Inflation Report
February 2005

National Bank of Poland
Monetary Policy Council

Warsaw, February 2005

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 models and has been prepared by a team of NBP economists led by Krzysztof Rybiński, Deputy President of the NBP. 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.

Contents

Summary

In 2004 Q4 the price growth rate in consumer goods and services settled at an average level of 4.4% y/y, while in January 2005 it went down to 4.0% y/y. In the period elapsed since the publication of the November *Inflation Report* inflation still remained above the inflation target of 2.5%, even though its January rate was lower than expected.

The decline in inflation in January 2005 mainly resulted from a reduction in the dynamics of food and fuel prices. The earlier-than-expected lowering of food price dynamics attests to the evaporation of inflationary impulses caused by the price hikes related to Poland's accession to the European Union. This also finds support in the behaviour of core inflation indices.

In the analysed period the level of inflation expectations of individuals stabilised and since October 2004 it has been lower than the current rate of inflation as known at the time of the survey. Inflation expectations are predominantly adaptive in character. Therefore with the swift inflation decline, in the second half of 2005 they should decrease to the level close to the inflation target of 2.5%.

At the same time in the recent months the rate of growth of producer prices in industry was slowing down. This was mainly the result of falling dynamics of export prices related to the appreciation in zloty exchange rate. On the other hand, the reduction in the annual dynamics of producer prices in the period under review was hampered by the persistently high prices of commodities (such as *inter alia* crude oil and copper) in world markets.

In the period analysed, no signals have appeared that would point to the surfacing of wage pressure in the enterprise sector. Absence of any strong wage pressure is also confirmed by a low growth rate of nominal wages in this sector and by NBP survey studies, according to which pay rises planned for 2005 should be moderate. The pressure towards pay increases in the corporate sector is still being limited by the continuing difficult situation in the labour market, not least high unemployment.

In turn, in the economy as a whole in 2004 Q4 the dynamics of wages amounted to 5.6% y/y, as compared to 5.1% y/y in 2004 Q3. After a period of falling unit labour costs in the economy, starting from 2004 Q3 a slight increase has been observed. In consequence, the disinflationary pressure of this factor is gradually wearing off.

Following a period of fluctuations in January 2005 the zloty has appreciated again. Strong appreciation of the Polish currency led to a reduction in price growth rate in the period under review. It has also contributed to the rise in the probability of inflation path running lower than it had been presented in the November *Report*. The strengthening of the zloty in the analysed period may also result in weakening the 2005 economic growth.

On the basis of GUS preliminary data for 2004 it can be estimated that the rate of economic growth in Poland in 2004 Q4 declined in relation to the previous quarters and amounted to just over 4% (y/y). Preliminary estimates indicate that the contribution of net exports in the total economic growth was negative. According to preliminary assessment, the private consumption dynamics in 2004 Q4 was lower than in 2004 Q3. At the same time the rate of growth of real wages in the economy increased from 0.7% to 1.1% y/y. Full assessment of the consumption and savings dynamics will only be possible after data for 2004 Q4 have been released. In turn, the last quarter of 2004 saw a rise in the rate of growth of investment outlays. The favourable conditions for investments are reflected, among others, in a high level of corporate production capacity utilisation, increased opportunities of enterprises financing investment outlays from own resources as well as the influx of EU structural funds. This favourable course of future investments is also indicated by quarterly economic climate surveys conducted by the NBP.

Since November 2004 for another consecutive month a rise in the annual dynamics of the M3 money supply has been visible. Also, the annual growth rate of household loans has remained high, and it is worth noting that there has been a gradual rise in the contribution of consumption loans in newly-granted loans. In turn, the negative dynamics of corporate loans has been sustained.

In the period between December 2004 and February 2005 the Monetary Policy Council kept NBP interest rates unchanged. At the end of this period the reference rate stood at 6.5%, the lombard rate at 8.0% and the deposit rate at 5.0%. While the interest rates remained unchanged, the appreciation of zloty contributed to a tightening of monetary conditions.

In the months December 2004-January 2005, the Council maintained its tightening bias in monetary policy, because in its assessment the probability of inflation running above the target (of 2.5%) in the monetary policy transmission horizon was still higher than the probability of inflation falling below 2.5%, however the balance of risks gradually changed towards lower inflationary pressure.

In the Council's opinion the economic developments in the period between November 2004 and February 2005 indicated that in the monetary policy transmission horizon inflation would be lower than it had been presented in the November *Report*, which is also confirmed by the February inflation projection. According to the projection, based on the assumption of unchanged interest rates, there is a 50-percent probability that inflation will stay in the band 1.2-4.0% in 2005 Q4 (against 2.5-5.2% in the previous projection), 0.4-4.2% in 2006 Q4 (1.3-4.8% in the November projection) and 0.5-4.6% in 2007 Q4. According to the projection, the likelihood of inflation staying above inflation target in the monetary policy transmission horizon is close to the probability of its running below target.

In the Council's assessment the current balance of risks for future inflation may be more favourable than that presented in the February projection. This is because, the hitherto scale of zloty appreciation was larger than what was accounted for in the projection and the dynamics of food prices may be declining faster than assumed. Still, the Council acknowledges the uncertainty related to *inter alia* the developments in oil prices and the zloty exchange rate.

Considering the above, in February 2005 the Council adopted an easing monetary policy bias.

Inflationary Processes

1.1 Inflation indicators

In 2004 Q4 inflation remained at the level of approx. 4.4% y/y[1]. In turn, the annual price growth rate in January 2005 was lower that expected and amounted to 4%[2] (Figure 1.1). The halting of the growth and the ensuing decrease in the annual CPI dynamics result from a gradual lessening and currently almost complete abating of inflationary impulses that were operative in the period before Poland's accession to the European Union and in the first months of its membership. Among others, these impulses include a climb in domestic and external demand for some domestic raw materials and goods, introduction of EU regulations concerning indirect taxation, customs policy and agricultural policy, as well as the impact of the concurrent disturbances in world markets of energy and industrial commodities (among others crude oil, coal and copper). Although the above listed sources of price growth are wearing off, annual inflation remains at a heightened level, which is because the present price level is compared to the level from the period preceding Poland's EU accession. As a result, the abating of inflationary pressure already visible in month-on-month terms (Table 1.1) and – to some extent – in the year-on-year January 2005 CPI will only be reflected in a significant reduction in 12-month price growth rate in 2005 Q2.

Due to a strong growth in food prices in the first months of Poland's EU membership, their annual rates of growth in the period were running at a still high level (7.7-7.8% y/y in November and December, and 7% in January). As a result, food price growth rate still represents the largest contribution in keeping the current inflation at an increased level as measured with 12-month CPI (Figure 1.1, 1.2). Still, on the basis of January data it can be assessed that the deceleration in food price dynamics occurred sooner than expected. In 2005 the growth of external demand for Polish food will be probably lower than in the previous year and, consequently, will not be exerting such a strong influence on price growth as it was the case in the first months after the EU

[1]The 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

[2]Data for January 2005 are of preliminary nature and may be subject to changes after the annual adjustment in the system of weights in the composition of CPI has been performed.

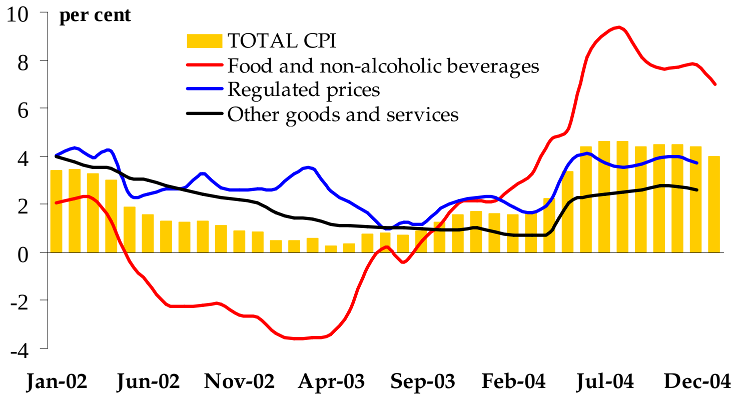

Figure 1.1: CPI and main categories of prices (y/y changes, per cent)
Source: GUS data, NBP calculations.

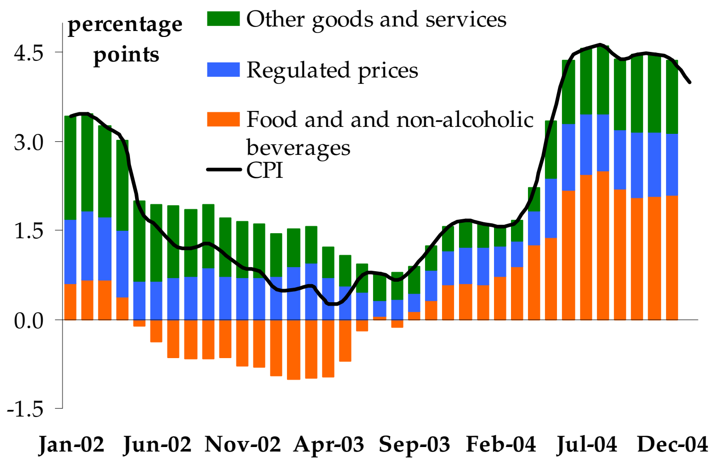

Figure 1.2: CPI breakdown (y/y changes, per cent)
Source: GUS data, NBP calculations.

accession. At the same time, the situation in the grain market, where the crop harvest in the 2004/2005 season was 26.7% higher than in the previous season as well as the falling trend of meat price dynamics will be conducive to a further deceleration in the annual price growth rate of food and non-alcoholic beverages with a significant drop predicted in the coming months.

In 2004 Q4 the inflation in the group of regulated prices was slightly reduced (Figure 1.1)[3]. This drop was primarily caused by fuel price shifts in domestic market, which in November-December 2004 decreased by the total of 1.5%. According to NBP estimates,

[3]Data on inflation in the group of regulated prices as well as prices of other consumer goods and services cover the period until December 2004. The price indices for January 2005 will be released at the end of this quarter.

	y/y change in percent											
	2004											
	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
CPI	1.6	1.6	1.7	2.2	3.4	4.4	4.6	4.6	4.4	4.5	4.5	4.4
Core inflation indices excluding:												
Regulated prices	1.3	1.5	1.7	2.3	3.2	4.5	4.9	5.0	4.6	4.6	4.6	4.6
Most volatile prices	1.1	1.2	1.3	2.2	3.7	4.5	5.1	5.1	5.2	5.4	5.4	5.1
Most volatile prices and fuel prices	0.9	1.1	1.3	2.1	3.2	3.8	4.6	4.6	4.7	4.7	4.7	4.6
Food and fuel prices ("net" inflation)	1.2	1.1	1.1	1.2	2.0	2.3	2.3	2.3	2.4	2.4	2.4	2.4
15% trimmed mean	1.5	1.5	1.5	2.0	2.7	3.2	3.1	3.2	3.1	3.1	3.2	3.1
	m/m change in per cent											
	2004											
	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
CPI	0.4	0.1	0.3	0.8	1.0	0.9	-0.1	-0.4	0.3	0.6	0.3	0.1
Core inflation indices excluding:												
Regulated prices	0.3	0.1	0.3	0.9	1.0	1.2	-0.2	-0.6	0.2	0.6	0.3	0.3
Most volatile prices	0.1	0.1	0.2	0.7	1.1	0.0	0.8	0.2	0.3	0.8	0.4	0.3
Most volatile prices and fuel prices	0.0	0.0	0.1	0.7	0.9	0.0	0.9	0.1	0.2	0.7	0.4	0.4
Food and fuel prices ("net" inflation)	0.2	0.0	0.1	0.2	0.9	0.2	0.2	0.1	0.1	0.3	0.3	0.0
15% trimmed mean	0.2	0.1	0.2	0.2	0.4	0.2	0.2	0.1	0.2	0.2	0.1	0.0
Core inflation indices - seasonally adjusted (TRAMO/SEATS):												
CPI	-0.1	0.2	0.3	0.6	0.9	0.9	0.5	0.3	0.0	0.3	0.3	0.1
"net" inflation	0.0	0.1	0.2	0.2	0.4	0.3	0.2	0.2	0.2	0.3	0.3	0.3

Table 1.1: CPI and core inflation indices
Source: GUS data, NBP calculations.

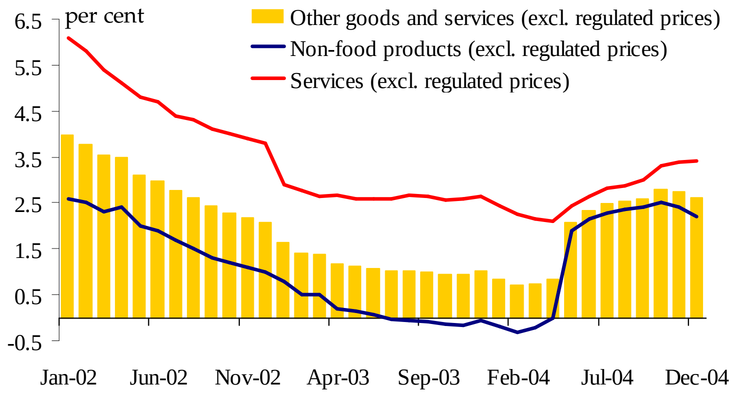

Figure 1.3: Prices of the remaining consumer goods and services (y/y changes, per cent)
Source: GUS data, NBP calculations.

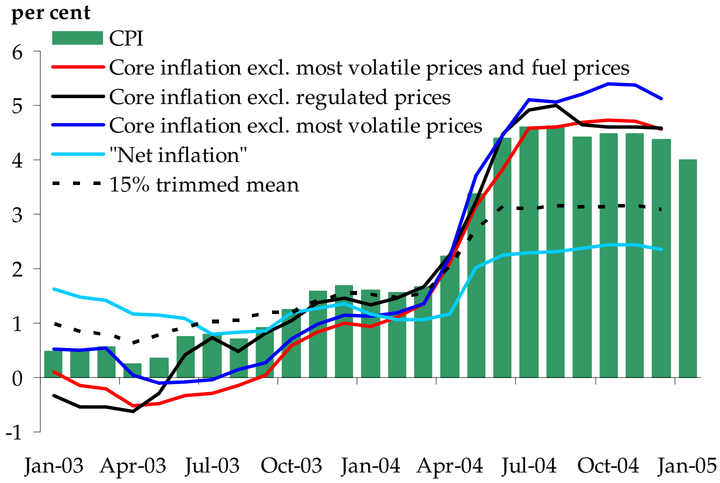

Figure 1.4: CPI and core inflation indices (y/y changes, per cent)
Source: GUS Data, NBP estimates.

the monthly decline in fuel prices in January 2005 was the second largest contribution – besides the food price reductions – to the deceleration in annual price growth rate. In turn, the largest contribution to the growth in regulated prices in January was probably the change of electricity and grid gas tariffs[4]. The effects of excise tax increases introduced in January 2005 have not fully materialized yet. Nevertheless, the expected dynamics of regulated prices in the next few months indicates that they will not be an important source of inflationary pressure this year.

The prices of other consumer goods and services[5] in 2004 Q4 did not report any significant changes and their annual growth rated was on a slow falling trend, decreasing from 2.8% in October (the highest level in the whole of 2004) down to 2.7% in November and 2.6% in December 2004 (Figure 1.3).

The above characteristics of inflationary processes point to the almost complete wearing-off of inflationary impulses related to Poland's accession to the EU. This conclusion is also supported by the stabilisation (in year-on-year terms) and decline (in month-on-month terms) in core inflation measures[6] (Figure 1.4, Table 1.1). Similarly to the

[4]According to the announcements of the Energy Regulatory Office (URE), in December 2004 President of URE accepted new tariffs on electricity for 2005 and declared that the fuel gas tariffs operative since 1 October 2003 shall remain in force until 25 March 2005. At the same time, URE President accepted new, higher tariffs for gas fuels. The remaining components of the final price payable by the fuel receivers, i.e. the amount of standing charge and transmission fees, will remain unchanged.

[5]The group of other consumer goods and services includes the prices of good and services shaped mainly by market forces and so the group of regulated prices is not included here.

[6]Data on core inflation indices in January 2005 are not yet available due to the fact that the GUS has been performing some adjustments in the system of weights. Nevertheless, NBP estimates indicate that in January 2005 ˝net inflation˝ settled at the level of 2.5% (y/y).

previous months, the 15% trimmed mean and the so-called ˝net inflation˝[7] are characterised with a much lower annual dynamics in comparison with the remaining inflation indicators. Reduction in the differential between CPI and ˝net inflation˝ (especially in January 2005) attests to the dwindling of pro-inflationary influence of food and fuel price movements on the CPI dynamics (y/y). This differential, however, is still significant. This is primarily a result of an increase in food and fuel prices in 2004 Q2, which follows from the comparison of seasonally adjusted monthly differentials of both inflation measures in question (Table 1.1).

Summing up, starting from 2005 Q2 a reduction may be expected in 12-month price growth rate, which, in the second half of 2005, should approach the level of 2.5%. Data on the rate of growth of prices in consumer goods and services in January 2005 indicates that the reduction in inflation may occur sooner than expected.

