmetrical tolerance range for deviations of +/- 1 percentage point. The Council confirmed that the monetary policy would be focused on maintaining inflation as close as possible to the 2.5% target in the mid-term. The Council declared that in 2006 monetary policy would be conducted so as to achieve the target in the horizon of 5 to 7 quarters. However, this period might be shorter or longer depending on the type and strength of shocks affecting the Polish economy. The MPC pointed to the likely favourable changes in the functioning of the labour market, not least an increase in its flexibility, which should be conducive to limiting the impact of shocks on inflation.

In the course of preparing the *Monetary Policy Guidelines* the Council decided not to announce its monetary policy bias any more on the grounds that this instrument of communication might limit the flexibility of the pursued monetary policy. Instead of making the bias known to the public, the Council will be communicating its assessment of the balance of factors influencing future inflation. This balance is based on the inflation projection, which is an important input into monetary policy decision-process, the assessment of the actual economic developments that may deviate from the scenario presented in the projection, as well as the course of variables and information not accounted for directly in the projection.

In October 2005 the Council also decided to change the release schedule of the *Inflation Report* and projections of inflation and GDP prepared by NBP staff, which form a part of the *Report*. This decision was connected with a new release schedule of quarterly data on national accounts published by the GUS (CSO). The GDP estimates are now released no later than 60 days after the end of each quarter, i.e. a few days before or after the publication of the *Inflation Report*. Therefore, with the previous *Report* publication schedule in place, it would not be possible to include the latest GUS estimates in the NBP document. Consequently, the publication of the *Inflation Report* was shifted from November 2005 to January 2006. Subsequent *Reports* are to be released quarterly, i.e. in April, July and October 2006.

In September-December 2005 the Monetary Policy Council kept the NBP's interest rates unchanged. At the same time, the MPC maintained its easing monetary policy bias, as in the view of the Council the probability of inflation running below the target level of 2.5% in the monetary policy transmission horizon exceeded the probability of inflation running above 2.5%. In January 2006 the MPC lowered interest rates by 0.25 percentage point, and thus at the end of this period the reference rate was at 4.25%, the lombard rate at 5.75%, the deposit rate at 2.75%, and the rediscount rate at 4.50%.

The data published in September 2005 – January 2006 indicated a strengthening of the economic recovery in Poland observed since 2005 Q2. There was a progressive increase in the annual growth rate in manufacturing and a moderate rising trend in retail sales. The recovery in construction continued, though its pace was decreasing in October and November. The assessment of economic climate, as signalled by enterprises in GUS business tendency surveys, did not change in any significant way, while the favourable results of the enterprise sector in the first three quarters of 2005 pointed at a good economic situation of the surveyed companies: growing revenues, high profitability and a safe level of liquidity (in 2005 Q3 this level reached the highest value in the history of GUS survey).

According to GUS estimates, the year-on-year GDP growth in Poland in 2005 Q3 was higher than in Q2 and consistent with the August *Inflation Report*. Also consistent with the NBP expectations were the growth rates of individual consumption and investments. Net exports - despite a strong appreciation of the zloty - remained the major demand factor of economic growth in 2005 Q3. The contribution of net exports to GDP growth proved significantly larger than expected in the August *Report*. At the same time, however, GUS data pointed to a gradual acceleration in domestic demand, including investment growth rate. Preliminary data on national accounts in 2005 confirm strengthening of favourable growth tendencies in the economy.

Data available in the analysed period suggested a sustained improvement in the labour market. There was a steady increase in the annual growth rate of employment in the corporate sector accompanied by a simultaneous decline in the unemployment rate. According to BAEL (Labour Force Surveys), the moderate growth rate in the number of working persons in the economy was sustained in 2005 Q2, while the data published after the MPC December meeting pointed to a significant acceleration in the number of working persons in 2005 Q3. Consequently, the data indicate that improvement in the labour market is larger than expected in the previous *Report*.

In 2005 Q3 the rate of growth in nominal wages in the economy recorded a slight drop in relation to the preceding quarter, which was connected with shifts in additional payments of remunerations in the section *post and telecommunications*. In the corporate sector, the growth rate of nominal wages in August-September remained at a moderate level. In October and November, however, corporate wages rose considerably and stabilised significantly above market expectations. To some extent, the rise in the wage growth rate in those months resulted from time shifts in the payment of additional remunerations in some sections (post and telecommunications and mining). These shifts also reduced the wage growth rate in enterprises in December (down to

1.5% y/y). In the whole of 2005, the wage growth rate in enterprises was at 4.8% y/y, which was higher than in the first three quarters of 2005.

As expected, in August-December 2005 the annual growth of consumer prices ran notably below the inflation target. In 2005 Q3 consumer price inflation was slightly above expectations presented in the August *Inflation Report*, while the data for October and November indicated that in Q4 it would be consistent with those expectations. The latter was confirmed by data on December 2005 inflation, published by GUS in January 2006.

In August 2005 inflation expectations of individuals reached their lowest value in 2005 (1.3%). They slightly increased in the two subsequent months to reach a level of 1.5% in the period from October to December 2005, i.e. 1 percentage point below the inflation target of the NBP (2.5%). In January 2006, inflation expectations of individuals dropped to the level of 0.9%, i.e. markedly below the target of 2.5%. In the whole of the analysed period, inflation forecasts of bank analysts rose slightly, but also stayed below the NBP's target level.

Despite some strengthening in the recovery of the Polish economy, in the period under review all core inflation indices went down. Low 'net inflation' indicated that the demand-driven inflation was limited. Moreover, the recorded growth rate of core inflation measures indicated the so-far limited impact of high fuel prices on the prices of other consumer goods and services.

In August-November 2005 producer prices in industry continued to fall in year-on-year terms and increased slightly in December. The low level of PPI could be attributed to a moderate growth of domestic demand and a stronger than a year before zloty exchange rate, which offset the impact of high oil prices on producer prices.

Over the period between the MPC meetings in August 2005 and January 2006 the zloty exchange rate appreciated and remained stronger than it had been accounted for in the August *Inflation Report*. The stronger zloty exchange rate had the effect of reducing inflation.

In the reviewed period, the most important sources of uncertainty accounted for by the Council were the prospects of investment activity and the impact of globalisation and commodity prices on the outlook for economic growth and inflation.

Economic recovery continued to strengthen over the analysed period accompanied by an increasing growth rate of investment. In the longer term investments are a key factor in sustaining economic growth. Still, the prospect for a further acceleration in the investment process continued to be uncertain. A very good economic standing of companies suggested that their financial situation should not be an obstacle to increasing investment outlays. Further, the conditions of external investment financing were favourable due to relatively low interest rates in Poland and the euro area and an exceptionally good situation in the capital markets. The continuing growth in corporate lending, and especially in foreign loans of enterprises, indicated rising investment activity. On the other hand, the limited growth rate in private consumption and thereupon based assessments of future demand may be conducive to slowing down investments.

Moreover, statistical data on the domestic credit market in the second half of 2005 and the findings of survey studies of credit activity of enterprises in 2005 Q4 could rebut the expectations for significant investment acceleration. This could result from fears about further appreciation of the zloty, growing political uncertainty, lack of clarity regarding the future total fiscal burden, the tax system and uncertainty as to higher oil prices. Negative impact on the propensity to invest is exerted by the lack of progress in institutional reforms, on which the investment climate in the country depends.

A factor that attracted a lot of the Council's attention was the impact of processes occurring in the surrounding of the Polish economy on inflation. Amid advancing economic growth, inflationary pressure may be reduced by the import of goods from countries with low production costs. At the same time, it can be expected that in the longer horizon the increasing scale of the production relocation by Polish companies to these countries will be curbing wage pressure. On the other hand, the outflow of labour force to other EU countries may lead to increased wage pressure and higher inflation. It is very difficult to assess the persistence and scope of the impact of globalisation on price developments in particular countries, Poland included, and thus it is one of the major uncertainty factors in pursuing monetary policy in economies open to international exchange.

The Council also discussed the impact of current and forecast oil prices on inflation. It may be expected that in the short-term heightened oil prices will lead to price increases, yet the scale of these effects will be to a large extent dependent on exchange rate movements and price policies of fuel companies. In the longer term, however, higher oil prices may lead to a contraction of demand and the associated inflationary pressure. The monetary policy decisions should also take into consideration a possible impact of heightened oil prices on wages and inflation expectations. The scale of this impact may increase as the economic recovery consolidates.

In September-November 2005 the Council was of the opinion that the persistently low growth rate of unit labour costs in the enterprise sector coupled with a drop in current inflation and continuously low values of core inflation measures indicated limited inflationary pressure. At the same time, however, the Council acknowledged the possibility that the balance of factors influencing future inflation might be modified if there appeared signals of a heightened probability of the emergence of second-round effects. Further, due to the fact that forecast oil prices were higher than those assumed in the August inflation projection and given the higher than expected inflation rate in 2005 Q3, inflation could, in the Council's assessment, return to the target sooner than it followed from the August inflation projection.

In December the Council judged that the level of CPI and core inflation measures in November, indicated a, so far, limited influence of high energy prices on prices of other consumer goods and services. This judgment led to the revision of the previous assessments concerning the impact of crude oil prices on future inflation path. The Council came to the opinion that inflation may in fact take longer to return to the target than it had been assessed in the previous meetings.

The NBP inflation projection presented in the January Inflation Report was prepared on the basis of data available as of 2 January 2006 and so, among others, it does not account for the GUS estimates of GDP in 2005. The projection indicates that with a 50-percent probability the annual GDP growth should stay in the range of 3.8%-5.1% in 2006, 3.4%-5.2% in 2007 and 3.6%-5.5% in 2008, respectively. The January inflation projection indicates that growth in prices in 2006 will be lower than expected in the August projection. In 2007 inflation will accelerate and at the end of the year should be close to the level from the projection presented in August 2005. Assuming unchanged interest rates, there is a 50-percent probability that inflation will stay within the range of 0.5%-2.3% in 2006 Q4 (compared to 1.0%-3.1% in the August Report) 1.1%-3.6% in 2007 Q4 (compared to 1.2%-4.1%) and 0.8%-3.9% in 2008 Q4.

It has to be emphasised that the inflation projection and the distribution of probabilities presented in the Report do not account for all sources of uncertainty related to the scale of future rise in employment, the impact of globalisation effects on price processes, the economic policy of the government in the years to come and the path of the exchange rate. Moreover, the projection does not allow for the latest developments which may have great bearing on the forecast growth of prices. On the one hand, oil prices in January 2006 were higher than accounted for in the projection. On the other, the zloty exchange rate in January was stronger and the data on national accounts indicate that the GDP growth in 2005 Q4 and the whole of 2005 was slightly lower, while the rise in investments was significantly higher, than assumed in the January projection.

The Council maintains its conviction that implementing an economic strategy focused on creating conditions which ensure the introduction of the euro at the earliest possible date would be most favourable for Poland and would contribute to higher long-term economic growth.

Projection of inflation and GDP

The projection of inflation and GDP was prepared with the use of the macroeconomic model ECMOD by a team of NBP economists led by the Director of the Macroeconomic and Structural Analyses Department Adam B. Czy'ewski. The NBP Management Board has approved the projection to be submitted to the Monetary Policy Council. The inflation projection is one of the inputs to the Monetary Policy Council's decision-making process. The cut-off date for the assumptions of the current projection was 2 January 2006. In consequence, the January projection is based on NBP estimates concerning macroeconomic categories in 2005 Q4.

4.1 Introduction

Due to the fact that publication schedule of *Inflation Reports* has been adjusted to the GUS calendar of releasing quarterly data on national accounts, the gap between the previous and the present projection enlarged from 3 to 5 months. In that interval the Monetary Policy Council received a monthly balance of factors influencing future inflation prepared on the basis of released data. Monthly data on the real sector of the economy suggested that real processes and the path of GDP would be consistent with the August projection, while the constantly higher oil prices, in comparison to those accounted for in the August projection, give grounds to suspect that inflation path may in fact be running higher than in the summer projection. The shifting of the balance of risks towards higher inflation became more probable when inflation in 2005 Q3 proved higher than anticipated, and then its level in October deviated upwards from expectations. Data on national accounts in 2005 Q3 published in December confirmed previous expectations concerning the real sector. The rate of GDP growth in Q3 turned out to be consistent with the projection. At the same time, the published updates of quarterly national accounts for the past two years, which, on the one hand, adjusted upwards those components of domestic demand that are significant for the projection (such as consumption and investment outlays) and, on the other, decreased the contribution of net exports to GDP growth, made probable the materialisation of a high GDP growth rate in 2005 Q4, as projected in August. A faster than forecast in August growth in the working population in 2005 Q3 and Q4, coupled with the wage growth rate in 2005 Q3 equal to, and in 2005 Q4 even higher than that forecast in August, gave grounds to

expect inflation to rise above its forecast in the longer horizon, despite some drop in November and December attributable to bird flu menace and unexpected, in the face of high oil prices, slide in fuel prices, which resulted from a deeper than expected reduction in producer margins.

In line with expectations formulated in the balance of risks the inflation projection based on ECMOD model, which is discussed later on in this chapter, does not diverge significantly from the one published in the *August Inflation Report*. Main differences concern the inflation path in 2006 and are connected with a lower path of food and fuel prices, the latter being mainly affected by the considerably deeper than expected reduction of margins in December 2005 and the fact that rates of excise tax reduced in September 2005 were not raised throughout 2006. In 2007 inflation is gaining momentum and returns to the path projected in August, and throughout 2008 it remains on target.

The fundamental reason why the present projection is not higher (as anticipated in the balance of risks), in the horizon of monetary policy transmission, than that presented in August, even though the model has not been modified (parameters of the model have not been reestimated on new data) is a lower forecast growth rate of investment outlays plus a slightly lower rate of economic growth. The adjustment of assumptions concerning the utilisation of EU funds after 2006 has been an important factor in the assessment of the future investment path.

	04q1	04q2	04q3	04q4	05q1	05q2	05q3	05q4
GDP y/y	6,8	5,9	4,8	3,9	2,1	2,8	3,7	4,8
contributions to growth:								
Domestic demand	7,1	7,5	6,0	3,9	1,1	-0,6	1,6	3,9
Consumption + investment	4,6	4,9	4,3	4,0	1,9	2,2	2,9	4,0
Change in inventories	2,5	2,6	1,7	-0,1	-0,7	-2,8	-1,3	-0,1

Table 4.9: Contribution of domestic demand to GDP growth
Source: GUS data, 2005q4 – NBP estimates

While assessing the current and future path of domestic demand it is, first of all, necessary to pay attention to consumption and investment. The quarterly estimates of growth in inventories published by the GUS are subject to strong fluctuations which, to some extent, distort the information on the dynamics of domestic demand (e.g. 2005 Q2 – Table 4.9), and what is more the movements in inventories are more strongly correlated with net exports than domestic demand net of inventories, i.e. the sum total of consumption and investments⁵⁴. As a result there is a considerable risk of actual inventories deviating from the projection which assumes that the rise in inventories is

⁵⁴Correlation coefficients between the contributions in the GDP growth of inventories growth and the sum total of consumption and investments on the one hand and the rise in inventories and net exports on the other, amount to 0.19 i -0.42 for sample 1996 Q1-2005 Q4 and 0.40 i -0.85 for sample 2000 Q1-2005 Q4.

roughly proportional to GDP growth. Thus, in assessing domestic demand, the analysis of the growth rate of consumption and investments is much more justified.