1.2 Inflation expectations

Inflation expectations of individuals

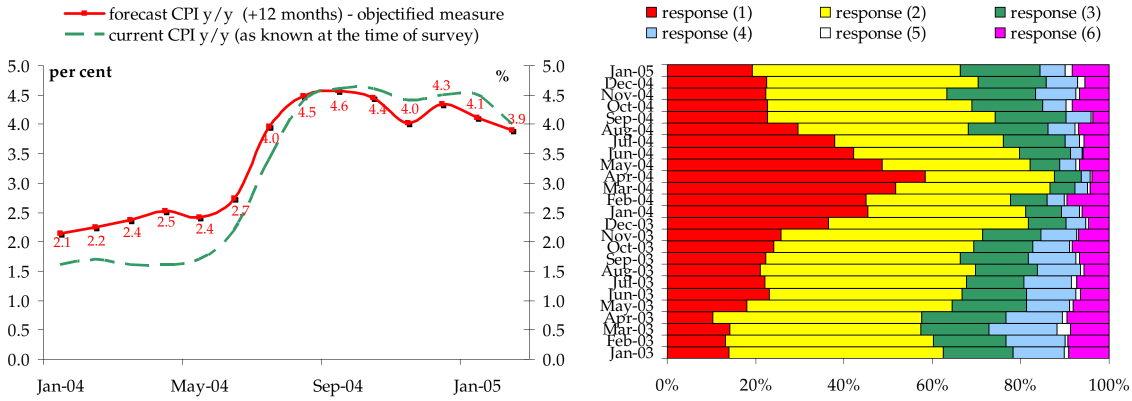

Figure 1.5: Inflation expectations of individuals. Left panel: Inflation expected in 12 months. Right panel: Responses to the question asked by Ipsos.
Source: GUS data, NBP estimates on the basis of Ipsos data.
Ipsos survey question: ˝Considering the present situation, do you think that prices during 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?˝

In the analysed period the inflation expectations of individuals continued to run above the NBP's inflation target (2,5%) (Figure 1.5, left panel). However, a gradual subsiding of transitory factors leading to inflation acceleration in 2004, and the subsequent halt in inflation growth were conducive to stabilising the level of inflation expectations.

[7]The measure of inflation representing CPI net of food and fuel prices.

Starting from October 2004 inflation expectations, for the first time since September 2003, started to assume values lower than the current inflation rate known at the moment of the survey.

Moreover, it has to be mentioned that since May 2004 there has been a progressing improvement in the structure of responses for the survey question (Figure 1.5, right panel). Thus, the rise in inflation expectations of individuals ongoing until September 2004, and then the stabilisation of their level primarily result from the movements in the current inflation rate, which serves as a reference point for the persons surveyed while declaring their predictions.

Taking into account that the inflation expectations of individuals are predominantly of adaptive nature, it can be expected that in the second half of 2005, following the forecast decrease in price growth rate, these expectations will decrease to a level close to the inflation target of the NBP (2.5%).

Inflation forecasts of bank analysts

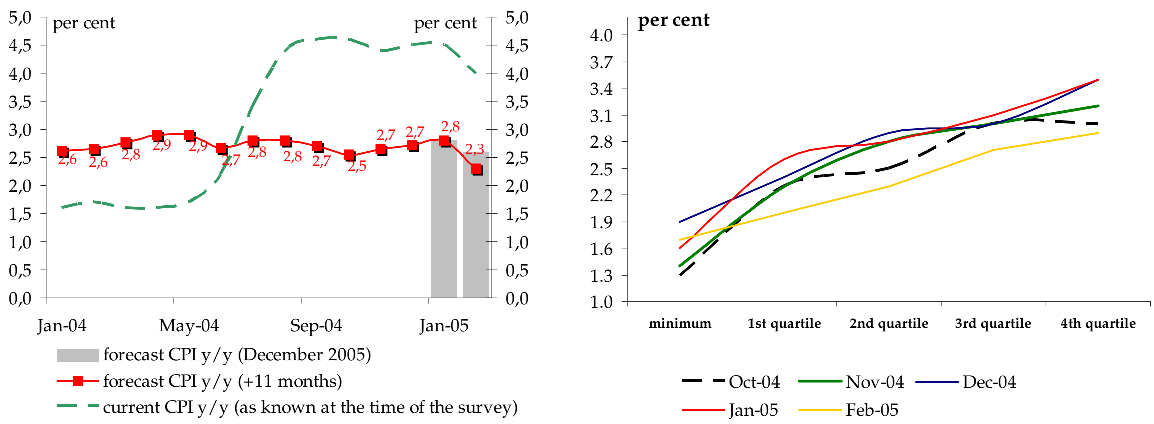

Figure 1.6: Inflation forecasts of bank analysts. Left panel: Inflation forecasted in 11 months and inflation forecast for December 2005. Right panel: Distribution of bank analysts´ inflation forecasts of the annual inflation rate in 11 months.
Source: GUS data, Reuters data, NBP calculations.

In the period between November 2004 and January 2005 the annual inflation forecast by bank analysts in 11 months´ time went up slightly (to 2.8% in January 2005). However, in February 2005 the expectations of analysts for the same time horizon were subject to a considerable reduction (down to 2.3%) (Figure 1.6, left panel). At the same time, the uncertainty surrounding the future course of inflationary processes was diminished, which is reflected in the decrease in the difference between the maximum and the minimum level of expected inflation (Figure 1.6, right panel).

1.3 Inflation and the Maastricht criterion

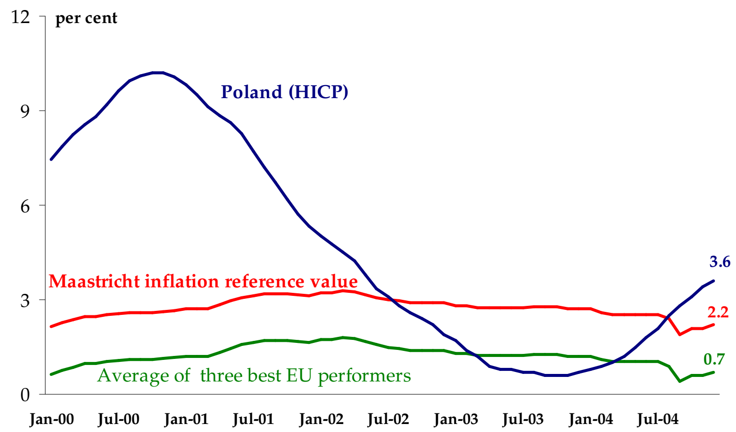

Figure 1.7: Inflation in Poland (HICP annual average) and the Maastricht criterion (y/y changes, per cent)
Source: Eurostat data, NBP.

The acceleration of inflation in Poland in 2004 in the period before the accession to the European Union and in the first months of EU membership as well as the subsequent persistently high inflation path resulted in an increase in the average annual price growth rate as measured by the harmonised index of consumer prices HICP[8]. In consequence, starting from August 2004 Poland has failed to comply with the price stability criterion (Figure 1.7). The difference between the annual average inflation and the reference value[9] is on the rise due to the rising annual average price growth rate in Poland. Nevertheless, this difference was made more pronounced by a decline in the average inflation in the group of reference countries, the most significant fall of which occurred in September 2004 (down to 1.4%)[10].

[8]The key difference between CPI and HICP is that the harmonized 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 different weight composition, in practice the differences between these indices are insignificant.

[9]The reference value is determined on the basis of average inflation in the three EU countries with the lowest average annual price growth rate (measured with the HICP) plus 1.5% percentage point. Accession country complies with the price stability criterion when its annual average inflation does not exceed the thus determined reference value. For more information on the Maastricht criteria see: *Report on the Costs and Benefits of Poland's Adoption of the Euro*, NBP 2004.

[10]The above estimates of the reference value are consistent with the position of the European Commission as presented in the 2004 Convergence Report. In contrast to the Commission's stance, however, the European Central Bank (ECB) does not condition its decision about the exclusion of a country from the group of three EU member states with the most stable prices on whether this country recorded deflation, but rather on whether its annual average inflation rate significantly diverges from the price growth rate recorded in other countries. The assessment whether the situation of serious divergence exists or not is prepared in each individual case by the General Council of the ECB. Thus, although in August 2004

Lithuania, with 0.2% deflation, was not included in the group of reference countries and Finland with 0.4% inflation was, the level of 0.1% average annual inflation recorded in Lithuania in September, for example, does not automatically guarantee, in the ECB´s opinion, that this country should already be taken into account while determining the reference value for the price stability criterion.

Determinants of inflation

2.1 Demand

According to the Central Statistical Office's (GUS) preliminary estimates, the GDP growth rate in 2004 amounted to 5.4%. The released data are only slightly lower than the previous NBP estimates (5.5%) and the forecasts of market analysts (5.5-5.6%).

It has to be emphasised that so far the information that would allow an assessment of the economic growth in 2004 Q4 is not available. Consequently, the estimates of economic growth in the whole of 2004 are subject to considerable uncertainty. Accounting for as yet unavailable information collected on a yearly basis may result in adjustments to the GDP growth rates in the first three quarters of 2004. Taking this into consideration, the estimates on the rate of GDP growth in 2004 Q4 obtained by comparing annual estimates with preliminary data for the first three quarters of 2004 are, as yet, uncertain.

The estimates made on the basis of preliminary GUS data on the GDP in the whole of 2004 and on the data concerning the GDP in the first three quarters of 2004 indicate that the GDP growth rate in 2004 Q4 amounted to slightly above 4% y/y and was only a little lower than expected. Applying an analogical procedure to the components of the final demand, it can be concluded that this situation resulted to a similar degree from the lower growth rate of domestic demand and the negative contribution of net exports in GDP growth.

Preliminary data indicate that in line with expectations, 2004 Q4 saw acceleration in the dynamics of gross fixed capital formation (of over 7% y/y). A high rate of growth of gross capital formation (over 14% y/y in the whole of 2004) indicates that the GUS had assumed a high increase in inventories in the economy in 2004 Q4 in the extent similar to that observed in the previous quarters[11].

The reduction in the annual rate of growth of domestic demand was brought about by an unexpected, in view of other available data, significant decline in the consumption dynamics. This was particularly true for private consumption, the estimated growth of

[11]On the day the assessment of GDP growth in 2004 was released, F01 study results of the enterprise sector were still not available.

Seasonally adjusted (per cent)	2002q4	2003q1	2003q2	2003q3	2003q4	2004q1	2004q2	2004q3
GDP	0.7	0.7	1.5	1.4	1.2	1.7	1.1	0.8
Domestic demand	0.4	0.4	0.7	1.0	1.0	1.6	1.2	1.1
Total consumption	0.6	0.6	0.7	0.8	0.8	0.8	0.8	0.7
Private consumption	0.7	0.7	0.9	0.8	0.9	0.7	0.9	0.7
Gross capital formation	0.4	0.2	-0.7	2.0	3.0	6.0	2.4	3.1
Gross fixed capital formation	0.5	-0.8	0.5	0.5	0.4	1.6	1.1	1.3

Table 2.2: GDP and aggregate demand components growth rates (q/q, per cent, seasonally adjusted)
Source: GUS data.

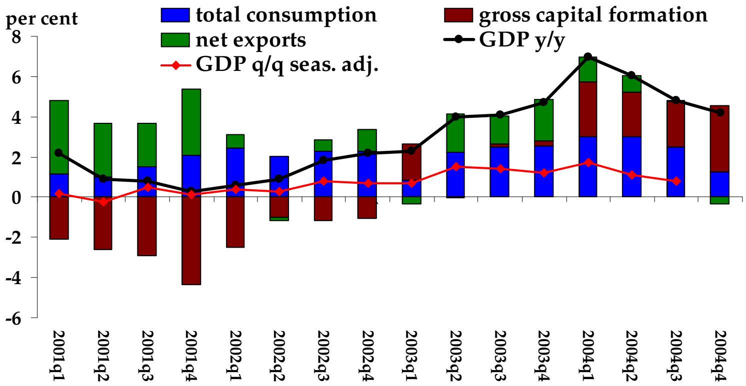

Figure 2.8: Contribution of aggregate demand components to GDP growth (per cent)
Source: GUS data, NBP estimates.

which in 2004 Q4 fell under 2% y/y, while for the past six quarters it had been standing at 3.5%-3.9%.

Preliminary NBP estimates point out that after an exceptionally high growth in 2004 Q3, in Q4 the dynamics of exports and imports reported a decrease. However, this referred to exports dynamics to a greater extent and as a result in Q4 the contribution of net exports in the annual GDP growth rate was negative while in the previous quarter it was close to zero. This situation corresponds to expectations, according to which investment recovery will be accompanied with deterioration in the trade balance.

2.1.1 Consumption demand

As it was emphasised in section 2.1, preliminary estimates on private consumption growth rates in 2004 reveal a remarkable reduction in 2004 Q4 (down to 1.8% from 3.5% y/y in Q3) Such a marked slowdown in private consumption growth is difficult to explain in view of other data on the household sector, as according to NBP estimates made on the basis of registered components of disposable income of households (income from paid employment, income from private business activity, income from property, pensions, social benefits and subsidies for farmers) the increases in gross disposable income in 2004 Q3 and Q4 were similar in real terms[12]. Therefore, the income dynamics does not explain the decline in consumption growth of over 1.5 percentage points.

Moreover, the decline in private consumption should not be linked to a decrease in the growth rate of retail sales, which fell from 4.0% in Q3 to 1.1% y/y in Q4. In January 2004 there was an acceleration in the retail sales rate of growth (increase of 7,5% y/y). The slowdown in retail sales in 2004 Q4 was mainly driven by an almost 25% (y/y) drop in sales of the automotive sector[13]. Polish households imported nearly 800 thousand of second-hand cars, which had a direct impact on the reduction in sales of new cars one the one hand and on the rise in consumption on the other. It is probable that in its estimates of consumption the GUS did not account for a significant underpricing of imported second-hand vehicles, which might have resulted in registering a lower than actual dynamics of private consumption in real terms.

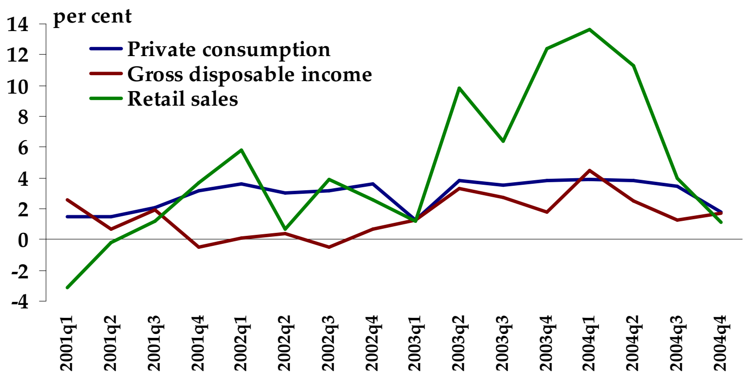

Figure 2.9: Growth of private consumption, gross disposable income and retail sales (y/y, per cent, constant prices)
Source: GUS data, Q4 2004 - NBP estimates.

GUS business tendency surveys indicate that households foresee an improvement in their financial situation within the next 12-months. This ongoing consistent increase in consumer expectations has been observed for many months now and so it should translate into a growth in consumer demand dynamics. At the same time, the scale of this growth will be probably lower than that of income growth, as the survey results signal that households intend to raise their savings and cut spending on important purchases.

[12]The rise in gross disposable income in 2004 Q4 was affected by growing income from private business activity and property. Slightly stronger than in 2004 Q3 was the rise in income from paid employment. The real value of social benefits paid out in 2004 Q4 decreased, similarly to the previous quarter. However, farmers received payments of subsidies from the European Union.

[13]Another factor contributing to the weakening in retail sales dynamics was a modest growth (of 0.5% y/y) in the retail sales of consumer durable goods (furniture, household equipment and electronics).

Change (per cent)	2003q4	2004q1	2004q2	2004q3	2003q4	2004q1	2004q2	2004q3
	q/q sesonally adjusted				y/y			
Employment in the economy	-0.5	0.0	-0.1	-1,0	-2.9	-1.3	-0.7	-1.6
Average nominal wage	0.8	2.8	0.3	1.3	2.3	4.6	4.2	5.1
Average real wage	-0.8	2.8	-1.2	-1.9	0.9	3.0	1.0	0.8
Payroll fund in the economy (in nominal terms	0.5	2.6	0.5	-0.4	1.3	4.4	4.5	3.0
Payroll fund in the economy (in real terms)	-0.4	2.8	-1.2	-1.9	-0.2	2.8	1.2	-1.4

Table 2.3: Growth of employment, average wage and payroll fund in the economy (per cent)
†ródşo: GUS data, NBP calculations.

At the same time in 2004 Q4 there occurred a build-up in household savings both non-financial (among others for housing financing) and financial. However, this rise would have had to be extremely strong to account for such a pronounced reduction in consumption dynamics with income dynamics staying very close to its level in the previous quarter.