The uncertainty surrounding an inflation projection prepared on the basis of econometric model of economy may be divided into two subcomponents, i.e. uncertainty as to the projection itself with the assumption that model adequately describes the reality and uncertainty concerning the adequacy of the model itself. The first type of uncertainty concerns the projection, which – by definition – is treated as unbiased. Under this assumption the projection errors may be treated as random variables with a known distribution, which makes it possible to analyse the risk in probability terms and present the uncertainty in the form of a fan chart. In case of uncertainty about the adequacy of the model we suspect (assert with some probability) that the model generates biased projections. Because we are usually not able to measure the bias *ex ante*, we cannot analyse the risk in terms of probability nor can we present it in a fan chart.

Usually, while discussing the uncertainty concerning the projection it is enough to focus on the uncertainty stemming, in the projection horizon, from the path of exogenous variables and random components in the forecasting model which is assumed to adequately map inflation processes. This type of uncertainty is conventionally presented in the form of a fan chart.

Now passing on to the second-type uncertainty it has to be observed that the construction of a macroeconomic model of economy makes use of specific theoretical assumptions to derive dependencies (equations) holding between variables of the model. In turn, the parameters of the model's equations, which are, among others, responsible for its dynamic properties (the pace of adjusting the deviations of variables from their long-term paths), are estimated or calibrated on the basis of historical data. These characteristics of the model (theoretical assumptions and estimated values of parameters), determining the degree of its adequacy in describing the reality, may be an important source of deviations of future inflation realisations from their forecast values. This risk is not accounted for nor quantified, for methodological reasons, by the fan chart.

Together with the data on national accounts for 2005 Q3 the GUS published a significant update of the data on national accounts since 1995. In face of such a fundamental and deep adjustment of the sample the ECMOD model should be, in fact, reestimated. However, as the reestimation of models usually involves considerable modifications to the specification of equations and, consequently, to the way models react to typical shocks, the properties of models should be thoroughly examined after such reestimation. Due to the fact that the time-span between the release of the data update and the publication of the projection was too short to carry out the necessary tests of the model's properties with newly estimated parameters, no reestimation of ECMOD model parameters was performed, which might have deteriorated its capacity to accurately replicate some economic mechanisms thus raising the probability of the projection being biased. For this reason, the projection description pays particular attention to the second type of projection uncertainty connected with the model's adequacy, as this type of uncertainty affects the January projection to a much greater extent than it used to bear on the

August and previous projections. As mentioned before, the uncertainty concerning the model's adequacy is not accounted for in the fan chart, as the chart is constructed with the assumption that the forecasting model is adequate (does not generate biased projections). In our opinion the level of this second-type risk, which cannot be accounted for or presented in the fan chart, increased in-between the projections to the extent requiring a separate treatment, which is offered in the final section of this chapter. We have concluded that this way of discussing projection uncertainty (fan chart with no changes to the model plus extra-model analysis of uncertainty connected with a different course of economic processes than assumed in the model) is a better solution than introducing expert adjustments to the model itself in order to account for other developments than those following from model mechanisms.

A key factor in assessing the outlook for inflation, particularly in the longer-term horizon, is the consideration of reasons and persistence of changes in the labour market. Data published on the number of working persons and the economically active figure in 2005 Q3 according to BAEL were considerably higher than previously expected. A higher than forecast by experts rate of growth in the number of working persons in 2005 Q3 was accounted for while determining the starting point for the projection, but the higher number of economically active was not adjusted correspondingly. In line with the dependencies holding within the ECMOD model, where the demand for labour is, among others, dependent on the level of business activity, capital assets and real wage level, after a rise in the growth rate of working persons at the end of 2005 not matched with a corresponding rise in output that would suffice to uphold it, the growth rate of working population is gradually decreasing in the direction of long-term growth rate consistent with the constant contribution of wage bill in GDP (as implied by the Cobb-Douglas production function). In line with its internal logic, the model interpreted, against the backdrop of other macroeconomic variables, the rise in the number of working persons observed for a very short period (in proportion to the whole sample span) as an "unusual" development and so the error-correction mechanism brought the number of working persons down to the vicinity of its long-term path (the rate of growth in the number of working persons decreased from 2.3% in 2005 to 1.4% in 2006 and 0.8% in 2007-2008).

However, while assessing the risk of inflation deviating from the projection we should not disregard alternative scenarios of the situation in the labour market, i.e. scenarios entailing that the improvement observed in the labour market may, in fact, prove permanent. Because these scenarios may be assigned a significant probability of materialisation, they have been considered in the uncertainty analysis though not included in the fan chart.

4.2 Assumptions for the January projection of inflation and GDP

Since August 2005 new information has been released making it possible to adjust the forecasts of the developments of variables exogenous to the model. In the assumptions on the exogenous variables only data available as of 2 January 2006 (which was the cut-off of the projection) was taken into consideration.

External demand and euro area inflation

The data on GDP growth in the euro area in 2005 Q3 (1.6% y/y) was consistent with the assumptions of the August projection. The growth acceleration was driven mainly by a rise in the investment growth rate (of 1.3 percentage point up to 3.2% y/y), while the annual individual consumption growth was moderate and reached 1.5%. According to the authors of the projection, GDP in the euro area grew by 1.4% in 2005 (against 1.3% in the August projection), while the growth forecasts for 2006, 2007 and 2008 are at 1.9% (1.9%), 2.0% (2.2%) and 2.2%, respectively. The main growth factor in the euro area should be the recovery in investment demand, which is heralded by low cost of capital and high profits of enterprises.

The slightly lower-than-expected inflation (GDP deflator) in 2005 Q2 and Q3 contributed to a certain downward revision of the inflation estimates in the euro area in 2005⁵⁵ (down to 1.2% from 1.3% in the August projection).

The low inflation prognosis for the euro area formulated in August has also been upheld for 2006 (1.5%) and slightly revised downwards for 2007 (down to 1.6% from 1.7% in August). The main factors contributing to the reduction of the inflationary pressure on prices in the projection horizon include a weak GDP growth rate, continuing negative output gap and a low growth rate of unit labour costs. In turn, the risk of inflation growth is associated with a change in tax rates and elevated crude oil prices, which may also lead to weaker economic growth in the euro area. At the same time, it has to be emphasised that the path of external demand will be largely affected by the economic policy pursued by the new government in Germany, where a stronger than expected recovery is in fact possible.

Foreign interest rates

The interest rate path in the euro area accounted for in the projection is consistent with the financial markets' expectations, which have been revised upwards since August 2005. The forecast 3-month LIBOR rates for the euro are increasing throughout the

⁵⁵The low GDP deflator-measured inflation accompanied by a growing CPI-measured inflation results from a different impact of growing oil prices on those price indicators – in the case of the GDP deflator this impact is insignificant.

projection horizon, reaching 3.18% in 2007 Q4 (against 2.83% anticipated in the August projection) and 3.24% in 2008 Q4. The nominal disparity of interest rates is lower than expected in August throughout the projection horizon.

Crude oil prices

In the view of the observed upward trend in prices in the world crude oil markets, their forecast has been revised upwards in relation to August 2005. The scale of this rise corresponds to the developments in forward market prices and the adjustments made by institutions monitoring the oil market.

In the present projection it has been assumed that the average price of an oil barrel will rise to approx. USD 61 in 2006 (in the August projection: to approx. USD 54) and then drop slightly to approx. USD 58 in 2007 (approx. USD 53) and USD 52 in 2008. These assumptions are based on a long-term forecast of the US Department of Energy from December 2005. At the same time, the unstable political situation in important oil producing regions (Iran and Nigeria) constitutes a significant factor of further growth in oil prices.

In comparison with the August projection, changes in the path of fuel prices in the projection horizon were mainly the result of the above mentioned revision of the path of oil prices and change in the assumptions of the excise tax rate. In line with the declarations of the government, it was assumed that the excise tax on fuels reduced in September 2005 will not be changed in 2006. It was assumed, however, that it will only be raised from 2007. The August projection did not account for a reduction in the excise tax on fuels in 2005; instead, it assumed that the excise tax would start rising as early as 2006.