It is difficult to assume that households increased their savings in 2004 Q4 at the cost of a drastic reduction in consumption. Data suggests that consumption is characterised by a relatively strong inertia and unexpected changes in disposable income primarily result in adjustments to savings rather than consumption. Moreover, a reported boost in consumer optimism (*Leading Consumer Confidence Index* is at its five-year high) is not consistent with the information on a radical fall in private consumption dynamics either.

As a result, comprehensive assessment of consumption growth in 2004 Q4 and the whole of 2004 will only be possible after final data have been released. Until then, the estimates of consumption dynamics produced by comparing preliminary yearly and quarterly estimates should be treated as uncertain.

2.1.2 Government demand

2004 Q4 saw a dynamic growth in demand created by the general government sector, which found reflection in the level of the central budget deficit in the period. This deficit amounted to PLN 12,7 billion, which was almost three times as big as that recorded in 2003 Q4.

In 2004 Q4 the central budget reported a moderate increase in revenue, mostly from indirect taxation. Additionally, the the central budget revenue was increased by high inflows from EU resources in terms of the so-called Schengen Instrument[14]. The total revenues in the whole of the year were 2.7% higher than in 2003 in nominal terms, which, however, in real terms represents a fall of 0.8%.

In 2004 Q4 the realisation of central budget expenditure was accelerated. In the analysed period the nominal spending growth rate accounted for 19.4% y/y against 1.7%

[14]The Schengen Instrument stands for EU resources allocated to the modernisation of the eastern border of the Union.

y/y recorded in Q3. In comparable terms (i.e. adjusting central budget expenditure for subsidies paid to the Social Security Fund as way of compensation for the reduction of the social security contribution transferred to open pension funds) budget spending was 26.7% y/y higher in nominal terms compared with 7.6% y/y recorded in 2004 Q3. The rise in central budget expenditures resulted to a large extent from increasing the resources for co-financing EU funded projects as well as supplementing EU direct subsidies for farmers. Also, the budget transferred an additional subsidy to the Social Security Fund enabling it to reduce its liabilities to commercial banks. In the analysed period there was probably a further climb in expenditure realised by local governments[15]. An important factor affecting domestic demand in 2004 Q4 were payments of direct subsidies for farmers – of about 1.7 billion zloty – realised by the Agency for Restructuring and Modernisation of Agriculture and financed from disbursement and expenditures of the central budget. 2004 Q4 also saw a rise in investment spending both by the central budget and local governments, which may attest to a greater contribution of the general government sector in the recovery of Poland's investment demand. In the whole of 2004 the central budget expenditure rose by 4.6% y/y (by 1.1% y/y in real terms). In comparable terms[16], however, the spending of the central budget was significantly higher. Compared to 2003 its nominal growth accounted for 10.3% y/y (6.6% y/y in real terms), while the budget expenditure growth rate net of payments of EU membership contribution amounted to 7.1% y/y (3.5% in real terms).

In consequence, in the last three months of 2004 there was a dynamic growth in the central budget deficit. Its level was significantly higher than in the previous quarters of the year. This was mainly caused by a rise in central budget expenditure, which had been rather limited in the first half of the year. Nevertheless, at the end of 2004 the central budget deficit settled below its statutory ceiling (91.6% of the plan) and amounted to PLN 41.5 billion (4.7% of GDP). This was a result of higher than expected (by 1.1%) revenues of the central budget, but also of expenditure realisation stopping short of reaching the limit (by 1%).

Despite significant accumulation of expenditures, particularly from the central budget and probably local governments in 2004 Q4, the implementation of spending reduction policy in the first half of the year as well as favourable situation on the revenue side resulted in a lower than anticipated general government deficit. According to preliminary estimates of the Ministry of Finance, in 2004 the deficit amounted to approx. 5.6% of GDP in relation to the planned value of 6.3% of GDP. Still, this means a 0.3 percentage point rise in general government deficit in relation to GDP as compared to 2003 (a rise of 1.4 percentage points in comparable terms), and consequently, an increase in the demand created by this sector in the previous year. As a result of a lower general government deficit and higher than planned inflows from privatisation

[15] On the basis on local governments' reports on budget execution in 2004 Q1 these entities reported a nominal rise in total spending of 4.2% y/y, in Q2 of 8.5% y/y and in Q3 of 10.8%.

[16] i.e. adjusting central budget expenditure for subsidies paid to the Social Security Fund as way of compensation for the reduction of the social security contribution transferred to open pension funds

as well as due to zloty appreciation (conducive to lowering the value of foreign liabilities in zloty terms), in 2004 public debt settled at the level not exceeding 51% of GDP[17], i.e. below the 2003 value.

The Justification for the 2005 Budget Act assumes a reduction in general government deficit down to the level of 4.5% of GDP mainly by lowering the central budget deficit to GDP ratio by approx. 1.0 percentage point. This, however, will only help to halt the current rising trend in general government deficit, as the reduction of the share of fixed and social expenditure in the public spending planned in 2005 is to a large extent a one-off effect. The level of expenditures of the general government sector in relation to GDP will remain high (at about 45.0% of GDP) and so unfavourable from the perspective of economic growth. Additionally, there is a considerable risk that the general government deficit in 2005 may prove higher than planned due to the fact that the parliament failed to pass bills crucial for the reduction of expenditure, the financial impact of which had been accounted for in the budget[18]. What is more, according to the NBP's assessment until February 2005 the financial effects of the so far implemented components of the *Public Expenditure Reform and Reduction Programme* will amount in 2005-2007 to approx. PLN 17 billion, which represents as little as 31% of the total amount planned[19]. Thus the implementation of further saving measures remains the key task of fiscal policy as one of the sine-qua-nons of a long-term and sustainable economic growth.

The implementation of the fiscal reform which would limit the imbalance in public finance is also a condition necessary for Poland's euro-area accession. The high level of general government deficit – approx. 4.2% of GDP (according to ESA 95) assumed for 2005 poses the main challenge on the way to comply with the Maastricht fiscal criteria.

2.1.3 Investment demand

According to GUS preliminary estimates, which is in line with the NBP's assessment, in 2004 Q4 a marked acceleration in investment demand could be observed. Gross fixed capital formation increased by over 7% y/y compared with a rise of below 4% in the first three quarters. It is assumed that the acceleration in the outlays dynamics followed from a sustained rise in investment in the corporate sector which was fostered by a significant increase in investment outlays in the sector of government institutions and

[17]According to preliminary data of the Ministry of Finance.

[18]Financial effects of not passing this legislation are estimated at approx. 3.6 billion zloty, i.e. 0.4% of GDP.

[19]The Ministry of Economy and Labour declares that the financial effects of the so far implemented elements of the Hausner Plan account for PLN 24 billion, i.e. 44% of the plan. The difference results from the fact that NBP estimates account for the costs of liquidation of the so-called "old portfolio", i.e.additional costs of pre-retirement benefit payments to persons who had become eligible for those in the last months when the old regulations were binding, and also from the exclusion of taxes paid by the Polish Railways (PKP) and hard coal mines. All the listed factors contributed to the reduction of the financial effects forecast in the *Program*.

local governments. It has to be emphasised, however, that when preliminary annual GUS estimates were being released no data on gross fixed capital formation in 2004 Q4 was available.

In enterprises employing 50 or more people increased investment activity has been observed since the beginning of last year (a rise of 9% y/y in the first three quarters of 2004). However, while in the first half of 2004 the principal source of growth in investments were outlays on buildings and constructions as well as increased purchases of means of transport (in connection with the expected change in tax regulations coming into force on 1 May 2004), in Q3 a strong growth in the outlays on machines and equipment was observed (of over 9% y/y compared with 1.4% y/y in the first half of 2004)[20].

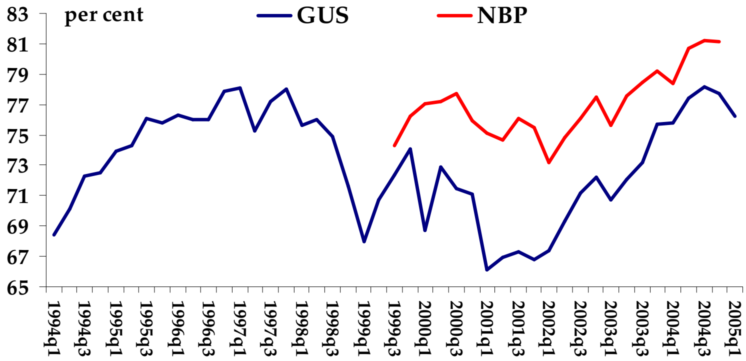

Figure 2.10: Production capacity utilisation in industry (GUS) and in the corporate sector (NBP) (per cent)

Production capacity utilisation obtained from the GUS business survey is markedly lower than that indicated by NBP business survey. The difference 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. 630 enterprises (in December 2004) 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.

The favourable conditions for corporate investment are being promoted by a very high degree of production capacity utilisation, which has been continuing for long time now, as well as improved opportunities for financing investment outlays, mainly from own

[20]In the first three quarters of 2004 the growth in the cost-estimate value of investments initiated in large enterprises was halted (the drop of 1.3% y/y). Still, it has to be remembered that the data on initiated investments are subject to very large volatility and so drawing direct conclusions on their basis as to the future investment propensities may be rather deceptive. It is worth noting that the slight drop recorded in 2004 came after a very high rise in the previous year (of almost 50% y/y) and the current value of initiated investments is close to that observed in 1998-2000, i.e. the period of the highest level of investment outlays in enterprises. Nevertheless, the cost-estimate value of initiated investments should be carefully analysed and a potential lack of its further growth could be an indication of a halt to the growing trend in corporate investments.

resources. In the case of central government and local government institutions the main source of increased demand is the initiation of the realisation of projects financed from EU structural funds. Additionally, there is a bright outlook for Poland attracting new inflows of foreign direct investments, because after the EU accession Poland's attractiveness as perceived by foreign investors significantly increased.

It is estimated that the foregoing factors will be conducive to a further investment recovery in 2005. This expectation is supported by the results of NBP economic climate survey, which stipulates that the percentage of companies planning to embark on new investments has reached the highest level since 1998. One in two enterprises intends to start *major*[21] investments in 2005, 50% of them declaring to start off the investment at the very beginning of the year. Thus, it can be expected that the inflows of EU resources will be raising investment demand in the remaining sectors of the economy, as well. This does not only refer to the sector of central government and local government institutions in that they are implementing infrastructural investment, but also to small enterprises and private farms. This is so, because at least a part of the direct subsidies farmers have been receiving since the end of the previous year will be spent on modernising their production.

Despite favourable conditions for current and future investment activity, a considerable uncertainty persists as to the behaviour of the investment dynamics in the coming quarters. An important reason behind this uncertainty is an unclear fiscal outlook (election year) and the ensuing uncertainty on the future business conditions (exchange rate risk, cost of credit).

2.1.4 External demand and current account of the balance of payments

According to preliminary estimates, the aggregate current account deficit in January-November 2004 amounted to EUR 2.73 billon compared with EUR 3.34 billion in the corresponding period of the previous year. This improvement in the current account balance primarily resulted from a rise in the surplus of current transfers and services (Figure 2.11) .

In January-November 2004 the value of exports (expressed in the euro) grew by 21.5% (y/y), while the value of imports (in the euro) – by 19.5% y/y. In mid-2004 (July-August) there was a slight deepening of the trade deficit in relation to the corresponding period of the previous year accompanied by a decline in the dynamics of both imports and exports, more pronounced in the latter. Additionally, starting from August 2004 imports rose faster then exports[22].

[21]This information reflects the percentage of responses to the following question included in NBP economic climate survey: *Does your enterprise intend to embark on some major investments in 2005?*

[22]The analysis and assessment of export and import developments in 2004 is considerably hindered by changes in the system of Polish statistics of foreign trade introduced after Poland's entry to the European Union (cf. *Inflation Raport, August 2004*). At the current stage of the new system's implementation the released data should be approached with caution and treated as preliminary, as they are subject to deep adjustments in the following months.

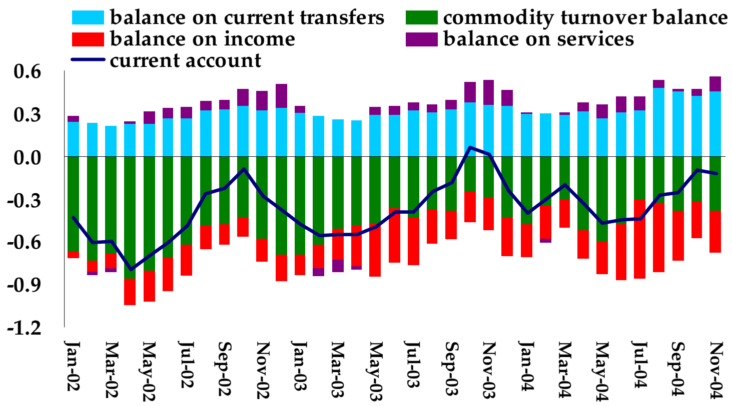

Figure 2.11: Current account balance – monthly data (three-month moving average, EUR bn.)
Source: NBP data.

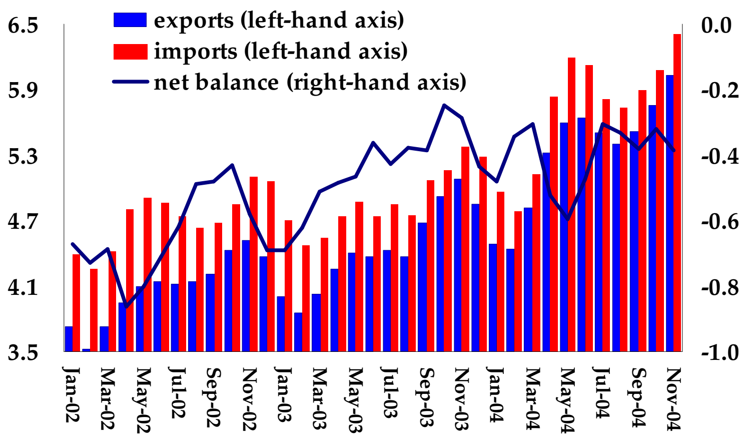

Figure 2.12: Polish foreign trade – monthly data (three-month moving average, EUR bn)
Source: NBP data.

According to GUS data in the period from January to November 2004 the deficit in the Polish foreign trade shrank by EUR 840 million (down to the level of EUR 10,7 billion). The improvement in the trade balance was mainly affected by a slide in the deficit in the trade with the European Union[23]. 2004 was the sixth consecutive year in which the imbalance in Polish trade with the EU was falling. This was due to a higher growth of exports (22% y/y) than imports (16% y/y). At the same time, the rise in Polish exports to the EU in 2004 ranked highest since 2000.

This high dynamics in EU exports in 2004 was favoured by a rise in import demand in Poland's most important trade partners. The second half of 2004 saw import acceleration in the euro-area in general and in Germany in particular. The balance on

[23]In the course of eleven months of 2004 the deficit in trade with the European Union decreased by EUR 1.7 billion.

	2003q1	2003q2	2003q3	2003q4	2004q1	2004q2	2004q3	2004q4
Export prices / Unit labour costs*								
y/y	13.1	18.6	11.1	20.8	25.6	32.8**	13.0	lack of data
q/q	-1.8	9.4	5.3	6.8	2.1	15.6**	-10.4	lack of data
Import prices / Producer prices								
y/y	8.5	8.8	3.8	4.0	4.8	-1.1	-5.6	lack of data
q/q	2.7	2.1	-0.1	-0.7	3.5	-3.6	-4.6	lack of data
REER ULC								
y/y	-15.0	-19.5	-11.9	-23.2	-23.3	-18.4	-5.3	8.7***
q/q	1.0	-10.5	-6.4	-9.2	0.9	-4.7	8.7	4.1***

Table 2.4: 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,
"**" – data adjusted for information based on most recent GUS publications,
"***" – based on ECB and NBP estimations (ULC for Poland on the basis of GUS monthly data), minus denotes REER ULC depreciation.
Source: Own estimates based on NBP, GUS, EC and ECB data.

trade with Russia, which observed a very dynamic economic growth (GDP growth of over 7% y/y), was also markedly improved.

Just like in the previous years the strongest impact on the rise in Polish exports was exerted by goods classified as machines and transport equipment[24]. The acceleration in the dynamics of exports was also greatly affected by a climb in the sales of metallurgical products, which was mostly related to a high demand for metals in world markets and a significant increase in their prices.

However, the highest growth rate, was in the export of unprocessed products, particularly coal and coke (due to price hikes in world markets) and agricultural products. The rise in agricultural exports to the EU displayed the highest dynamics, which was the effect of the elimination of customs duties in agricultural trade with this area. In the second half of 2004 there was also a significant increase in the export of Polish agricultural produce to eastern markets, which to a large extent resulted from the fact that since Poland's EU accession Polish agricultural exports to third countries have been subsidised by the EU.

In the first half of 2004 a marked improvement in the cost competitiveness indices of Polish exporters could be seen, as measured with shifts in the relation of the export transaction prices index to the index of unit labour costs, and also with changes of real effective exchange rate deflated with unit labour costs. Since 2004 Q3 a gradual weakening in thus measured competitiveness has been observed. This weakening follows from a lower dynamics in export prices connected with the appreciation of

[24]The analysis of changes in the goods composition of exports and imports is based on GUS data on the period from January to September 2004.

Warning indicator	2003q1	2003q2	2003q3	2003q4	2004q1	2004q2	2004q3
Current account balance / GDP*	-2.7%	-2.4%	-2.4%	-2.2%	-1.7%	-1.8%	-1.8%
Trade balance / GDP*	-3.7%	-3.2%	-3.1%	-2.7%	-2.4%	-2.6%	-2.6%
Direct investment / Current account deficit	78.1%	52.8%	104.2%	137,0%	142.7%	79.2%	-34.7%
Current account balance plus direct investment / GDP	-0.8%	-1.2%	0.1%	0.5%	0.6%	-0.6%	-2.1%
Foreign debt service / Revenue from export of goods and services	30.2%	36.6%	25.3%	31,0%	28.3%	27.7%	28.1%
Foreign reserves expressed in terms of monthly import of goods and services	5.4	5.1	4.8	4.4	5.2	4.4	4.3

* calculated yearly

Table 2.5: Selceted warning inidicators
Source: GUS data, NBP data, NBP calculations.

the zloty and also from a weaker than in the first half of 2004 annual decline in unit labour costs in Poland. This decrease in competitiveness of exporters is signalled by NBP economic climate surveys[25], which point to the fact that in relation to the previous quarter a rise was registered in both the average share of unprofitable exports in revenue from sales and the percentage of enterprises reporting unprofitable export sales[26]. There was also a significant increase in the percentage of exporters for whom the actual exchange rate of the zloty exceeded the declared threshold ensuring profitable exports (in the case of the euro this percentage stood at 32% compared with 18.3% in the previous quarter, and for the dollar it rose to 62.7% compared with 42%). The threshold exchange rates declared in the latest NBP economic climate survey both for the dollar and the euro were at lower (appreciated) levels compared to the previous quarter. Still, it has to be pointed out that the assessments of the threshold export profitability rate declared by enterprises change over time. In survey history the signalled EUR/PLN threshold exchange rate of export profitability (the median of responses) ranged between 3.5 and 4.2. In a comprehensive assessment of export competitiveness, however, the level of the real exchange rate has to be considered in the first place.

In the case of Polish imports, the greatest part in its rise was played by the import of supply goods, which resulted from a relatively high dynamics of industrial production and exports At the same time, Q3 marked a decline in the import dynamics of investment goods in relation to the first half of 2004 (in January-June 2004 the rise in the value of the imports of these goods amounted to 15% y/y, while after nine months – 10%). The lowest import dynamics was observed in consumer goods (a rise in value of 7% y/y). Despite the fact, in this group of products there was a significant increase in food imports due to the elimination of customs duties on EU products and a reduction in duties on third-country products after Poland's EU accession. Another

[25] *Preliminary information concerning the condition of the corporate sector and the economic climate in the first quarter of 2005*, NBP.

[26] The average share of exports in the revenues of surveyed enterprises currently amounts to 39.3%, while the percentage of entities reporting unprofitable export sales rose from 9.2% to 18.4%.

factor contributing to the import growth may be the deterioration in the index of price competitiveness of Polish producers as measured with shifts in the relation of import transaction prices index to the index of domestic producer prices in manufacturing, which has been visible since the mid-2004 (Table 2.4). The deterioration of competitiveness calculated in this way results, among others, from the zloty appreciation in this period.

In 2004 Q3 the composition of financing the current account deficit deteriorated. In this period in foreign direct investment a negative balance of EUR 266 billion was recorded (resulting from lower foreign capital inflows in the form of share purchases accompanied with outflows for the repayment of loans granted by foreign investors). As a result, the deficit in the current account was in this quarter fully financed by capital inflow in the form of debt securities. In turn, in 2004 Q4 the composition of capital inflow was changed, i.e. there was a rise in direct investments in relation to portfolio investments.

In 2004 Q3, all the prudential indicators selected for the assessment of external imbalance remained at a safe level (Table 2.5).

2.2 Output

On the basis of GUS preliminary estimates for 2004 it can be inferred that the value added in 2004 Q4 exceeded its level from a year ago by approx. 4%. In the whole of 2004 its growth rate amounted to 5% y/y, although it gradually decreased from quarter to quarter. The annual value added growth in 2004 was determined mainly by industry and market services sections. The greatest influence on the growth dynamics of the value added in individual quarters was exerted by the decreasing annual growth rate in industry (Figure 2.13).

2004 Q4 and January 2005 saw a significant decline in the rate of growth of industrial output. This mainly referred to these manufacturing sections that recorded a strong output growth in the first half of 2004 due to significant investment outlays in the previous years (automotive industry, manufacture of fabricated metal products, manufacture of machinery, manufacture of electrical machinery and equipment, rubber and plastic products, furniture industry). It can be presumed that growth trends in these sections were hampered mainly by a high level of production capacity utilisation, as indicated by GUS business tendency survey.

In some industries an important role was played by demand factors, both domestic (e.g. the petering-out of the pre-accession boom in the sales of construction materials) and external (a halt to the export of some processed food products to Russia).

In the face of the worsening assessment of economic climate by enterprises analysed in GUS business tendency survey, it may be expected that the low growth dynamics of industrial output (m/m) will be sustained in the coming months. The statistical base effect, however, will lead to a further decrease in the annual dynamics, especially in

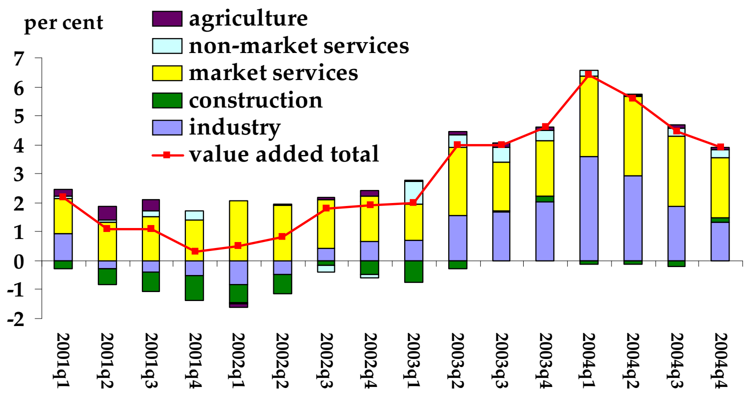

Figure 2.13: Sector contribution to annual gross value added growth (per cent)
Source: GUS data

Seasonally adjusted (per cent)	2002q4	2003q1	2003q2	2003q3	2003q4	2004q1	2004q2	2004q3
Value added - total	0.7	0.8	1.2	1.3	1.3	1.6	1.3	0.9
Industry	0.5	0.4	3.1	2.6	3.5	3.8	1	-0.4
Construction	-2.5	-0.8	1	0.1	-0.2	-3	-0.9	-1.8
Market services	0.9	0.9	0.8	1	1.1	1.2	1.5	1.1

Table 2.6: Value added and its components (q/q growth of seasoanlly adjusted data)
Source: GUS data

the months corresponding to the period of the pre-accession boom. A rebound in the m/m growth dynamics of industrial output may be expected when the effects of investment outlays, among others those started by enterprises during the economic recovery, come to the fore. Analytical studies of enterprises conducted at the NBP indicate that, regardless of the economic climate in the corporate sector as a whole, investment was usually made by those companies, whose assessment of the economic outlook and prospects for development was positive.

GUS preliminary estimates point to the continuation of upward trends in market services in 2004 Q4, although their growth rate was somewhat lower as compared to the first half of the year. Q4 marked a sharp decrease in the dynamics of retail sales. However, it is worth emphasising that the slump was caused by a decline in the sales of new passenger cars due to a record-beating influx of imported second-hand cars. In the remaining sections of retail trade a high turnover growth rate was maintained. As in the case of industry, in the nearest future the annual retail sales dynamics will be adversely affected by its high levels in the months preceding Poland's EU accession. However, favourable signs from business tendency surveys indicate that there are prospects of a further recovery in this section.

As for the remaining sections of market services, it is important to highlight a slowdown in the growth of wholesale trade and a significant decrease in the sales of transport services. This means that a relatively high growth rate in the value added in market services is determined by the remaining sections with the sales of telecommunication services making a particularly favourable contribution.

In 2004 Q4, a long-awaited revival in the construction started, which results from the slowing decline in investment-type construction work accompanied by a further acceleration in renovation projects. In the light of very optimistic signals visible in GUS business tendency survey, it can be expected that positive trends in construction will be strengthening in the nearest future. Other factors that can potentially be contributing to the recovery in this industry sector include infrastructural investments made related to projects co-financed by the EU and positive business climate in residential construction.

2.3 Labour market

2.3.1 Employment and unemployment

According to BAEL data in 2004 Q3 the number of working persons[27] started to rise again significantly. The figure was then 230 thousand higher than a year before (1.7% y/y) (Figure 2.14). This rise resulted mainly from the increase in the number of people on fixed term contract, which is consistent with the developments observed in the previous quarters. The number of people working on a fixed-term contract has been dynamically rising, while the number of permanent-contract employees has been falling. According to BAEL data the situation in the labour market improved in all main sectors of the economy, though the largest improvement was recorded in the private sector excluding farming (Table 2.7).

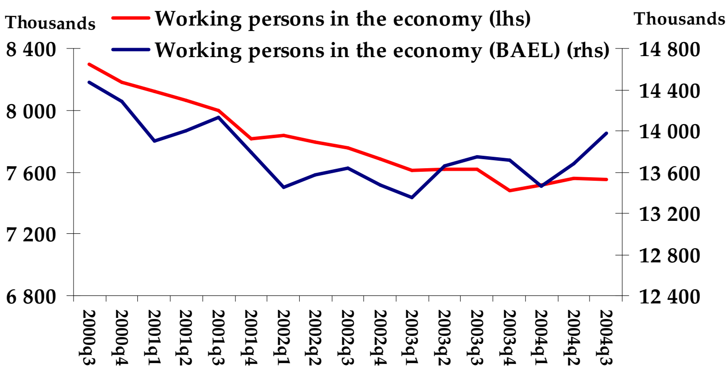

Figure 2.14: Working persons in the economy – according to BAEL and entities with more than 9 employees
Source: GUS data.

[27]For definition of the working persons according to BAEL (Labour Force Survey) see: *Quarterly Information on the Labour Market, GUS.*

	Number of working persons in 2004q3 (thousands)	Growth in 2004q2 (y/y)	Growth in 2004q3 (y/y)
Total	13 974	0.2%	1.7%
Place of residence			
urban areas	7 648	-0.5%	0.8%
rural areas	6 326	1.3%	2.2%
Economic sector			
agriculture	2 685	-3.1%	1.0%
industry	4 053	1.9%	1.4%
services	7 236	1.3%	2.1%
Ownership sector			
public	4 128	-4.5%	-4.5%
private (excluding farms)	7 331	3.9%	5.7%
private (farms)	2 515	-1.9%	1.2%
Employment status			
hired employees	10 090	0.7%	1.8%
employers and self-employed	3 044	-2.2%	0.9%
contributing family workers	841	1.0%	2.1%
Type of job contract			
fixed-term contract	7 693	-3.7%	-2.4%
permanent contract	2 397	20.1%	18.7%

Table 2.7: Working population according to BAEL in selected sections
Source: BAEL data, NBP calculations.

On the other hand, according to the reports from entities with over 9 employees, in 2004 Q3 the number of working persons in the economy was 60 thousand lower than a year before (Figure 2.14)[28]. Employment grew in trade and repair (2.1% y/y) and in financial intermediation (4.1% y/y). Also the number of the employed in manufacturing reported a slight increase (0.7%). In contrast, employment fell sharply in construction (a decrease of 8.2% y/y) and in healthcare and social work (a decline of 3.8% y/y).

In the last five years employment figure in the corporate sector was always dropping at the turn of the year. In December 2004, the monthly decrease of employment was smaller than in the previous years, which corresponds to a slight annual increase (0.2% y/y). In turn, in January 2005 a considerable monthly increase in the enterprise sector employment was recorded. The number of the employed went up by 1.4% m/m (Figure 2.15), which translates into an increase in employment in annual terms (1.2% y/y). However, these positive employment data for January 2005 should be approached with caution. This is because at the beginning of the year the sample of companies examined by the GUS always changes (as was the case this year as well), which may affect the employment data.

Both the data from labour offices and BAEL indicate that the unemployment is lower

[28]For definition of the working persons according to reports from entities with over 9 employees see: Statistical Bulletin, GUS.

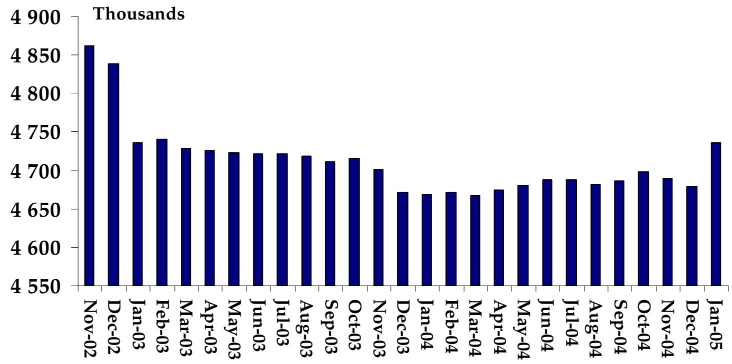

Figure 2.15: Employment in the enterprise sector
Source: GUS data.

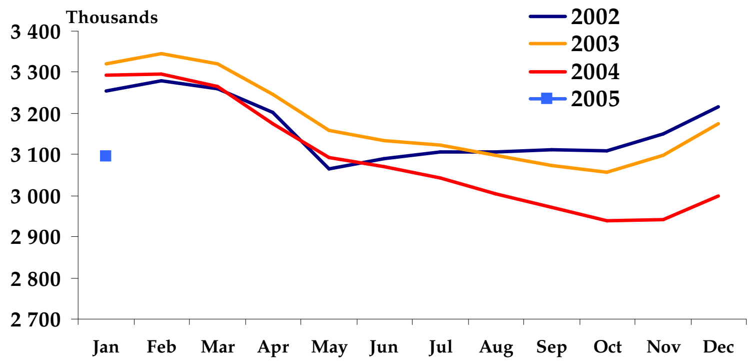

Figure 2.16: Number of unemployed (thousands)
Source: GUS data.

than a year before. Although at the end of 2004 and in the beginning of 2005 there was a seasonal increase in the number of the unemployed registered and in unemployment rate, in the course of the year 2004 unemployment dropped substantially. At the end of 2004, the number of registered unemployed was by 176 thousand smaller than a year before (Figure 2.16), while the unemployment rate was 0.9 percentage point lower as compared with the previous year. According to BAEL data, in 2004 Q3 the number of unemployed was by 194 thousand lower than a year before. In January 2005 the registered unemployment rate stood at 19.5%.

NBP economic climate survey shows that in 2005 Q1 the outlook for employment in the corporate sector is better than in the previous years (in the corresponding period), even though slightly worse than in the two preceding quarters. Despite the fact that there are still more enterprises intending to reduce employment (19.3%) rather than to raise it (7.7%), the number of enterprises planning to maintain their employment at the same level is increasing (73.0%)[29]

[29]The positive outlook for employment in the current quarter is suggested by the *Hudson Job Index*

In summary, it can be stated that data which have been released since the last *Inflation Report* point to a gradual improvement in the labour market. Unemployment is significantly lower than a year before. A rise in the employment in the corporate sector was observed. On the other hand, there are conflicting signals as to the number of working persons in the economy: according to BAEL data it is increasing (y/y) while according to reports from entities with over 9 employees it is falling (y/y).

2.3.2 Wages and productivity

In 2004 Q4, the average wage in the enterprise sector grew slower than in the previous quarters of 2004. In Q4, the average wage grew by 2.7% y/y in nominal terms (the real wage dropped by 1.5% y/y) (Figure 2.18). Low annual growth of wages was also continued in January 2005. A drop in real wages in the corporate sector has been observed since September 2004. The wage pressure in the corporate sector is still being curbed by a difficult situation in the labour market, among others a high unemployment. According to the latest NBP economic climate survey nearly 60% of all surveyed

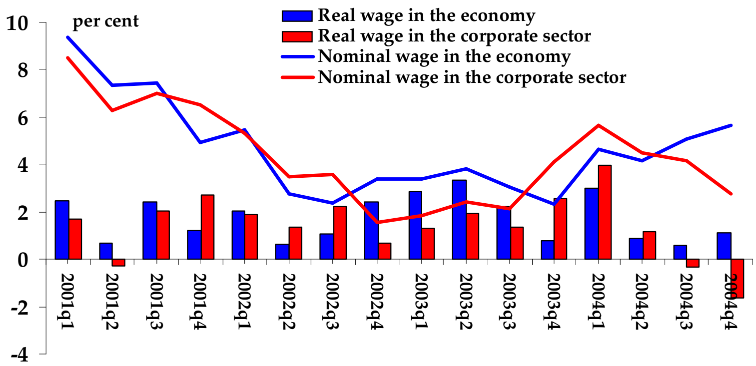

Figure 2.17: Annual growth of wages in the economy and in the corporate sector (nominal and real)
Source: GUS data, NBP calculations.

enterprises did not observe any wage pressures, while the percentage of those reporting increased wage pressures has decreased since the last survey. Moreover, the NBP economic climate survey indicates that – according to the survey question – 28% of enterprises are planning to raise wages in the upcoming quarter (compared with 13% in the previous one). Pay rises are to pertain to approx. 40% of employees of the

which reflects employers' predicted behaviour as regards employment. As many as 37% of surveyed companies declare to increase in the number of permanent-contract employees in the current quarter, 7% warn about reductions in their workforce and 54% companies intend to retain their employment at the current levels. Hudson Global Resources researches the outlook for the labour market by examining a sample of 200 small, medium-sized and large Polish and international companies. The sample is selected at random from the data base of Hudson Global Resources' customers and business associates.

surveyed enterprises, but the scale of the rises will be rather moderate (approx. 5% on the average)[30].