As a result, in 2006 fuel prices will increase at a lower growth rate than accounted for in the August projection. In subsequent years, despite decreasing oil prices, fuel prices will continue to rise, which results, among other things, from the forecast changes in the excise tax in 2007 and the anticipated increase in the distribution margin in retail sales of fuels resulting from the return to its multi-year average⁵⁶. In 2007, the growth rate of fuel prices will be higher than accounted for in the previous projection.

Absorption of EU funds

An important assumption of the ECMOD model, which is affecting the behaviour of investment processes in the projection horizon, is the degree of the absorption of transfers from EU structural funds and the cohesion fund. This assumption has been considerably adjusted in relation to the August projection and thus largely contributed to lower paths of investments, individual consumption and GDP, which lowered the inflation path

⁵⁶On the basis of price-determining mechanisms in the fuel sector it has been assumed that the rise in the excise tax in 2007 will significantly reduce fuel companies' propensity to change their margins in that year.

in the longer projection horizon as compared with the expectations of the balance of factors affecting inflation and the August projection path.

It has now been assumed that in the projection horizon 75% of funds allocated for the years 2004-2006 will be utilised. In the case of structural funds, the originally granted period of funds utilisation has been assumed to extend from the period 2004-2006 to 2008 (taking into account the "n + 2 principle" of funds utilisation); in the case of the cohesion fund this period has been assumed to extend to the end of 2010. The scope of change is illustrated in Figure 4.33.

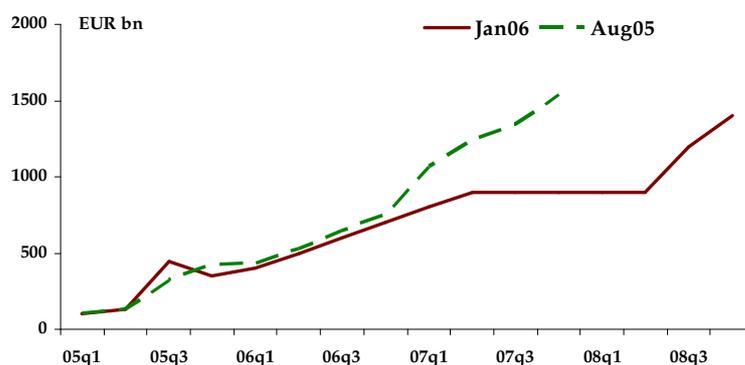


Figure 4.33: EU structural funds and the cohesion fund: comparison of assumptions to January 2006 and August 2005 projections.

Source: NBP.

The scale of transfer utilisation has been lowered, as compared with the August projection, due to delays and barriers to the existing EU fund budgeting and spending (which factor is decreasing fund utilisation in 2006), and also because of anticipated difficulties in pre-financing and co-financing of the high level of EU funds from domestic sources, both public and private (starting from 2007). Lower absorption of EU transfers is one of the risk factors for the path of economic growth which have been named in the convergence programme. However, it cannot be ruled out that administration barriers will be removed sooner and the problems with co-financing will prove less serious than currently estimated.

In the forecasting model, one of the elements affecting the amount of household disposable income is the inflow of the EU-budget funds under the Common Agricultural Policy (CAP). In the assumptions for the August and January projection the total level of EU-budgetary transfers to Poland under the CAP in 2005-2007 is similar. In 2005-2007 the level of CAP transfers was assumed at EUR 5.78 billion in the August, and EUR 5.8 billion in the January path. The paths differ, however, as far as the distribution of CAP transfers in particular years is concerned. This is because the August path envisaged the CAP transfer utilisation at EUR 1.07 billion in 2005, while the NBP data revealed it to be EUR 1.8 billion. Therefore, an adjustment has been done in the allocation of funds for particular years (2005, 2006 and 2007). As a result the current path anticipates the utilisation of the CAP transfers at the level of EUR 2.05 billion in 2007 as compared

to the August path, which expected the level of EUR 2.49 billion.

Situation in the public finance sector

Just like in the previous projection, the present assumptions regarding the state budget expenditure only take into consideration the effects of laws currently in force. In particular, no account has been taken of the implications of the acts signed by the President of Poland after 2 January 2006. The expenditure associated with the old-age and disability pension indexation is estimated according to the statutory regulations passed by the Parliament in 2004, i.e. in 2006 indexation by the price growth index in the years 2004-2005 and no indexation in the years 2007-2008.

The forecast revenue in main tax categories has been based on effective rates. All the effective rates, except for personal income tax rate, have been assumed at their historical levels. The effective rate of the personal income tax allows for the abolition of the renovation relief in 2006, which will affect the PIT revenue in 2007.

The projection does not assume any greater tensions in the public finance sector. Such tensions may arise e.g. in connection with higher than expected absorption of the EU transfers. The prospects of greater tensions in the public finance sector and the consequent imbalance in the financial markets are not accounted for in the fan chart.

Food prices

The external centres' forecasts of the output volume in main agricultural and horticultural crops indicate that this year's harvest should prove higher than its 5-year average, yet lower than in 2004. Due to the originally high level of stocks in the 2005/06 season, the supply of cereals will be slightly higher than in the previous season. According to the GUS assessment, also the 2005 fruit and vegetable harvest was lower than in 2004. The lower 2005 harvest will result in higher prices of certain fruit and vegetables beginning from June 2006. The assessments of these analytical centres also indicate that both the actual and expected growth in the number of pigs will lead to increased supply of slaughter hogs at least till the end of the first half of 2007. As a result of the high supply, the growth rate of purchase prices, and consequently of retail pork prices may be negative in 2006. Due to the high contribution of pork in the meat and meat product consumption, the growth rate of the whole category will also be negative, especially in the first half of 2006.

In such conditions the current forecast of annual food price growth in 2006 Q1 is lower than in August 2005, and in 2006 Q2 – close to that value. Until the autumn of 2006 it is close to zero, but then it starts to rise.

Forecasting food prices is subject to a significant risk of committing an error which has a direct impact on the CPI projection in the horizon of the next four quarters, and through uncertainty involved in forecasting food prices – over the whole projection horizon, which is an important factor influencing the shape of the fan chart. In

the absence of the premises allowing to forecast changes in food prices in the longer horizon, the model assumes that after this period food prices are rising at the rate of net inflation⁵⁷. This is not the only possible path of food prices and the probability of its significant deviation from the assumed path may be considerably higher than that accounted for in the fan chart. As the food price forecast is prepared with the assumption of a constant exchange rate, the rate depreciation expected in the projection increases (upwards) the risk asymmetry around the path of food prices. It has to be emphasised that large and unusual drops in food prices in November and December 2005⁵⁸ may result in "rebound effect" of these prices, though it would be released gradually due to the supply factors.

Demographic situation

The assumptions as to the economically active figure (BAEL) are based on demographic forecasts and assume constant economic activity indicators across sex groups and 5-year segment age groups. The economically active figure is gradually climbing up to approx. 17.25 million at the end of the projection horizon. The forecast does not allow for BAEL data for 2005 Q3 released on 22 December 2005. If these data were accounted for, the path of economically active would rise slightly.

In the August projection the assumed rise in the number of old-age and disability pensioners is proportional to the rise in the number of people who have reached retirement age. Starting from the January projection, the forecast of number of old-age and disability pensioner allows for the Polish component of the AWG model (Ageing Working Group)⁵⁹. The current forecast indicates a drop in the number of old-age and disability pensioners down to approx. 9.04 million at the end of 2008.

4.3 Projection of inflation and GDP

Like in the previous *Inflation Reports*, the present projection assumes that the NBP reference rate remains constant throughout the projection horizon. In the current projection the reference rate has been set at a constant level of 4.5%. As a result, the projection is conditional in nature and shows how inflation and GDP would develop should the NBP rates remain unchanged. Furthermore, at the time when the projection was prepared only the data published before 2 January 2006 were available, and so this is the cut-off date for the assumptions of the projection.

⁵⁷The inflation in quarter-on-quarter terms forecast under the ECMOD model is the weighted average of "net inflation", described by the model's equation, plus the prices of fuels and exogenous food prices.