In the economy as a whole the situation was different. In 2004 Q4 the average wage in the whole economy grew faster than in the preceding quarters and also faster than in the enterprise sector – an increase of 5.6% y/y in nominal terms (real growth of 1.1% y/y), compared with 5,1% y/y in 2004 Q3 (0,7% y/y in real terms) (Figure 2.17). The higher – as compared to the corporate sector – wage dynamics in the whole economy probably resulted from a higher rate of growth of wages in education and financial services.

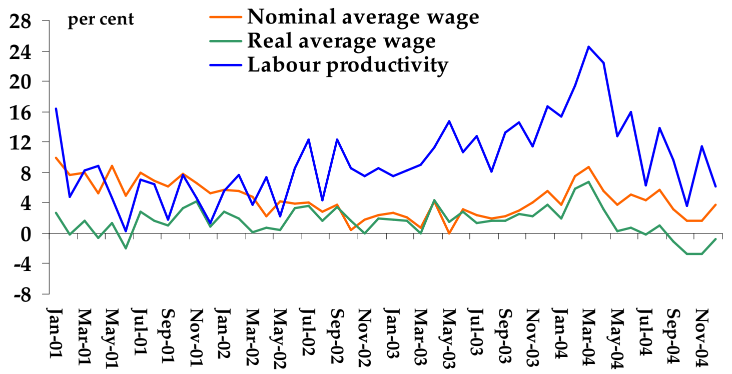

Figure 2.18: Annual growth of labour productivity and wages in industry
Source: GUS data, NBP calculations.

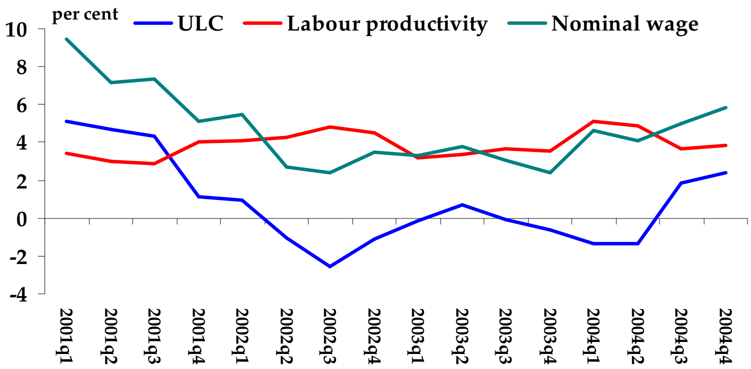

Figure 2.19: Annual growth of unit labour costs (ULC), labour productivity and nominal wage in the economy - seasonally adjusted
Source: GUS data, NBP calculations; Q4 2004 - NBP estimates.
Note: Labour productivity: GDP (constant prices) per working person according to BAEL; Unit Labour Costs (ULC): nominal payroll fund in the economy (average wage in the economy times number of working persons in the economy according to BAEL) to GDP (constant prices).

[30]See also *Preliminary information concerning the condition of the corporate sector and the economic climate in the first quarter of 2005*, NBP.

For several years now the growth in labour productivity in industry has outpaced the wage growth in the sector (Figure 2.18). In the economy as a whole in the last two quarters of 2004 growth rate of wages was higher than productivity dynamics, which resulted in an increase in unit labour costs in year-on-year term (in 2004 Q3 and Q4 unit labour costs rose by approx. 1.9-2.4% y/y)[31]. Consequently, the disinflationary influence of this factor has been gradually weakening.

2.4 Other costs and prices

2.4.1 External prices

In 2004 Q4 a further price increase in world commodity markets could be observed. This rise, however, was slower compared to the previous quarters of 2004 (Table 2.8). The weakening in the rising trend observed since the beginning of 2004 was brought about by reductions in food prices as well as by the slower growth in the price of metals[32]. Nevertheless, throughout 2004 commodity prices increased by over 30%[33] (i.e. over twice as fast as in 2003), primarily due to hikes in metal and fuel prices (i.e. those materials which experienced the highest surge in demand in 2004).

	y/y change in %				m/m change in %			
	2004q1	2004q2	2004q3	2004q4	2004q1	2004q2	2004q3	2004q4
Total	**13.1**	**36.2**	**38.2**	**35.1**	**12.1**	**8.7**	**6.7**	**3.8**
Non-energy raw materials	**25.4**	**25.5**	**20.5**	**11.8**	**13.4**	**0.5**	**-3.9**	**2.0**
food	18.4	25.3	9.0	-5.0	13.4	3.7	-16.0	-3.7
industrial raw materials	29.1	25.6	25.8	19.5	13.4	-1.0	2.1	4.3
agricultural	17.3	11.0	10.2	1.6	3.2	-0.4	-1.2	-0.1
non-ferrous metals	39.8	41.4	37.4	29.7	18.3	-0.1	3.1	6.2
Energy raw materials	**7.6**	**42.0**	**47.2**	**47.3**	**11.5**	**13.1**	**11.7**	**4.5**
crude oil	3.0	35.2	42.2	46.2	9.0	11.4	13.3	6.2

Table 2.8: World prices of main raw materials´ groups in USD (y/y change in %)
Source: HWWA – Hamburg Institute of International Economics.

Growing trend in crude oil markets continued till the end of October 2004 (Figure 2.20), when the prices reached their all-time high. High level of OPEC production as well as the restoration of the previous levels of supply from the Mexican Bay[34] all contributed to the build-up in crude oil and oil product stocks. In consequence, since

[31] Unit Labour Costs (ULC): nominal payroll fund in the economy (average wage in the economy times number of working persons in the economy according to BAEL) to GDP (constant prices).

[32] The decrease in the growth rate of the prices of metals was primarily the result of a lower GDP dynamics in the United States in 2004 Q3 and of the expected – after the recent interest rates hikes – deceleration in economic growth in China.

[33] In USD, HWWA data.

[34] After previous reductions brought about by the autumn hurricanes.

the beginning of November till the middle of December 2004 oil prices decreased by USD 15 on a barrel. However, a further decline in crude oil prices was curbed by the OPEC's decision to reduce their output levels to the official limits, starting form the beginning of 2005.

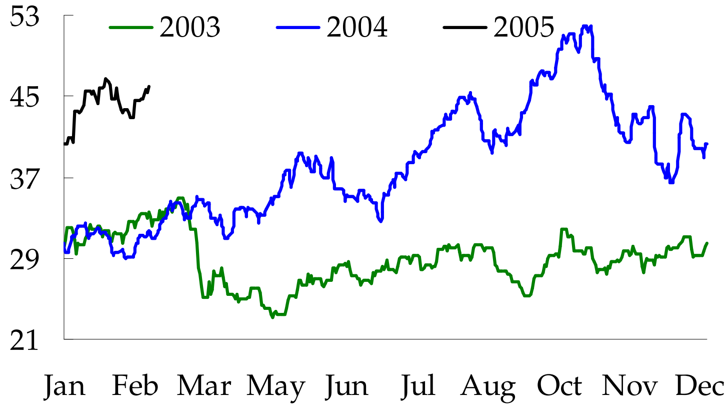

Figure 2.20: Brent crude oil prices (USD/barrel)
Source: Bloomberg data.

High demand continuing throughout 2004[35] kept oil stocks at a relatively low level. This results in high price volatility, and all disturbances in production and supplies result in significant price hikes[36]. Price growth in January 2005 resulted in the OPEC decision (taken at its ministerial session on 30 January 2005) to leave their declared output at an unchanged level.

Futures market data and external analytical institutions indicate that oil prices will stay at a relatively high level, but the dominating trend should be that of a gradual decline. It can be expected that the average oil price in 2005 will exceed USD 40 per barrel and so will be higher than last year's average. It is also expected that the main influence on the oil price movements will be exerted by demand factors. Still, in 2005 the demand growth will be most probably lower than last year[37].

[35]According to the International Energy Agency (IEA) in 2004 the demand for crude oil rose by 2.68 million b/d, which was the highest score since 1976 (it Oil Market Report, International Energy Agency, 10 February 2005).

[36]This also happened in the middle of January 2005, when Iraq's oil facilities once again became the target of sabotage attacks in connection to the approaching elections.

[37]However, there are considerable differences in the assessments of this growth, which reflects the uncertainty surrounding the economic growth in world economy. In reports published in February 2005 the US Department of Energy predicts that in 2005 the demand for oil will grow by 2.0 million b/d, OPEC estimates that it will grow go up by 1.73 million b/d, while the IEA estimates that the rise in demand will amount to 1.52 million b/d. In relation to January 2005, both the OPEC and IEA introduced upwards adjustments to their forecasts of the demand for oil.

2.4.2 Producer prices

In the analysed period the index of producer prices in industry (as measured with PPI) was gradually decreasing and in January 2005 it stood at 4.4% y/y (Figure 2.21). Due to the unexpected rises in commodity prices (crude oil and copper) in the second half of 2004 the fall in the price dynamics was slightly slower than previously expected.

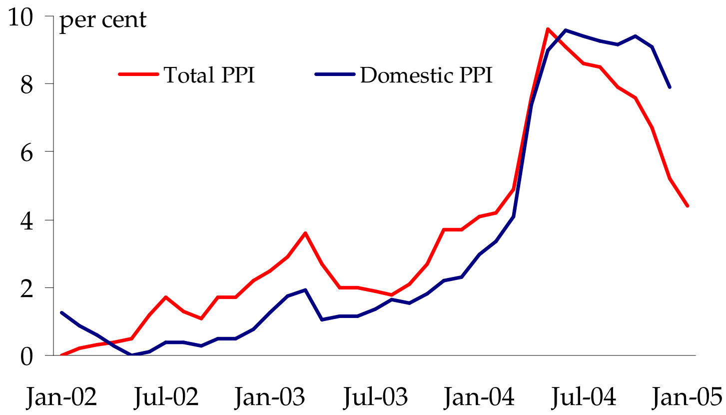

Figure 2.21: PPI in industry and PPI in domestic market
Source: GUS Data, Eurostat Data

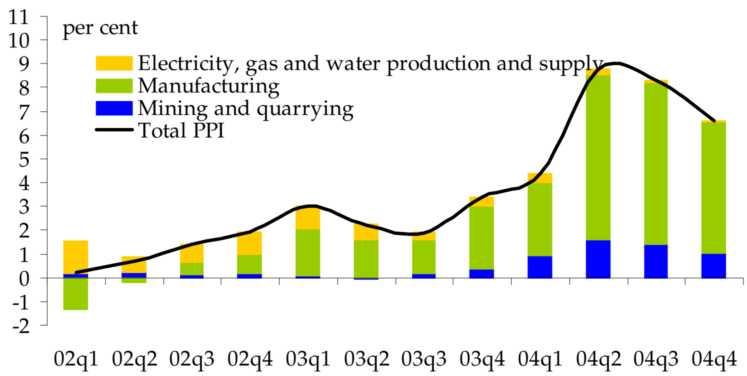

Figure 2.22: Contribution of producer prices in industry sectors in PPI total growth (y/y changes, per cent)
Source: GUS Data

Producer prices grew mainly in the first half of 2004 (by 6.3% in January-June), while in the second half of the year they recorded a slump (of 0.5%).

The main contribution in the rise of annual PPI dynamics was from price movements in manufacturing, mainly due to its weight in the whole of the index[38] Additionally,

[38]In December 2004 the price growth rate in this industry was mainly shaped by the price dynamics

mining and quarrying also had a considerable impact on the PPI level (Figure 2.22).

The observed fall in Producer Price Index mainly resulted from a lower growth rate of export prices associated with the appreciation of the zloty. In turn, the dynamics of domestic producer prices in industry has remained at a high level and since June 2004 has outpaced the total PPI dynamics (Figure 2.21), mainly resulting from the high price growth rate in manufacturing. However, in December 2004 there was a significant drop in domestic price dynamics (down to 7.9% y/y from 9.1% y/y in November 2004). This was mainly caused by the lowering in the dynamics of prices in the food industry (from 10.8% y/y in November 2004 to 9.4 y/y in December 2004), manufacture of motor vehicles (from 13.5% to 11.3% y/y), manufacture of coke and refined petroleum (from 49.3% y/y to 39.2% y/y) and manufacture of chemical products (from 7.4% y/y to 6.7% y/y). Industries characterised with a low dependence on commodity prices and also export-oriented sections reported producer price deflation in year-on-year terms in December 2004[39].

2.5 Financial markets

2.5.1 Asset prices / Interest rates

Short-term interest rates[40]

In the analysed period the Monetary Policy Council did not change the key interest rates of the NBP leaving the reference rate at the level of 6.5%. This was consistent with expectations of analysts and also with market expectations as calculated from FRA contracts[41]. Because the MPC's decisions were not surprising, they did not result in any significant changes in interest rates on money market instruments.

Until the end of January 2005, a falling trend (observed since September 2004) in inter-bank deposit rates and in short-term interest rate futures had been continued (Figure 2.23). This was due to abating market expectations of interest rates rises accompanied by surfacing expectations of reductions of NBP interest rates in 2005. What to a large extent contributed to these developments was the persisting appreciation of the zloty, which was listed by the MPC as an inflation reducing factor. Furthermore,

in sections: *manufacture of coke and refined petroleum products*, where prices rose by over 38.6% y/y and in *manufacture of metals* (rise of over 26.9% y/y). Due to a large contribution of food industry in industrial output the price rise in the section *manufacture of food products* (of 7.2% in December 2004) was also significant.

[39] For instance: manufacture of electronic equipment – a fall of 9.9%, other transport equipment – of 3.5%, manufacture of medical, precision and optical instruments – of 3.3%, manufacture of tobacco products – of 1.8%.

[40] The data presented in this section refer to the period from 18 November 2004 to 18 February 2005.

[41] It has to be pointed out, however, that interest rates in forward curves do not only reflect expectations of market participants as to the level of nominal interest rates, but also the risk premium. As the time horizon lengthens, the risk premium increases, since future investments are surrounded with respectively greater uncertainty.

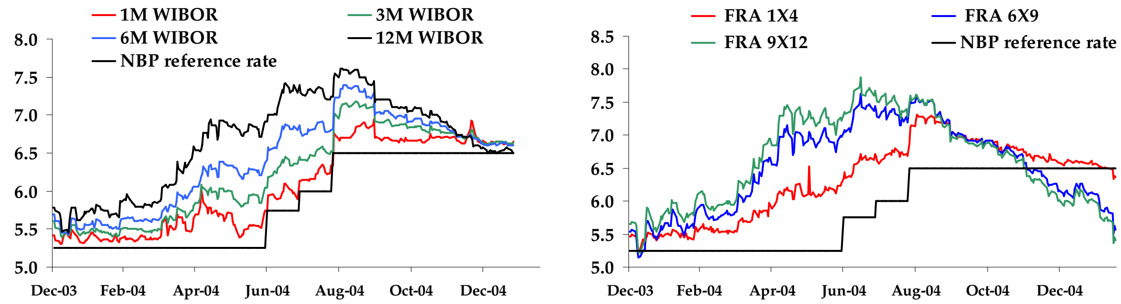

Figure 2.23: NBP reference rate and interest on interbank deposits (left panel) and NBP reference rate and interest on FRA contracts for 3M WIBOR (right panel)
Source: Reuters data.

the published macroeconomic indicators suggesting a lessening of the pressure on price growth in the economy (low pay dynamics, falling dynamics of industrial output) strengthened market expectations of a change of direction in the monetary policy. The most sizeable decrease in the FRA contact rates took place after the publication of the January inflation rate, which proved significantly lower than analysts´ expectations.

As a result, the major change in relation to the November *Report* was a complete wear-off of market expectations of interest rates rises in favour of a gradual increase in expectations of interest rate reductions in 2005. At the end of the reviewed period FRA contracts accounted for rate reductions of approx. 100 bp. in total in 2005 (Figure 2.24, left panel). The first reduction of 0.25 percentage points was expected in April while the second in May or June 2005. This strengthening of expectations of interest rate reductions, however, was accompanied by a considerable uncertainty of market analysts as to their total value in 2005. The median of expectations – on the basis of Reuters surveys – settled above FRA contracts curve (Figure 2.24, right panel).

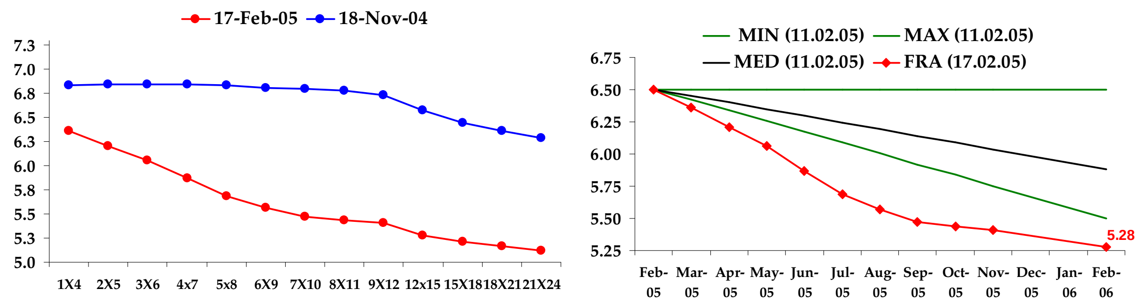

Figure 2.24: Three month forward curves (left panel) and expected changes in NBP reference rate on the basis of FRA contracts and Reuters survey of 11 Feb 2005 (right panel)
Source: Reutersa data.

Trends in international financial markets

In line with market expectations, at its December meeting the Federal Open Market Committee of the US Federal Reserve (FOMC) raised its interest rates by another 25 bp. to the level of 2.5%. Since the tightening period of US monetary policy began in June 2004, the federal fund rate has risen by the total of 150 bp. In the information released after its latest meeting (on 1-2 February 2005) the FOMC implied that the current level of interest rates was still too low to curb inflation. As a result, another 25-point rise is expected to be declared at the next meeting of the Committee in March.

Moreover, in the January Reuters survey most respondents expected an increase in the Fed rate level of 50 bp. in 2005 Q1 (up to 2.75%), another 25-point rise in Q2 (up to 3%) and an increase in the interest rate to the level of 3.5% at the end of December 2005. The median of Reuters survey expectations was close to the levels of futures contracts on federal fund rate, which also value the total rate increase by the end of 2005 at 100-125 bp. (Figure 2.25).

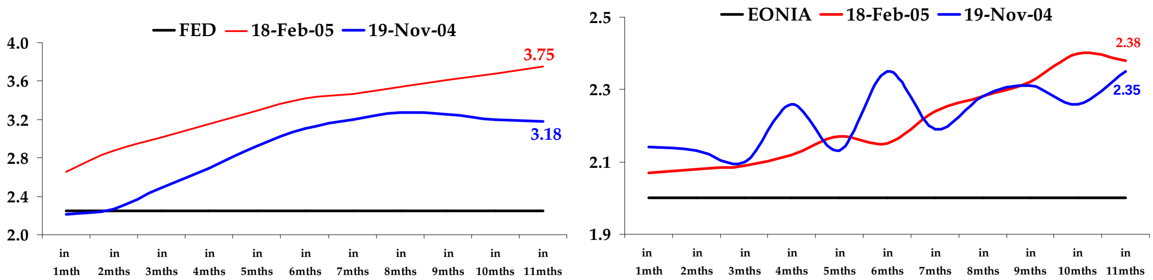

Figure 2.25: Expectations on the FED interest rate changes (on the basis of Fed Funds Futures) – left panel – and expectations on the ECB interest rate changes (on the basis of EONIA swaps – overnight index swaps) – right panel
Source: Bloomberg.

In line with market expectations, in the analysed period the European Central Bank (EBC) left its interest rates unchanged at their all-time low of 2.0%. The latest announcements of EBC representatives suggest that the risk of inflation growth in the short term has been diminished thanks to the decline in oil prices at the end of 2004, and also due to the lack of signals pointing to the existence of demand-driven inflationary pressure in the euro-area countries.

In the Reuters survey (of 18 February 2005), the majority of respondents expected EBC interest rates to be kept at their present level for three subsequent quarters of 2005. The rise predicted by analysts for 2005 Q4 amounts to 25 bp. This also finds support in market expectations as measured on the basis of interest rate contracts (EONIA contracts, Swaps – overnight index swaps), which value the rises by the end of 2005 at the total of 25-50 bp. (Figure 2.25).

Long-term interest rates[42]

The main factors influencing the developments in the bond market in the analysed period were the changing assessment of inflationary threats and the related expectations as to the future level of NBP rates as well as the decline in risk premium, mainly resulting from favourable information on the current fiscal situation.

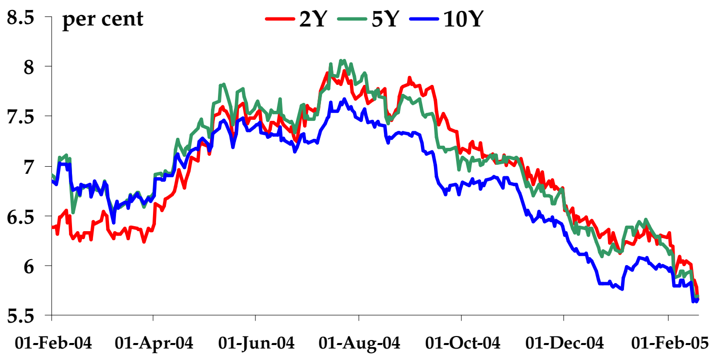

Figure 2.26: Change in the yields of the benchmark bonds
Source: NBP data.

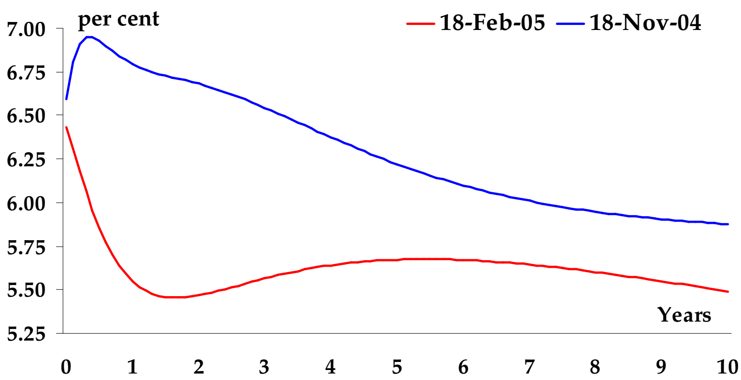

Figure 2.27: Three-month interest rate curves on the basis of forward contracts
Source: Bloomberg.

The shift in the market expectations concerning the future direction of NBP monetary policy became permanent after the publication of the November inflation projection, which was lower than the projection presented in the August Report. Also conducive to the drop in yields in the bond market were the data reporting a lower than planned degree of central budget execution in 2004 as well as a reduction in deficit scheduled for 2005 as well as the related plan of reducing the supply of treasury papers. Additionally, zloty strengthening and weaker data on economic growth soothed inflation

[42]The data presented in this section refer to the period from 18 November 2004 to 18 February 2005.

fears of market participants. The foregoing factors resulted in a growing interest in treasury bonds in all segments of yield curve, especially bonds with medium and long maturity. As a result, the falling trend of yields observed since August 2004 continued until the end of 2004 (Figure 2.26). There was a short-lived halt to this trend in January 2005 resulting from market adjustment brought about by, among others, the weakening of zloty exchange rate and also by the fact that the rise in bond prices at the end of 2004 was, in part, attributable to shallow-market speculations. Particularly important for the continuation of the bond yield falling trend was the publication of GUS data on January 2005 inflation. Its value of 4.0% was significantly lower than expected by market analysts, thus forcing them to adjust their expectations of future short-term interest rates. At the end of the period analysed a measure of convergence, calculated as the differential between yields on 10-year bonds in Poland and the euro-area, dropped to the level of 206 basis points. i.e. the lowest value since October 2003.

The drop in bond yields in the period under review was accompanied by a significant lowering of the curve of 3-month forward rates both in the short and long time horizon (Figure 2.27). Shifts in the prices of Polish bonds are also reflected in the fact that since November 2004 the annual average yields on long-term treasury securities have been decreasing. Their level, however, still exceeds the reference value for the Maastricht interest rate criterion, the compliance with which is one of the conditions for euro-area membership[43] (Figure 2.28).

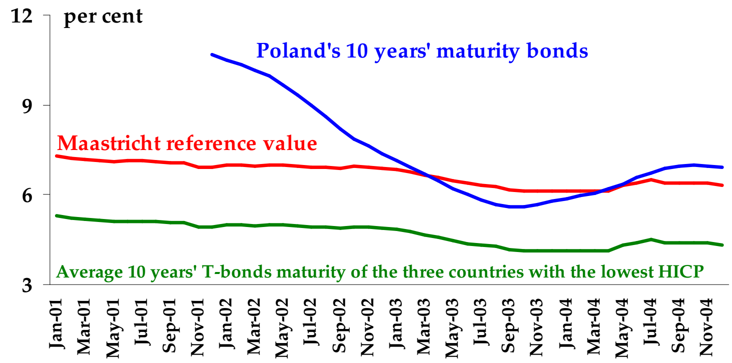

Figure 2.28: Average annual yield (12-month moving average) for long-term Treasury bonds in Poland versus the reference value for the Maastricht criterion
Source: NBP estimates based on Eurostat data.

In the analysed period foreign investors displayed a high and unfading interest in the Polish bond market. A growth in the involvement of non-residents in this market (to the level of PLN 62.1 billion) was observed till the end of 2004. In the whole of 2004 this

[43] A given country complies with this criterion when the average (12-month moving average) yield on long-term treasury bonds observed during the year does not exceed by more than 2 percentage points the arithmetic mean of the yields on the bonds of three EU-member states with the most stable prices. For more information about the Maastricht criteria see: *A Report on the Costs and Benefits of Poland's Adoption of the Euro*, NBP, 2004.

growth amounted to approx. 50% (i.e. PLN 21.7 billion), reaching its peak in December. Foreign capital was mainly located in bonds with medium and long maturities. In the period from the year start to 20 January, the involvement of non-resident was on the slide in connection with the ongoing correction in the bond market. Towards the end of the reviewed period (18 Feb 2005) the involvement of non-residents returned to the levels recorded at the beginning of the year.

2.5.2 Exchange rate

In the analysed period, a continuation of the appreciation trend of the Polish currency, which started in 2004 Q1, was still visible. Throughout 2004 the real effective exchange rate of the zloty (deflated with consumer price index – REER CPI) appreciated by 16.2%, thus returning to its mid-2002 level (Figure 2.29). Additionally, after a longer period of weakening an appreciation in the real effective exchange rate of the zloty deflated with unit labour costs was recorded in the second half of 2004[44]. Nonetheless, because the dynamics of labour productivity exceeded the wage growth rate, the appreciation of thus calculated zloty exchange rate was lower than in the case of the exchange rate deflated with other indices (CPI and PPI).

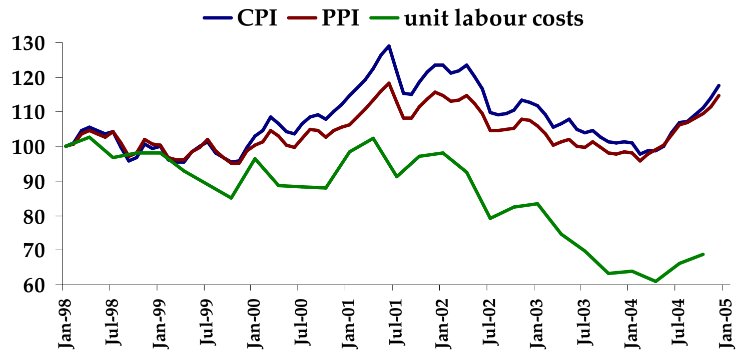

Figure 2.29: Zloty real effective exchange rate
Note: Data for unit labour costs based on NBP and Eropean Commission, estimates for 2004 Q4 based on ECB data.
Source: NBP, ECB and European Commission.

It is presumed that the factors that contributed to nominal zloty appreciation after Poland's accession to the EU include, among others, the favourable tendencies in the Polish economy such as a safe level of the current account balance, low unit labour costs dynamics as well as the continuously high economic growth. Zloty appreciation might have been also brought about by a decline in risk premium resulting

[44] The unit labour cost index was calculated as the ratio of the dynamics of wage cost per one employee to the dynamics of labour productivity measured with industrial output (volume) per one employee in this sector.

from increased political stability after the favourable outcome of confidence vote for the Government and the publication of encouraging data on the 2004 central budged execution. Another factor contributing to the strengthening of the zloty was a high degree of the absorption of the EU funds.

In the near term, the behaviour of zloty exchange rate will be primarily influenced by decisions on the implementation of public finance consolidation, shifts in the current and expected level of NBP interest rates and the developments related to parliamentary elections to be held later this year. Other factors potentially exerting some influence on the movements of the Polish currency in the nearest future include different than expected data on the current account balance and GDP in the first two quarters of 2005.

2.5.3 Credit and money

Corporate sector

In the past few months there have appeared signals suggesting that the continuing economic recovery has started to translate into corporate lending. Although between the end of October 2004 and the end of January 2005 loans for enterprises decreased in nominal terms by approx. PLN 1.8 billion[45], this drop was to a large extent brought about by zloty appreciation, which led to a reduction in the zloty nominal value of foreign currency denominated loans. The volume of corporate credit adjusted for exchange rate shifts rose by approx. PLN 0.6 billion and the 6-month growth, i.e. from the end of July 2004, in this category amounted to PLN 3.2 billion. As a result, as signalled in the previous *Inflation Report*, the situation in loans to enterprises has been steadily improving. According to the results of the NBP's survey[46], the majority of commercial banks anticipate a further growth in corporate demand for loans.

While listing the factors currently contributing to the increasing lending, commercial banks primarily point to the growing demand of enterprises for financing investments, inventories and working capital. On the other hand, the demand for credit has been restrained by the high level of corporate own resources. According to the findings of the January economic climate survey in enterprises[47] the share of these resources in the structure of financing day-to-day business activity was approx. 50%, while bank loans only accounted for 16%. Similarly, corporate own resources were the source of 75% of all investment outlays made in 2004 Q4, whereas only 15% of investments were financed through bank loans. It is worth noting, however, that since mid-2004

[45] All data on loans and deposits for January 2005 presented in this *Report* are based on early information from banking system and so may be subject to slight adjustments after the release of banking sector balance sheet data.

[46] *Senior loan officer opinion survey on bank lending practices and credit conditions (1st quarter 2005)*, www.nbp.pl

[47] *Preliminary information concerning the condition of the corporate sector and the economic climate in the first quarter of 2005*, www.nbp.pl

an increase in the contribution of bank loans in financing day-to-day business activity has been observed, whereas in the case of the share of bank loans in financing investment outlays a rise – although not a very high – has been recorded for the first time since 2004 Q1. The above-mentioned tendencies signalled in the survey studies of enterprises and banks are also reflected in the balance sheets of commercial banks in the form of an increase in working capital loans to companies (adjusted for exchange rate movements – Figure 2.30). No similar changes have so far been observed in the case of investment loans for this sector. A rather moderate recovery in the corporate lending may stem from a significant improvement in the financial position of the enterprise sector registered last year – enterprises with considerable amounts of their own resources do not need to resort to bank loans when financing their activity.

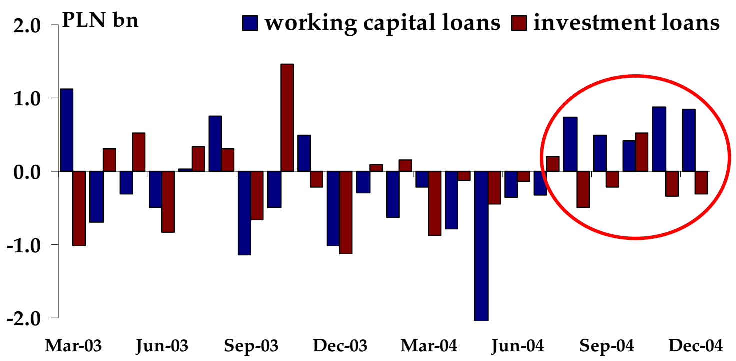

Figure 2.30: Working capital loans and investment loans – monthly changes, adjusted for the impact of exchange rate movements
Source: NBP data.

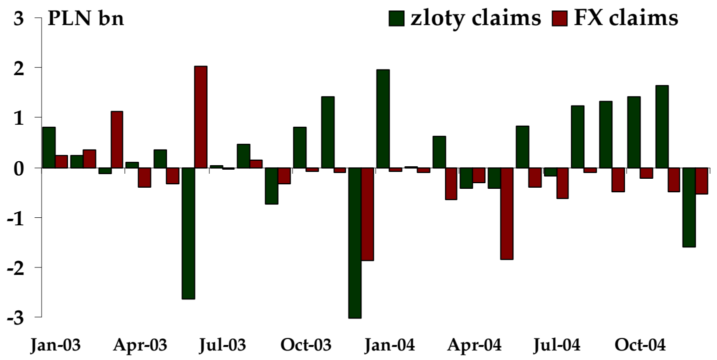

Figure 2.31: Zloty claims and foreign exchange claims of banks on enterprises – m/m changes, foreign exchange claims adjusted for impact of exchange rate movements
Source: NBP data.