⁵⁸December 2005 data were still unknown at the time food price projection was being prepared.

⁵⁹AWG model is prepared by EU countries under the supervision of the European Commission. Old-age and disability pensions in the Polish part of the model are forecasted with the participation of specialists from the Social Insurance Institution (ZUS), the Ministry of Labour and Social Policy and the Market Economy Research Institute (IBnGR).

As mentioned in the introduction, the most important change in assumptions in relation to the August projection concerned the utilisation of EU funds. This change was conducive to lowering the path of investment outlays as compared to the August projection. Yet, the course of the path of investment outlays in the current projection does not follow solely from the change of assumptions. From the last quarter of 2006 the investment paths have been positively revised by expert adjustments. The adjustments are grounded in the experts' conviction that the inflow of direct investments has a fundamental importance for the growth rate of total investment outlays, and the scale of the adjustments led to approx. 9% investment growth rate in the subsequent years of the projection. The growth rate path of investment outlays in 2006-2007 is on average 2 percentage points lower than in the August projection. Increasing investment outlays in the projection horizon should be encouraged by a gradual improvement of the prospects for sales in domestic and foreign markets, expected inflow of foreign direct investment as Poland will be getting more attractive as an EU member, and by still relatively low labour costs and lower cost of capital amid the historically low interest rates of the NBP.

The forecast investment path, which is strongly affected by expert adjustments, is subject to considerable uncertainty. A different size of adjustments, which would be warranted by a different expert assessment of investment climate and an accordingly different scale of foreign direct investment inflows, would render a different investment path, different path of aggregate demand and potential output and, consequently, a different inflation path. The current path has been accepted by experts as the most probable. It cannot be ruled out that the investment path could be higher provided the degree of structural fund utilisation grows higher than accounted for. On the other hand, the uncertainty concerning the shape of economic policy of the government may cause a reduction in the path of investments and may have further consequences such as financial market instability, which is not included in the fan chart.

The current projection indicates that individual consumption growth rate will be rising over the next two quarters, and will be high in the projection horizon (at over 4% in the subsequent years of the projection), though slightly lower than in the August projection (by 0.2 percentage points, on average, in succeeding years). This rise in consumption will be resulting from further improvement in the income situation of households in connection to growing labour income and increased income of private businesses, higher inflow of transfers within the framework of the Common Agricultural Policy and the indexation of old-age and disability pensions scheduled for 2006.

The improvement in the income situation of households will be slower than in the August projection, mainly due to the slower growth rate of labour income. In the present projection this income is growing at a slower rate despite a marked improvement in the labour market recorded in the second half of 2005 as compared to the August projection. In 2005 Q3 and Q4 the rise in the number of working persons was considerably higher than forecast in August. This fact has raised the question how the future growth rate of the number of working should be approached. Should the increased growth rate be treated as transitory and so can it be expected to return to its previously observed

levels or, rather, is it the beginning of a new tendency? The projection assumed the former interpretation, and so by the use of the error-correction mechanism the number of working persons has been brought down to the vicinity of its long-term path. As a result the forecast growth in the number of people working in the economy, despite having risen in 2005 Q3 and Q4 is currently slower than in the August projection by approx. 0.3-0.4 percentage points in subsequent years and is accompanied by slower wage growth than in the August projection (deceleration of 0.6 percentage point, on average, in subsequent years of the projection). Such an outcome of the model's mechanisms has influence on labour income, unit labour cost growth rate and inflation.

However, an alternative scenario is possible, under which the growth in the working figure would be treated as a continuation of developments from 2005 Q3 and Q4. In this scenario the number of working persons would be higher than in the present projection, which would be conducive to increasing inflation in relation to the present central projection. The impact that the sustaining of a higher growth rate in the number of working persons in the projection horizon would have on inflation would be also dependent on whether, and to what extent the rise in employment results in a parallel rise in economic activity of the society, in turn increasing the production potential of the economy. Empirical studies indicate that a large role in stimulating the economic activity of people is played by fiscal policy instruments.

While assessing the risk of inflation deviating from the projection, alternative scenarios of the situation in the labour market cannot be disregarded entailing that the improvement observed therein will prove relatively permanent or even permanent. Because these scenarios may be assigned a significant probability, they should be considered in uncertainty analysis. For reasons previously discussed, the uncertainty connected with the fact that the situation in the labour market may actually develop differently than described in the model-based projection has not been accounted for in the fan chart.

On the basis of the released quarterly data on national accounts it is estimated that both export and import growth rates in 2005 were actually lower than those forecast in August, with a much steeper and unexpected decline in the growth rate of imports (of 5.5 percentage points). As a result, the contribution of net exports to GDP growth was visibly higher throughout 2005 than accounted for in the August projection⁶⁰ According to the current projection, subsequent years will see a continuously strong growth rate in both exports and imports (at over 7-8% and over 8-9%, respectively). The contribution of net exports to the annual GDP growth will be negative from 2006 Q2. The forecasted contribution of net exports to GDP growth in 2006-2007 has not changed significantly

⁶⁰The higher contribution of net exports to GDP growth in 2005 was compensated with a high negative contribution of the change in inventories to GDP growth, which decreased the contribution of domestic demand in economic growth and suggested that GDP growth mainly resulted from the rise in net exports. It can be easily verified that in the same period the contribution of consumption and investment in GDP growth exceeded 80%. Given the aforementioned strong correlation between the contribution of net exports and changes in inventories to GDP growth observed in the whole sample, and especially in the period from 2000, the changes in domestic demand accounting for shifts in inventories should be interpreted rather cautiously, as the latter depend much more on net-exports than on the combined shifts in consumption and investments.

in relation to the August projection.

According to the present projection, the annual GDP growth rate in 2006-2008 will run in the range of 4-5%. In 2006 the forecasted growth rate is consistent with the August projection, but it runs below it in 2007. The decline in the GDP growth rate level can be fully attributed to a weaker growth in domestic demand, and in the first place investment growth rate connected mainly with the mentioned adjustment concerning structural funds.

According to the present projection, the main supply side factors of economic growth will be the growth of total factor productivity and of physical capital, which will follow the growing investments. Due to a lower forecast of investments, the capital growth rate will be weaker than expected in the August projection. There will be, however, a slightly stronger increase in the supply of labour. As a result, similarly as in the previous projection, the growth rate of potential output will accelerate from 4% in 2006 to 4.3% in 2008. Similarly as in the August projection, the real GDP throughout the projection horizon remains below the potential product and the output gap remains negative, though slightly narrower than in the August projection (Figure 4.34). As a result, the output gap in the projection horizon will be halting inflation slightly weaker than in the August projection. At the same time, it is worth to emphasise that the estimates of the potential output and output gap are subject to large uncertainty.

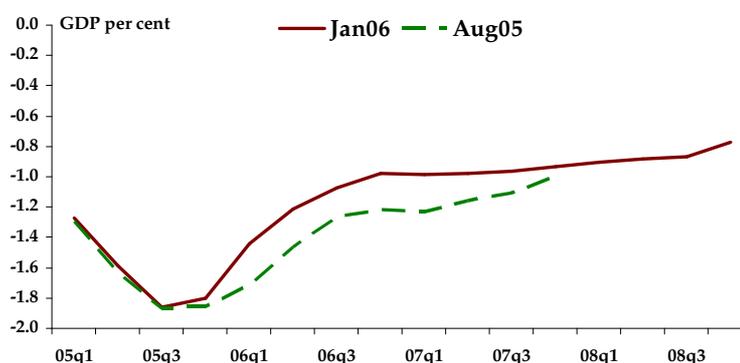


Figure 4.34: Output gap (GDP per cent) – comparison of January 2006 and August 2005 projections
Source: NBP.