For many quarters now the interest rates on corporate loans, which over the period under analysis stayed at a virtually unchanged level, have not been a barrier to the development of business activity in the view of entrepreneurs. In 2005 Q1 the percentage of enterprises listing the cost of credit among factors hampering their activities decreased to 4.8% (down from 6.4% in the previous quarter).

In the near future the surveyed banks do not anticipate any changes to the conditions of corporate credit granting in most credit categories. The only exception here are loans for small an medium-sized enterprises – half of the banks signal intentions to slightly relax the conditions for granting short-term credit in this sector. This should be conducive to the increase in the indebtedness of the small and medium-sized enterprises in the banking sector. Such a scenario is also supported by the results of the economic climate survey, according to which a revival in the market of loans for enterprises with less than 50 workers is expected.

Corporate deposits in commercial banks are still on a steep incline (23.2% y/y in January 2005), even though since September 2004 a weakening in the nominal annual growth rate in this category has been observed. This is primarily due to statistical reference base effect as well as the latest zloty appreciation. The annual growth rate adjusted for exchange rate fluctuations amounted to approx. 28% in January. The expected recovery in investment activity will probably be to a large extent financed from enterprises´ own resources, which may become one of the factors contributing to a gradual deceleration of the growth of corporate deposits in banks.

Household sector

Household loans are still accruing at a high rate (Figure 2.32). In the analysed period (i.e. from October 2004 to January 2005) banking sector claims on households increased in nominal terms by approx. PLN 1 billion[48]. However, just like in the case of corporate credit the appreciation of the zloty diminished the zloty value of loans granted to households. The growth in the volume of household loans adjusted for exchange rate differentials was significantly higher and amounted to approx. PLN 3.8 billion.

If since 2002 the increase in households´ indebtedness had been mainly fuelled by housing loans, then in 2004 Q4 a very similar contribution to credit growth in the household sector was from consumption loans. In the period under review the value of housing loans grew by approx. PLN 2.7 billion, while the growth in loans for consumption purposes amounted to approx. PLN 2.5 billion[49]. Growing contribution of consumption credit in the total growth in claims on households has been visible since the mid 2004. Figure 2.33 shows shifts in the composition of the growth of loans to households in 2004; to highlight the trend, the data has been adjusted for the one-off

[48] This is the increase in lending in relation to its volume as at the end of October adjusted for loans granted for the purchase of PKO BP shares. The rise in the volume of credit triggered by the privatisation offer of the bank was a one-off and short-lived deviation. Consequently, the average value of end-September and November was adopted as the reference value for household credit at the end of October 2004.

[49] Both values adjusted for the impact of exchange rate fluctuations.

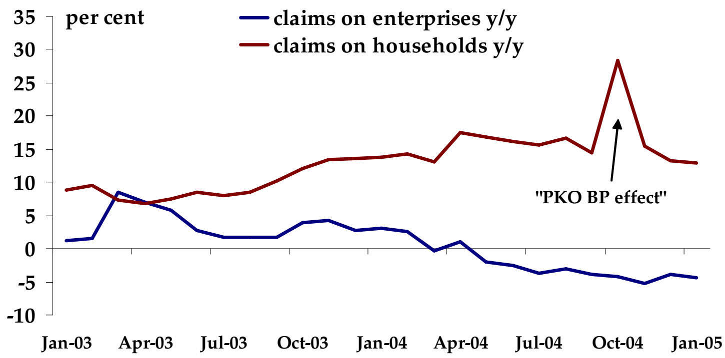

Figure 2.32: Commercial banks' claims on enterprises and households – nominal y/y growth
Source: NBP data. January 2005 figures based on preliminary data – may be subject to adjustment.

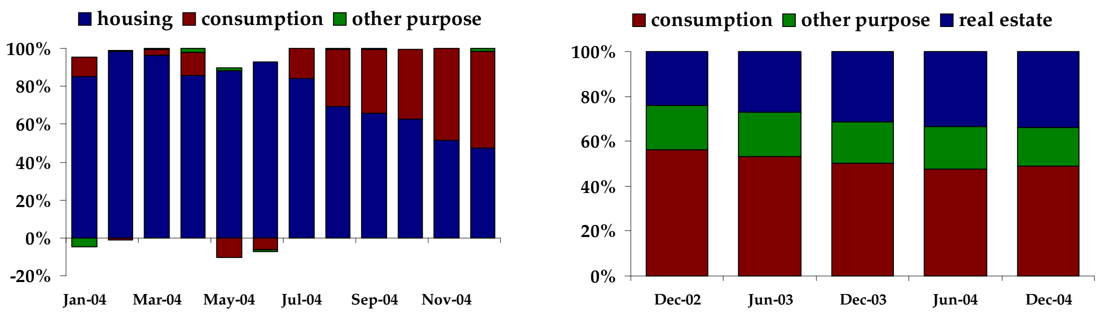

Figure 2.33: Household credit breakdown. Left panel: breakdown of credit to individulas semi-annual changes over periods ending in months indicated. Data adjusted for the one-off spike in November 2004 due to PKO BP privatisation. Right panel: Breakdown of the stock of credit to households in months indicated. Both panels based on nominal data adjusted for the estimates of impact of exchange rate movements.
Source: NBP data.

increase in loans granted for the purchase of PKO BP shares in October 2004. Previously, the growth in credit in this sector resulted primarily from the quickly growing housing loans, which led to significant changes in the structure of household indebtedness (Figure 2.33). This change in the composition of household credit growth is also indicated by banks surveyed by the NBP[50].

The conditions for granting both housing and consumption loans have gradually been relaxed, but this tendency has been more pronounced in the case of the latter category. Survey results point to the growing percentage of banks which relaxed their consumption credit policies in the last quarter of 2004. One of the most important reasons for increasing the availability of credit listed by banks is the growing compe-

[50] *Senior loan officer opinion survey on bank lending practices and credit conditions (1st quarter 2005)*, www.nbp.pl

	Loans			Deposits		
	total	households	enterprises	total	households	enterprises
Jan04	9.6	12.1	7.1	3.0	3.0	2.9
Feb04	9.5	12.0	7.1	3.0	3.0	2.9
Mar04	9.3	11.6	7.1	3.0	3.0	2.9
Apr04	9.5	11.6	7.3	3.0	3.0	2.9
May04	9.6	11.6	7.4	3.0	3.0	2.9
Jun04	9.6	11.6	7.4	3.0	3.0	2.9
Jul04	9.9	11.8	7.8	3.1	3.1	3.1
Aug04	10.3	12.2	8.2	3.5	3.5	3.2
Sep04	10.5	12.3	8.4	3.8	3.9	3.4
Oct04	10.7	12.5	8.4	3.8	3.9	3.4
Nov04	10.5	12.4	8.4	3.8	3.9	3.3
Dec04	10.4	12.1	8.3	3.7	3.8	3.4

Table 2.9: Average weighted interest rate on loans and deposits in commercial banks
Source: NBP data.

tition from other banks and non-banking financial institutions and also the improving economic situation of households.

Weighted average interest rate on household credit was subject to a modest reduction in 2004 Q4 (Table 2.9), which mainly resulted from a drop in the interest on housing loans (from 8.8% in November to 8.1% in December). The sustainability of the economic recovery as well as the bright outlook for the economic situation of households should encourage the rise in the lending for this sector, inter alia, by facilitating access to this form of financing and lowering credit margins. In the case of housing loans the climb in the costs associated with the introduction (at the beginning of 2005) of new supervisory regulations may act towards pushing up the credit margins in this segment.

After a falling trend in the value of household deposits had been halted in 2004 Q3, some rebound was noted in Q4. The rise in bank deposits of households adjusted for exchange rate differentials was equal to approx. PLN 5.4 billion, and in January 2005 household deposits went up again by another PLN billion (approximately). This increase was propped up by rising interest rates on deposits, which have been increasing the opportunity costs of holding money in cash and demand deposits. This is also one of the reasons behind the observed reduction in the annual growth rates of notes and coin in circulation as well as of demand deposits of households.

Households may hold their savings outside the banking sector as well. The growth rate of household savings in non-banking financial institutions[51] currently outstrips the growth rate of deposits in banks. This situation is reflected in the changes to the

[51]The amount considered here was the total of household assets deposited in Credit Unions (SKOK), investment funds and treasury instruments; in December the annual growth rate of these assets amounted to 12% versus a 1.4% growth on bank deposits of households (adjusted for exchange rate changes).

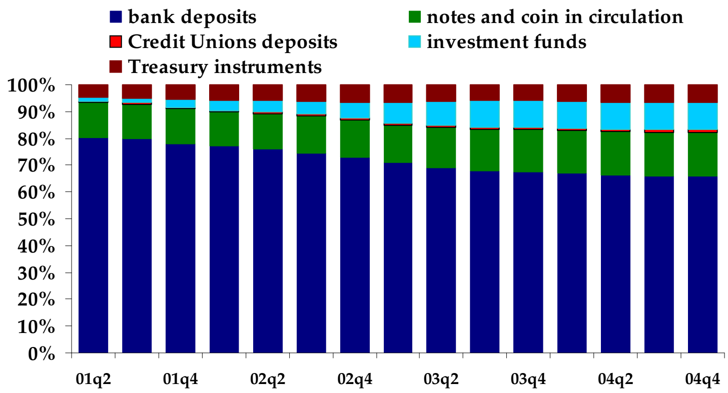

Figure 2.34: Structure of households´ financial assets
Source: NBP data.

structure of households´ financial assets as the share of bank deposits has been steadily thinning (Figure 2.34). A significant drop in the deposit margin in commercial banks visible in the last quarter was primarily the result of delayed adjustment to WIBOR rate shifts on the part of banks. It may also be an indication of banks increasing their efforts to win new retail customers.

Monetary aggregates

The above discussed tendencies in the credit and deposit markets were also reflected in the changes to the main monetary aggregates. In the last quarter of 2004 the

	as of 31 Dec 2004	q/q change		y/y change	
	PLN bn		per cent	PLN bn	per cent
LOANS AND OTHER CLAIMS	266.8	0.5	0.2	7.9	3.0
Households	115.5	2.6	2.3	13.5	13.3
of which individuals	86.4	3.3	4.0	12.4	16.8
Non-monetary finacial institutions	9.6	-0.8	-7.6	-1.1	-10.5
Non-finacial corporations	125.1	-2.7	-2.1	-5.0	-3.9
Non-profit insitutions serving households	0.8	0.0	1.0	-0.1	-6.4
Local government	11.1	0.7	6.9	0.6	5.8
Social security funds	4.8	0.8	18.8	-0.1	-1.1

Table 2.10: Claims on other domestic sectors
Source: NBP data.

annual nominal growth rate of broad M3 money continued on its rising trend and reached a peak of 8.7% at the end of December 2004[52] (Figure 2.35). A one-off increase

[52]The appreciation of the Polish currency was conducive to reducing the value of M3 components in the zloty – when adjusted for exchange rate shifts M3 y/y growth rate was higher, at approx. 11.3% in

registered in October 2004 was the result of two major privatisations taking place then: of the bank PKO BP and the publishing house *Wydawnictwa Szkolne i Pedagogiczne* (WSiP). The reduction of the gap between the growth rates of M1 and M3 money has been contributing to the deceleration in the growth of M3 liquidity as measured with the share of M1 in M3. At the end of December this ratio stood at 47.6%.

	as of 31 Dec 2004	q/q change		y/y change	
	PLN bn		per cent	PLN bn	per cent
DEPOSITS AND OTHER LIABILITIES INCLUDED IN M3	311.7	15.2	5.1	23.4	8.1
Households	192.6	4.8	2.6	0.1	0.1
of which individuals	178.8	2.1	1.2	-2.5	-1.4
Non-monetary finacial institutions	11.3	3.0	36.8	2.4	26.8
Non-finacial corporations	85.2	8.6	11.3	16.9	24.8
Non-profit insitutions serving households	8.9	0.0	-0.1	0.4	4.2
Local government	11.3	-1.8	-14.0	2.5	28.8
Social security funds	2.4	0.6	31.0	1.0	75.9

Table 2.11: Liabilities to other domestic sectors (included in M3)
Source: NBP data.

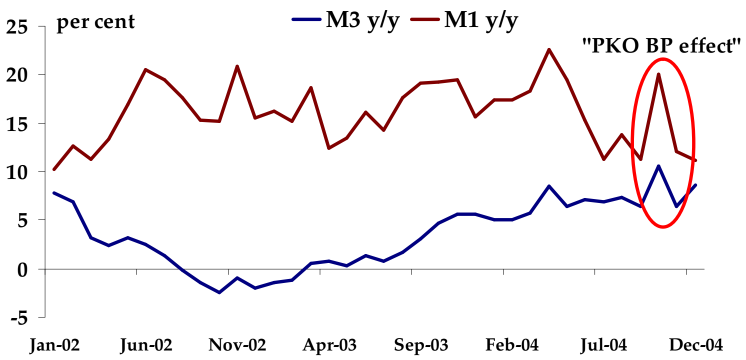

Figure 2.35: Monetary aggregates M1 and M3 – nominal y/y growth
Source: NBP data.

2004 Q4 saw a further slowdown in the growth of notes and coin in circulation. It seems to be an indication dynamics of currency in circulation regaining its balance after a period of a heightened performance (from 2002 Q1 to 2004 Q1). In 2004 the share of notes and coin in circulation in the M3 aggregate stabilised at approx. 14%, a level comparable to those in the other Central and Eastern European countries (Table 2.12).

Preliminary monetary data for January 2005 point to a continuation in the trends observed at the end of 2004. The beginning of 2005 marked a change in the methodology

December 2004.

country	Czech Republic	Slovakia	Hungary	eurozone	Poland
share of currency in circulation in M3 (per cent)	14.4	13.0	14.4	6.9	13.7

Table 2.12: Share of currency in circulation in broad money M3 – per cent, as of November 2004 (December 2004 for Poland and eurozone)
Source: ECB.

of compiling monetary aggregates[53] and so the comparison of their levels in January 2005 with those at the end of the previous year is rather problematic[54].

[53]Since January 2005 loans granted by Credit Unions (SKOK) have been included among the money creation assets and deposits therein have been included in the M3 monetary aggregate components. This move was necessitated by the requirements of further monetary statistics harmonisation with the Eurosystem methodology. Due to a relatively small value of SKOK assets the change resulted in rather little shifts in the values of monetary aggregates: the amount of M3 was increased by approx. 1%, deposits and other liabilities of the monetary financial institutions (MFI) sector by about 1.3%, the total claims of this sector by about 1.3% as well, and the amount of notes and coin in circulation decreased by approx. 0.1%.

[54]Estimated drop in M3 as calculated in terms of the old methodology would amount to approx. PLN 4.7 billion, and not 0.9 billion as it was registered in January. The January reduction of M3 aggregate was of seasonal nature.

Monetary Policy in December 2004–February 2005

In the period between December 2004 and February 2005 the Monetary Policy Council kept NBP interest rates unchanged. At the end of this period the reference rate stood at 6.5%, the lombard rate at 8.0% and the deposit rate at 5.0%. While the interest rates remained unchanged, the appreciation of zloty contributed to a tightening of monetary conditions.

In the months December 2004-January 2005, the Council maintained its tightening bias in monetary policy, because in its assessment the probability of inflation running above the target (of 2.5%) in the monetary policy transmission horizon was still higher than the probability of inflation falling below 2.5%, however the balance of risks gradually changed towards lower inflationary pressure.

In the last quarter of 2004 inflation settled at an average level of 4.4% y/y. In January 2005 the annual rate of price growth was lower than expected and amounted to 4.0% y/y and so still remained above the inflation target (2.5%). The January slide in inflation mainly resulted from lowering dynamics of food and fuel prices. A drop in the dynamics of food prices occurred earlier than predicted, which indicates that the inflationary impulses brought about by the food price hikes related to Poland's entry to the European Union have evaporated. It is estimated that net inflation in January remained close to its December level (of 2.4% y/y).

In 2004 Q4 and in January 2005 no signals appeared that would testify to an emergence of wage pressure resulting from increased inflation expectations (second-round effects). A tightening in monetary policy in the summer months of 2004 could contribute to limiting pressure on wage rises. Available data and NBP survey results indicate that pay rises planned in 2005 are moderate. Most of the rises planned will take place in 2005 Q1 so a fuller assessment of the prospective wage dynamics will only be possible in Q2. After a period of decline in unit labour costs in the economy, since 2004 Q3 they have been on a slight increase. Consequently, the disinflationary influence of this factor has gradually been weakening.

In the period from November 2004 to February 2005, an important factor pushing towards inflation reduction was the considerable appreciation of the zloty. This strengthening pointed to a rise in the probability of the path of inflation running lower than presented in the November *Report*.