The path of the real effective exchange rate in the projection is based on the model's mechanism, assuming that the real exchange rate will return to the appreciating path, which is consistent with the hypothesis that real convergence will also involve nominal convergence. The slope of the long-term exchange rate path changes depending on the relationship of growth rates of domestic and foreign potential products. Thus, in the longer horizon, which, however, exceeds the horizon of the current projection, the real exchange rate of the zloty will be appreciating due to the convergence of the Polish economy. In line with the model's mechanism, the future path of the real exchange rate of the zloty in relation to its long-term path depends on the interest rate disparity and the risk premium, and also on its deviation from the long-term path at the

starting point (a stronger rate will be depreciating and a weaker will be appreciating because of that). In the second half of 2005 the real effective exchange rate was visibly stronger than expected, despite unclear political situation both in the pre-election period and also after the elections. According to the present projection, in the short-term the exchange rate will be depreciating slowly to counterbalance the previous strengthening. In comparison to the August projection a smaller interest rate disparity will be resulting in a weaker path of the zloty exchange rate starting from 2006 Q3.

The projection anticipates that due to a very low food price growth rate, strong exchange rate and weaker than expected fuel price growth rate, the inflation rate will remain low till 2006 Q3. In subsequent quarters inflation will start growing gradually tracking the depreciation of the zloty exchange rate, growing unit labour costs and the gradually closing output gap. Another inflationary impulse in 2007 will be the rise in excise tax on fuel. Despite a clear drop in oil prices and stabilisation in the exchange rate, fuel prices will continue growing in 2008, as well. As a result, at the beginning of 2007 inflation will return to the tolerance range for deviations from the inflation target, reaching the target at the beginning of 2008.

To sum up, the deviation of the current inflation path from the path of the previous prognostic period in the first half of 2006 mainly follows from the course of food and fuel prices estimated outside the model. In successive quarters, the lower path of inflation will be primarily determined by weaker growth of investments, which is the outcome of the revision of assumptions as to the inflow of EU funds and experts' conviction of a slight dampening of the overall investment climate in Poland. Due to this expert assumption and as a result of the above described error-correction mechanism within the model which led to a "rapid" and deep downward adjustment in the projection of the high growth rate in the number of working persons and also to the reduction and then the stabilisation at a low level of the growth rate of unit labour costs, the inflation projection runs below the level envisaged in the *August Report* almost throughout the horizon. The difference is the largest in 2006, but later on the projection is stepping up to approach the level projected in August towards the end of 2007.

Calculated with the assumption that the model is able to correctly predict the developments in the labour market, the probability of inflation staying below the inflation target is higher until and through 2007 Q1 than the probability of its running above target. From 2007 Q2 both probabilities get close and the distribution of inflation projection becomes more symmetrical.

The fan charts (Figures 4.35 and 4.36) do not include the uncertainty concerning the model's adequacy. In particular the distribution of probability of future inflation deviations from the central path does not account for the probability of materialisation of the discussed scenario of a faster, than it follows from the projection, rise in the number of working persons. As this alternative scenario may be ascribed significant probability of materialisation, and in the event of its playing-out – a considerable probability of a higher inflation than that in the projection, it can be presumed that the general probability of inflation running above the central path is higher than that calculated with the assumption of the adequacy of the model.

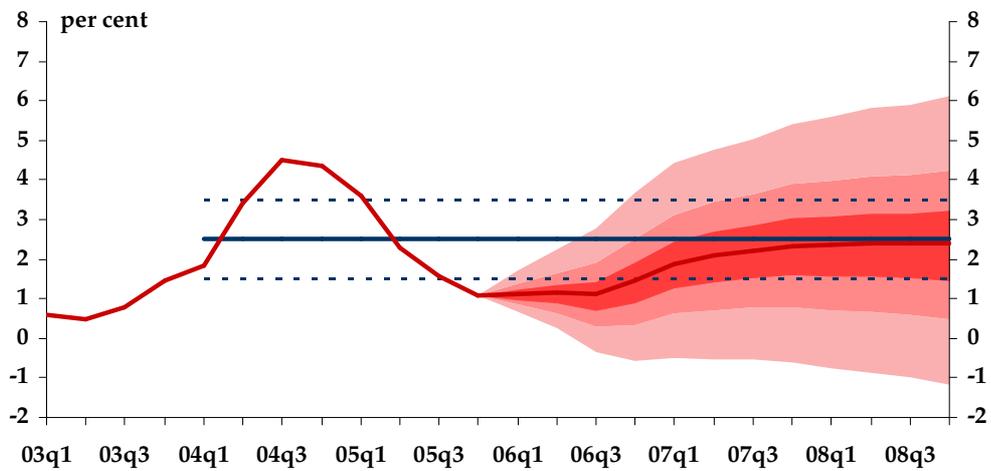


Figure 4.35: Inflation central projection, inflation fanchart and MPC's inflation target (y/y change in per cent)
Source: NBP.

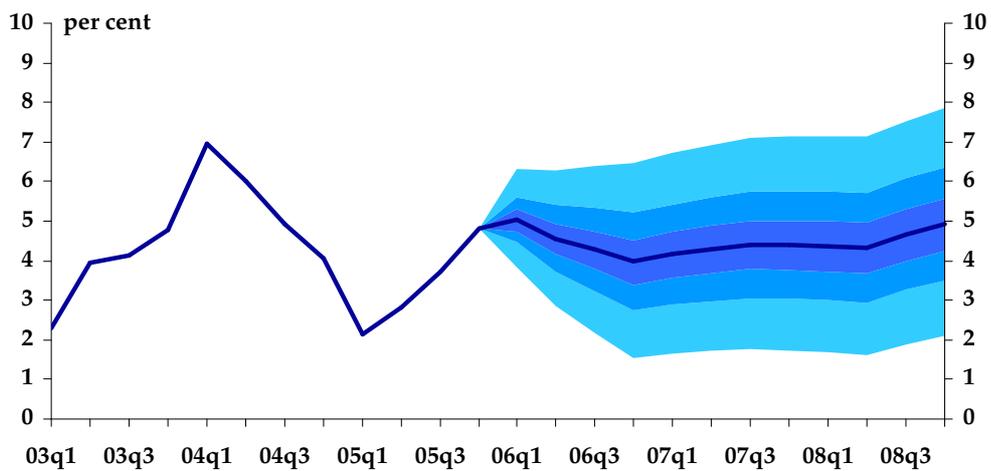


Figure 4.36: GDP central projection and GDP fanchart (y/y change in per cent)
Source: NBP.

How should fan charts be interpreted?

Every projection of future values of economic variables is subject to risk and uncertainty. Central banks present the size and scope of quantifiable inflation projection risk through the use of fan charts. The width of the "fan" corresponds to the overall level

of risk, which usually changes from quarter to quarter. The further ahead, the wider it gets, as the uncertainty of the assessments of the future usually grows proportionally to the length of the time horizon.

In both inflation and GDP projections prepared by the NBP, probability distribution of their possible outcomes is determined for each quarter. Starting from January 2006, the central projection is construed as the expected values of distributions in consecutive quarters (and no longer as their modes) due to their better interpretation properties: additivity, insensitiveness to multimodality of the probability distribution of future inflation and the so-called *certainty equivalence*. At the same time, 30-percent confidence intervals are constructed around the medians of distributions. These constitute the central band of the fan, indicated with the darkest shade. Thus, the probability of GDP or inflation settling within this band is equal to 30 percent. Next the fan is expanded on both sides so that the probability of the variable running between the extended boundaries increases by another 30 percentage points – 15 points on the above, and 15 on the below. The subsequent extensions create successive bands of the fan marked with increasingly lighter shades. The entire fan represents a 90-percent band of confidence around the medians – there is a 90-percent probability of inflation or GDP running within the fan.

The table below presents some of the properties of inflation probability distributions obtained in the January projection.