The prices of crude oil in the period November 2004-February 2005 still ranged high.

On the basis of preliminary data on 2004 GDP it may be estimated that in 2004 Q4 the rate of economic growth in Poland decreased in relation to the previous quarters and amounted to just over 4% (y/y). Preliminary estimates indicate that in 2004 Q4 private consumption dynamics was lower than in 2004 Q3. In the same period the dynamics of real wages in the economy rose from 0.7% to 1.1% y/y. Full assessment of the consumption and savings dynamics will only be possible after the data for 2004 Q4 have been released. In line with expectations, there was a rise in the rate of growth of fixed capital formation; January 2005 was another consecutive month, in which construction and assembly output increased. It can be assumed that the investment acceleration in 2004 Q4 was accompanied with a drop in net exports and that in this quarter net exports contribution in the annual GDP rate of growth was negative.

The favourable conditions for investments are reflected in a high degree of corporate production capacity utilisation, growing opportunities of enterprises financing investment outlays from their own resources and the influx of EU structural funds. Quarterly economic climate survey preformed by the NBP also attest to a favourable course of future investments, though, at the same time, they signal some deterioration in the outlook for the economic growth in the first half of 2005. The January analysis of other economic climate indicators monitored by the NBP reveals that the economic situation is positively assessed, whereas for several months most of the indicators have been signalling the tendency to a gradual deceleration in the pace of the recovery.

In December 2004-February 2005 inflation expectations of individuals remained at an increased level. In February inflation expectations fell by 0.2 percentage point, down to the level of 3.9%. Due to the predominantly adaptive character of the expectations, the Council expects that, together with the swift decrease in inflation, in the second half of 2005 the expectations will fall to the level close to the target of 2.5%.

Starting from the 2005 Q2 a decline in the 12-month price rate of growth can be expected, which in the second half of 2005 should be close to the level of 2.5%. This is also confirmed by the inflation projection presented in Chapter 4 of the *Report*, according to which the price growth rate will be lower than it was predicted in the November *Report*. On the assumption of unchanged interest rates, the likelihood of inflation staying below the inflation target in the monetary policy transmission horizon is close to the probability of its staying above target.

In the Council's assessment the current balance of risks for future inflation may be more favourable than that presented in the February projection. This is because, the hitherto scale of zloty appreciation was larger than what was accounted for in the projection and the dynamics of food prices may be declining faster than assumed. Still, the Council acknowledges the uncertainty related to *inter alia* the developments in oil prices and the zloty exchange rate.

Considering the above, in February 2005 the Council adopted an easing monetary policy bias.

Inflation projection

The inflation projection is based on econometric models and has been prepared by a team of NBP economists led by the Deputy President of the NBP. 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.

4.1 Introduction

The overall economic situation at the starting point for the projection may be characterised as follows: At the turn of 2004 and 2005 a relatively high level of economic activity as measured by GDP growth rate (estimated at 4.0-4.5%) is observed. This rate, however, is considerably lower than that reported in the first half of 2004. The high growth dynamics in the first two quarters of 2004 resulted to a large extent from Poland's accession to the European Union. At the same time, the uncertainty as to the composition of the economic growth persists. Decelerating GDP dynamics explains the lack of a clear recovery in the labour market – both the decrease in unemployment and the rise in wages remain moderate.

Poland's entry to the EU also greatly contributed to inflation acceleration in 2004 Q2 and Q3, though the stabilisation in inflation at the turn of 2004 and 2005 indicates that it was probably a one-off hike in prices rather than a more permanent increase in price dynamics.

The inflation projection has been prepared with the use of two macroeconomic inflation models[55] and on the basis of expert knowledge and experience. Expert knowledge was applied while preparing the assumptions of the tendencies in the world economy (fuel markets, financial markets, economic climate in Poland's main trade partners) and of the expected changes in other factors bearing on inflation in Poland (such as the situation in agriculture and public finances), as well as to the assessment of economic developments in 2004 Q4 (e.g. GDP composition). The inflation projection

[55] A description of the models may be found in: B. Kłos, R. Kokoszczyński, T. Łyziak, J. Przystupa, E. Wróbel (2004): *Modele strukturalne w prognozowaniu inflacji w NBP*, Materiały i Studia nr 180, NBP, Warszawa, www.nbp.pl

presented below was prepared on the basis of available data with the cut-off date of 21 January 2005 and it covers the period 2005–2007.

For 2005 Q1 all model variables, including the price growth rate, were estimated with the use of expert methods. Also the most important components of national accounts for 2004 Q4 were estimated in the same way. The impact of potential errors in these estimates on the inflation projection usually becomes evident in the first two or three quarters of the projection and then it wears off. The risk that the estimate of the inflation rate at the starting point of the projection will be erroneous increased after the publication of data on the January 2005 inflation. This data, which was released already after the projection had been prepared, proved significantly different from expectations, which was primarily a result of food prices and regulated prices (fuels prices in particular) lower than forecast. If in the coming months inflation continued to diverge from the previous expectations of NBP experts to the same extent, then the central projection in the first three quarters of 2005 would be lower than presented in this *Report* by a similar value on average. At the moment, however, it is impossible to accurately assess how big this risk is, as the precise composition of the price growth in January 2005 is as yet unknown. In view of the fact that in January the effects of excise tax rises did not fully materialize, it is conceivable that the dynamics of regulated prices in February and March 2005 will be higher than assumed in the projection – and consequently – that Q1 inflation will ultimately run close to the level envisaged in the projection.

In the projection, a technical assumption was made that in the projection horizon the NBP reference rate shall remain unchanged. This means that the projection – especially in longer time horizon – most probably do not show the future actual inflation rate, as it does not account for possible changes in NBP rates. In the models on which the projection is based, the short-term interest rate determined by the monetary authorities is represented by 3-month WIBOR. Its level adopted in the February projection was 0.2 percentage points lower than the value assumed in November.

4.2 Projection assumptions related to external environment

External demand and euro zone inflation

The assessment of euro-area economic climate is currently slightly worse than while preparing the previous projection. GDP growth in the euro area in 2005 and 2006 is currently estimated at 1.8% and 2.0%, respectively, i.e. approx. 0.4 percentage points lower than it was presented in the November projection; in 2007 a slight increase to 2.1% in GDP dynamics is expected. The main reason behind these adjustments is a lower contribution of net exports in GDP growth that has already manifested in data for 2004 Q3 and a more limited dynamics of individual consumption, resulting to a large extent from lower wage dynamics. In 2005-2006 euro-area inflation (as measured with HICP) will be gradually falling: from 2.1% in 2004 to 1.8% in 2005 and 1.6% in 2006;

these values are 0.1 percentage point lower than those assumed in November. This difference mainly results from euro appreciation and a lower wage dynamics. In turn, in 2007 a narrow inflation growth is assumed, up to the level of 1.8%.

The scale of the expected movements in demand and inflation in Poland's main trade partners, as well as their little bearing on inflation in Poland, imply that these factors do not have a significant impact on changes in the current inflation projection as compared to the November projection.

Oil prices

The current forecast of world crude oil prices for 2005 and 2006 does not diverge from the November forecast. Accordingly, average oil prices will stand at little above USD 40 per barrel in 2005 and at approx. USD 37 in 2006. In 2007 they will be slightly lower than in 2006 and should run at the average level of USD 36 per barrel in the whole of the year.

EUR/USD exchange rate and foreign interest rates

Forecasts of foreign interest rates (3-month LIBOR for USD) and EUR/USD exchange rate have been calculated on the basis of appropriate market instruments. Current expectations of interest rates in the first half of the projection horizon are higher than in the previous quarter, though the differential is negligible and, since the mid-2006, close to zero.

The expected EUR/USD exchange rate featured in the current projection points to a significant strengthening of the euro as compared to expectations formulated in November, practically throughout the whole projection horizon (from 1.23-1.24 to 1.31-1.34), although the currently assumed exchange rate dynamics does not differ from the dynamics adopted in the November projection.

4.3 Projection assumptions related to domestic environment

State budget expenditures

The assumptions for the February projection have not been significantly changed in relation to the previous quarter. It was assumed that central budget expenditures would be consistent with the draft of the 2005 Budget Act. For 2006 and 2007 estimates of the Ministry of Finance from November 2004 were used, which were adjusted for the impact of the macroeconomic variables at the levels assumed by NBP experts (inflation, interest rates, exchange rate).

Food prices

The current forecast of food prices is not significantly different from the one assumed in November 2004. However, GUS data released after the projection had been completed point to a food price dynamics in January 2005 considerably lower than expected, which bears the risk of food price inflation in 2005 running lower than it was assumed in the projection.

4.4 Inflation projection

In line with the principles adopted by the NBP, the present projection covers the year of its preparation as well as two subsequent calendar years. This means that for the first time the year 2007 is included in the projection.

According to the projection, based on the assumption of unchanged interest rates, there is a 50-percent probability that inflation will stay in the band 1.2-4.0% in 2005 Q4 (against 2.5-5.2% in the previous projection), 0.4-4.2% in 2006 Q4 (1.3-4.8% in the November projection) and 0.5-4.6% in 2007 Q4. The likelihood of inflation staying above inflation target in the monetary policy transmission horizon is close to the probability of its running below target.

The differences between the present inflation projection for 2005 and 2006 and the projection from November 2004 mainly consist in a faster decline in inflation in the second half of 2005 and its slightly different course in 2006. In the present projection inflation slides in subsequent quarters of 2005 down to just above 2% at the beginning of 2006, and then rebounds slightly only to stabilise at the inflation target level in 2007.

The major reason for these differences is a higher than previously assumed actual exchange rate of the zloty in 2004 Q4 and a change in the assumed value of the exchange rate in 2005 Q1. The exchange rate path in the present projection stays at the more appreciated level than in the November run. Compared to the zloty exchange level recorded in January, the models do not envisage it to appreciate further, but contrary – they do point out to a modest depreciation. A faster inflation decline in the initial quarters indicates that in the current projection there is a faster increase in the real interest rate than projected in November, which results in a deeper drop in inflation at the end of 2005 and in 2006.

It is expected that GDP growth will stay in between 4.0-4.5% – slightly below what was awaited in November *Report*, mainly due to lower contribution on net exports to GDP growth foreseen currently. In a consequence of more robust domestic demand and stronger exchange rate the contribution of net exports to GDP growth is negative since the beginning of 2005. On the other hand the growth of investments gets faster, however not enough to fully offset the fall in net exports. The expected high rate of growth of investment outlays will initially stem from a low reference base, and subsequently will result from the impact of investments co-financed with the EU-funds and a fall in capital cost (declining machinery costs). The uncertainty with regard to the prospective growth of consumer demand due to slow rebound in employment (growth below 1% annually on average over the projection horizon) may act to slow the growth in investments. Should the expected investment growth materialize, the GDP growth rate will rise to 4.5-5.5% in 2006-2007.

Uncertainty of projection

Every projection is subject to uncertainty. The projection presented in the current *Report* is conditional in nature, which constitutes the main sources of the uncertainty.

The first group of conditions is related to the fact that the replication of economic reality by means of econometric models is always approximate. Additionally, the use of the models in preparing a projection requires the assumption that the basic economic mechanisms remain unchanged in the sample period and within the projection.

The second group of conditions covers the assumptions formulated by experts (exogenous variables) and the estimated levels of endogenous variables in 2004 Q4 and 2005 Q1. In the short term the forecasts based on expert knowledge usually yield better results than forecasts prepared with the use of structural models, yet, the possibility of actual outcomes of variables different than expected cannot be ruled out.

Expert knowledge has also been used to assess the extent to which the exogenous variables may deviate from the values assumed. In the present projection the largest uncertainty surrounds the forecasts of food and crude oil prices, and also fiscal variables (in 2006) in the view of the upcoming parliamentary elections in 2005. It is still difficult to assess for how long and how strongly food prices in Poland will be affected by external demand. Additionally, the size of crop harvest in seasons 2005/2006 and 2006/2007 is yet unknown. Forecasting oil prices is problematic because of the scarcity of US stocks and the uncertainty of supplies make the prices very vulnerable to speculation, and consequently, extremely volatile. The outcome of Polish parliamentary elections may result in changes in the central budget expenditure, which are now difficult to predict. It has to be pointed out here that a clear correlation between the exchange rate and the risk related to the budget deficit may result in the actual movements in zloty exchange rate being different from those embedded in the February projection. Furthermore, it cannot be ruled out that political developments (parliamentary elections, EU constitution referendum) may not be conducive to creating favourable climate for investment and economic growth.

Another factor increasing the uncertainty of the projection is the preliminary nature of data on the 2004 GDP components, and particularly the composition of GDP growth in subsequent quarters of 2004.

In order to illustrate the projection uncertainty in a way that allows measurement the below presented fan chart was constructed. However, it has to be emphasised that this chart only reflects the uncertainty as to the behaviour of the variables whose trajectories in the projection horizon were *ex ante* assumed (food and oil prices, fiscal variables and particularly central budget expenditure, external demand and inflationary processes in Poland's external environment, as well as foreign interest rates and USD/EUR exchange rate).

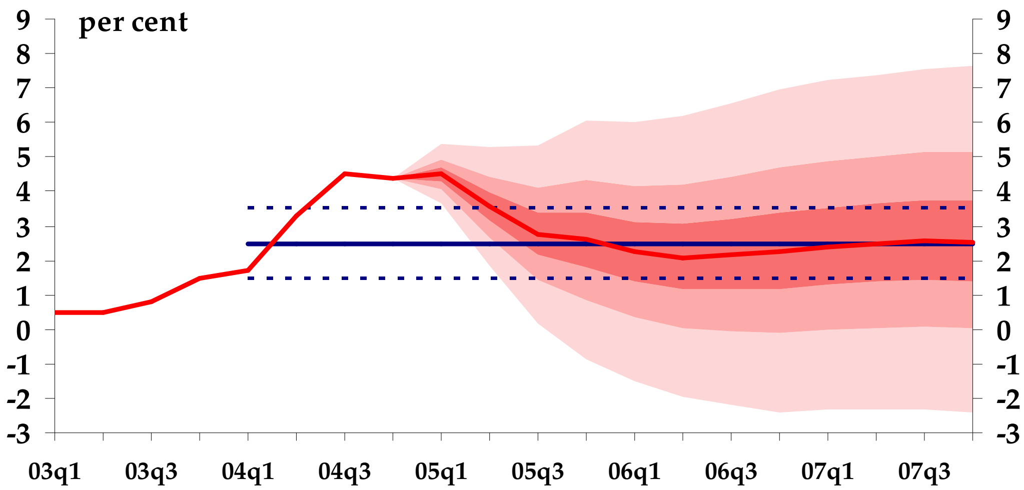

Figure 4.36: Fanchart, central projection and MPC's inflation target
Source: NBP.

How should the fan chart be interpreted?

Every projection of future values of economic indicators is subject to considerable risk and uncertainty. Central banks present the size and scope of quantifiable inflation projection risk through the use of the so-called fan charts. The width of the "fan" corresponds to the overall level of risk, which usually changes from quarter to quarter. For each quarter a central projection value is determined – that is the most probable rate of inflation – and then an interval is built around this value, such that the probability of inflation within this band equals 30%. This interval forms the central stripe of the fan, marked with the darkest shade of red on the chart. Next, this range is expanded on both sides for each quarter so that the probability of inflation falling within the new boundaries increases by another 30 percentage points. The subsequent extensions form new strips of the fan, marked with increasingly lighter shades of red. The entire coloured fan demonstrates the range within which inflation will run with 90-percent probability. The chart shows, for instance, that in 2006 Q4 the probability of inflation ranging within the tolerance band around the inflation target amounts to about 27%; the probability that it will be higher is 34% and the probability that it will be lower is 39%. In relation to the November projection, the probability that inflation will range within the tolerance band around the inflation target has virtually remained unchanged, the probability of inflation running below this band rose by approx. 10 percentage points and the probability that inflation will prove higher than 3.5% decreased by a similar value (about 10 pp.). The probabilities of inflation falling within the tolerance band around the target, and also below and above this band, in the last quarter of the projection horizon, i.e. 2007 Q4 are practically equal to those for 2006.

Annex

The voting of the Monetary Policy Council members on motions and resolutions adopted in 2004 Q4

- **Date:** 26 October 2004

  Subject matter of motion or resolution:
  Resolution to change a previous resolution on accounting rules, the arrangement of assets and liabilities in the NBP balance-sheet and on the NBP profit and loss account

  Voting of the MPC members:

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

- **Date:** 23 November 2004

  Subject matter of motion or resolution:
  Resolution to approve the financial plan of the NBP for the year 2005

  Voting of the MPC members:

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

- **Date:** 23 November 2004

  Subject matter of motion or resolution:
  Resolution on the appointment of certified auditor to examine the NBP's Annual Financial Report for the financial year 2004

  Voting of the MPC members:

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

- **Date:** 14 December 2004

  Subject matter of motion or resolution:
  Resolution on the rules of the conduct of open market operations

  Voting of the MPC members:

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