	Probability of inflation:				
	below 1.5%	below 2.5%	below 3.5%	below central projection	within (1.5%; 3.5%)
2006q1	0.870	1.000	1.000	0.537	0.130
2006q2	0.724	0.976	0.999	0.529	0.275
2006q3	0.672	0.918	0.988	0.521	0.315
2006q4	0.535	0.798	0.937	0.519	0.402
2007q1	0.408	0.668	0.861	0.513	0.453
2007q2	0.365	0.607	0.812	0.506	0.447
2007q3	0.345	0.577	0.778	0.507	0.433
2007q4	0.331	0.543	0.737	0.508	0.406
2008q1	0.335	0.535	0.723	0.509	0.388
2008q2	0.336	0.528	0.710	0.509	0.374
2008q3	0.344	0.531	0.705	0.510	0.361
2008q4	0.355	0.529	0.695	0.509	0.339

The uncertainty of inflation and GDP projections related to the exogenous assumptions and inaccuracy involved in the estimation of its equations have been illustrated in the fan charts presented below. These are constructed assuming the model's adequacy, i.e. they assume that the every model used for projection is not a source of systematic

error. These charts, however, do not account for all kinds of uncertainty, such as the uncertainty related to possible changes in economic structure, the approximate nature of any replication of economic reality by means of a model or the potential instability of estimated relationships over time. In the current projection, this is especially important as regards the model's ability to replicate developments in the labour market. The sources of uncertainty not accounted for in the fan chart are discussed after the description of the fan chart.

The greatest impact on the uncertainty of inflation, as presented on the fan chart, is exerted by the uncertainty of food price forecasts. Also significant is the impact of uncertainty about the future economic developments outside Poland, including in particular economic growth and inflation in the euro area and the path of external interest rates. The high uncertainty related both to the future growth rate of oil prices and the impact of the significant accumulated growth of the price of this commodity on the pace of economic growth and other prices is additionally increasing the uncertainty of the future inflation path in Poland. Another important source of uncertainty of future inflation is the uncertainty concerning the developments in the labour market and, in particular, changes in economic activity and the natural rate of unemployment (NAWRU).

The uncertainty presented in the fan chart about the future path of GDP growth mainly results from assumptions concerning economic developments outside Poland and the inaccuracy of the model's mapping of the zloty exchange rate path. Also very important here is the uncertainty as to the degree of absorption of EU funds by the Polish economy.

4.4 Risk of change in central projection

Below are discussed the remaining factors significantly affecting the uncertainty of the projection by increasing the probability of a systematic error, i.e. over- or underestimation of inflation in the monetary policy transmission horizon, and also the probability of these errors having other characteristics uncalled for in the forecasting process. In particular, the uncertainty concerning the adequacy of the model has been discussed. This uncertainty may, in turn, be divided into uncertainty as to the way of treatment of inflationary processes in the model and uncertainty concerning the data themselves (and, consequently, the economic accuracy of the estimation of model parameters). The first uncertainty also refers to the situation where inflation, in the projection horizon, will be increasingly affected by processes that used to have little significance in the past (e.g. globalisation or structural changes shifting the equilibrium exchange rate).

The deep revision of GUS data in November 2005 (concerning the national accounts in 1995-2005) indicates that the previous data were not correct and reflected the economic reality with a certain systematic error. As the ECMOD forecasting model has not been re-estimated using the GUS updated data, the quality of the mapping of the reality by the model's parameters might have deteriorated. It cannot be ruled out, either, that

structural changes in the economy and its environment, including those connected with the EU accession, weakened the degree of adequacy of some theoretical assumptions lying at the foundations of the specification of the model's equation.

4.4.1 Risk of errors in the projection due to inadequacy of the model

Labour market

Significant uncertainty is also connected with the impact of changes in the labour market on future inflation. A key factor in assessing the outlook for inflation, particularly in the long-term horizon, is the assessment of reasons and persistence of changes in the labour market. However, while assessing the risk of inflation deviating from the projection one should not disregard other scenarios – alternative to the projection – of the situation in the labour market. In those scenarios it is assumed that the improvement observed in the labour market for the past six months will prove permanent. If a plausible assumption that a high growth rate of working persons is sustained in the longer horizon is accepted, and – at the same time – the assumption of a stable long-term relationship of wage bill to GDP is withdrawn or the pace of return of the model to this long-term relation is significantly reduced by the experts, then the materialisation of a higher than projected growth of disposable income, consumption demand and unit labour costs becomes possible. At the same time, it is very important for inflation in the longer horizon whether, and to what extent, the rise in the number of working persons will be matched with a corresponding growth in economic activity of the population. The risk of growth in inflation may be offset if the rise in the number of working persons is accompanied by a rise in the economically active figure. The results of empirical studies indicate that a large role in stimulating the economic activity of the population is played by fiscal policy instruments. However, without an appropriate model at hand it is difficult to assess to what extent this additional inflationary pressure would be reflected in the future inflation path. That is because the deviation from the model's assumptions is so significant that it would require reformulation of i.a. investment function. The probability of this alternative scenario – which assumes improvement in the labour market and results in inflation running above inflation projection – is significant. Therefore, this scenario has to be taken into account in the uncertainty analysis and – on this basis – it should be estimated that the probability of inflation running above the central path will be higher than that calculated on the assumption of labour market developments being consistent with the projection.

Economic policy

In the shorter term the current political situation remains a risk factor due to the possibility of earlier elections to the parliament. The political uncertainty may exert negative influence on investment decisions of enterprises, which may put at risk the supply-side foundations of economic growth, and may also contribute to weakening the

exchange rate of the zloty. On the other hand, however, the fact that the zloty exchange rate in January 2006 was stronger than expected in the projection points to a possibility that it is being affected by factors not included in the forecasting model. A longer period of exchange rate at a level much stronger than in the projection would result in an increase of the probability of the inflation running below the projected level.

In the longer term, the main source of uncertainty regarding inflation is the shape of future economic policy. A sustained improvement in the investment conditions and, consequently, a higher growth of potential GDP require the streamlining of the supply mechanism of the economy. To achieve this, structural reforms aimed at eliminating the weak points of the Polish economy are necessary. Those weaknesses include, i.a.: excessive legally-determined expenditure destabilising the state budget, labour market distortions, limitations of the market mechanism in some sectors, large scale of state ownership in many crucial branches of the economy, low quality of regulations and problems with their enforcement.

Globalisation

To a large extent, the inflation path in Poland in the projection horizon will be a resultant of three factors: (1) present and forecast economic recovery, (2) improving situation in the labour market (which is reflected in growing employment and wages) and (3) increasing importance of imports of cheapening consumer goods from countries with low production costs. The first two of the above described processes are accounted for in the forecasting model, while the third one – the impact of lowering import prices – is only acknowledged in a very simplified way, even though goods whose prices are falling in connection with cheap imports – mainly from Far East countries – account for approx. 7-10% of the CPI basket. The developments in these prices are subject to large uncertainty. So far, due to the advancing trade liberalisation and significant changes in the structure of retail chains, imports and sales of goods from countries with low production costs have been growing. This process, however, may slow down with increasing saturation of retail chains. Prices of these goods in EU-15 countries, where changes in the structure of retail sales are slower, have been more stable in recent years.

The growing global imbalance (see Box *Global imbalances*, Chapter 2) raises the risk of adjustment in the form of slowdown of the world economy, which – through lower net exports – would contribute to a slowdown in domestic business activity and alleviation of inflationary pressure.

The impact of global factors also extends to labour market developments. There exists uncertainty as to the way in which wage dynamics in Poland will be affected by competition from cheap products from countries with low production costs, on the one hand, and economic migrations of the population – mainly to the old-EU countries – on the other. These migrations may lead to an increase in the wage pressure in certain sectors of the labour market. The outflow of labour force to other EU countries may lead to increased wage pressure and higher inflation.

4.4.2 Risk of errors in the projection due to uncertainty concerning statistical data

Another considerable uncertainty for the present projection is associated with the effects of the yearly change in the composition of the consumer basket, which forms the basis for determining CPI inflation. At the beginning of each calendar year its structure is updated by the GUS, which results in adjustments of the January data. In certain cases the adjustments are significant. The consumer basket used up till 2005 did not account for mobile communications services, which are to be included in the basket from 2006 on. Due to the recently observed decrease in prices of mobile communications services it cannot be ruled out that CPI inflation determined by the GUS on the basis of the new basket will be lower than that determined on the basis of the 2005 basket. The direction of impact of other shifts in the composition of the CPI basket on the headline inflation rate is difficult to assess at the moment.

The assumptions for the projection do not take into account the possibility of changes in some indirect tax rates, which is associated with the expiry of the transition periods following from obligations to the EU. The increase of the excise tax on tobacco products will most probably be gradual⁶¹ and, due to the lack of any accurate estimates, was only partially included in the projection. In line with the accepted calendar of harmonising tax rates with the EU requirements, 2008 should see an increase in the VAT rate on construction and catering services, new flats, books and periodicals and unprocessed food⁶². At the moment it is difficult to assess what will be the implications of these modifications for the central budget. They may be conducive to a sudden adjustment in prices, similar to that which occurred after Poland's accession to the EU, yet at a smaller scale.

Current world market quotations of oil prices indicate a rising uncertainty as to their future course accounted for in the projection. Unstable political situation in important oil producing regions (Iran and Nigeria) constitutes a significant factor of further oil price hikes. Moreover, the envisaged path of distribution margins in the fuel market is also subject to uncertainty in the conditions of the expected oil price decrease. Should crude oil prices remain at the level observed in the second half of January 2006, this will increase the probability of actual inflation exceeding the level envisaged in the projection.

4.4.3 Discussion of data released after 2 January 2006

The fan charts fail to account for all sources of uncertainty of the present inflation projection or data that were released after the projection's cut-off date. Still, the data published after 2 January do not diverge significantly from the assumptions concerning the starting point adopted for the projection. Particularly, the assumptions are

⁶¹The harmonisation has to be effected by the end of 2008.

⁶²The rate is to be raised in May 2008 from 3% to 7%.

consistent with the latest data on inflation rate, "net" inflation and the growth rate of employment and wages in the corporate sector. Data on the growth rate of industrial and construction and assembly output in December 2005 were higher than expected, while the actual level of retail sales was lower. The above information does not lead to a significant adjustment in the assessment of the economic growth rate in 2005 Q4 in relation to that accounted for in the projection. The fact that the data on prices of food and non-alcoholic beverages in December 2005 prove lower than expected indicates a possibility of annual CPI growth rate lowering in the period until November 2006 in relation to the January projection.

Annex

The voting of the Monetary Policy Council members on motions and resolutions adopted in July-November 2005

- **Date:** 27 July 2005

Subject matter of motion or resolution:

Resolution on the level of the reference rate, lombard rate, deposit rate and re-discount rate of the National Bank of Poland

MPC decision:

The MPC reduced the level of all interest rates by 0.25 percentage point

Voting of the MPC members:

For:	J. Czekaj	Against:	L. Balcerowicz
	S. Nieckarz		D. Filar
	S. Owsiak		M. Noga
	M. Pietrewicz		H. Wasilewska-Trenkner
	A. Sławiński		
	A. Wojtyna		

- **Date:** 27 July 2005

Subject matter of motion or resolution:

Motion to maintain the easing monetary policy bias

MPC decision:

The MPC maintained the easing monetary policy bias

Voting of the MPC members:

For:	J. Czekaj	Against:	L. Balcerowicz
	S. Nieckarz		D. Filar
	S. Owsiak		M. Noga
	M. Pietrewicz		H. Wasilewska-Trenkner
	A. Sławiński		
	A. Wojtyna		

- **Date:** 27 July 2005

Subject matter of motion or resolution:

Motion to change the monetary policy bias from easing to neutral

MPC decision:

The motion was not passed – MPC maintained easing monetary policy bias

Voting of the MPC members:

For:	L. Balcerowicz	Against:	J. Czekaj
	D. Filar		S. Nieckarz
	M. Noga		S. Owsiak
	H. Wasilewska-Trenkner		M. Pietrewicz
			A. Sławiński
			A. Wojtyna

- **Date:** 31 August 2005

Subject matter of motion or resolution:

Motion to reduce the reference rate, lombard rate and deposit rate by 0.25 percentage point, and rediscount rate by 0.5 percentage point

MPC decision:

Motion received a majority vote

Voting of the MPC members:

For:	J. Czekaj	Against:	L. Balcerowicz
	S. Nieckarz		D. Filar
	S. Owsiak		M. Noga
	M. Pietrewicz		H. Wasilewska-Trenkner
	A. Sławiński		
	A. Wojtyna		

-
- **Date:** 31 August 2005

Subject matter of motion or resolution:

Resolution on the level of the reference rate, lombard rate, deposit rate and re-discount rate of the National Bank of Poland

MPC decision:

Reduction of the reference rate, lombard rate and deposit rate by 0.25 percentage points, and rediscount rate by 0.5 percentage point

Voting of the MPC members:

For:	J. Czekaj	Against:	L. Balcerowicz
	S. Nieckarz		D. Filar
	S. Owsiak		M. Noga
	M. Pietrewicz		H. Wasilewska-Trenkner
	A. Sławiński		
	A. Wojtyna		

- **Date:** 31 August 2005

Subject matter of motion or resolution:

Motion to change the monetary policy bias from easing to neutral

MPC decision:

Motion did not receive a majority vote – the MPC maintained its easing monetary policy bias

Voting of the MPC members:

For:	L. Balcerowicz	Against:	J. Czekaj
	D. Filar		S. Nieckarz
	M. Noga		S. Owsiak
	H. Wasilewska-Trenkner		M. Pietrewicz
			A. Sławiński
			A. Wojtyna

- **Date:** 27 September 2005

Subject matter of motion or resolution:

Resolution on establishing the upper limit for liabilities incurred by the National Bank of Poland by way of loans from foreign banking and financial institutions

Voting of the MPC members:

For:	L. Balcerowicz	S. Owsiak	Against:
	J. Czekaj	M. Pietrewicz	
	D. Filar	A. Sławiński	
	S. Nieckarz	H. Wasilewska-Trenkner	
	M. Noga	A. Wojtyna	

- **Date:** 28 September 2005

Subject matter of motion or resolution:

Motion for the Monetary Policy Council to cease making use of monetary policy bias

MPC decision:

The motion received a majority vote – the MPC decided to no longer use monetary policy bias

Voting of the MPC members:

For:	L. Balcerowicz	Against:	J. Czekaj
	D. Filar		S. Nieckarz
	M. Noga		A. Sławiński
	S. Owsiak		A. Wojtyna
	M. Pietrewicz		
	H. Wasilewska-Trenkner		

- **Date:** 28 September 2005

Subject matter of motion or resolution:

Resolution on adopting the *Monetary Policy Guidelines* for 2006

Voting of the MPC members:

For:	L. Balcerowicz	S. Owsiak	Against:
	J. Czekaj	M. Pietrewicz	
	D. Filar	A. Sławiński	
	S. Nieckarz	H. Wasilewska-Trenkner	
	M. Noga	A. Wojtyna	

- **Date:** 25 October 2005

Subject matter of motion or resolution:

Resolution on appointing an auditor to audit NBP annual financial statement for the business year 2005 and for the year 2006

Voting of the MPC members:

For:	L. Balcerowicz	S. Owsiak	Against:
	J. Czekaj	M. Pietrewicz	
	D. Filar	A. Sławiński	
	S. Nieckarz	H. Wasilewska-Trenkner	
	M. Noga	A. Wojtyna	

- **Date:** 30 November 2005

Subject matter of motion or resolution:

Motion to change the monetary policy bias from easing to neutral

MPC decision:

Motion did not receive a majority vote – the MPC maintained its easing monetary policy bias

Voting of the MPC members:

For:	L. Balcerowicz	Against:	J. Czekaj
	D. Filar		S. Nieckarz
	M. Noga		S. Owsiak
	H. Wasilewska-Trenkner		M. Pietrewicz
			A. Sławiński
			A. Wojtyna