Inflation Report
October 2008

National Bank of Poland
Monetary Policy Council

Warsaw, October 2008

The *Inflation Report* presents the Monetary Policy Council's assessment of the current and future macroeconomic developments influencing inflation. The projection of inflation and GDP presented in Chapter 4 was prepared at the Economic Institute of the National Bank of Poland. The projection was prepared with the use of the NECMOD macroeconomic model. Content-related supervision over the works on the projection was entrusted to a member of the NBP's Management Board, Mr. Zbigniew Hockuba. The NBP Management Board approved the submission of the projection to the Monetary Policy Council. The inflation projection is one of the inputs to the Monetary Policy Council's decision-making process.

This Inflation Report is a translation of the National Bank of Poland's ***Raport o inflacji*** **in Polish. In case of discrepancies, the original prevails.**

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Summary

In the recent period turmoil in the global financial markets has intensified. Although the macroeconomic fundamentals of the Polish economy remain strong, and the banking system in Poland continues to be safe and stable, the domestic financial markets have seen adverse effects of the turbulences in international markets. Among these is the decline in mutual confidence among the participants of the Polish interbank market, which translates into limited credit availability and its higher cost. To counteract the risks emerging from the turbulences in the financial markets, the NBP has taken actions aimed at restoring smooth operation of the Polish interbank market. Another implication of the global financial turmoil was a considerable depreciation of the zloty exchange rate recorded in the second half of October 2008. It can be expected that the considerable deterioration of the global economic growth outlook will contribute to the dampening of economic growth and reducing inflation in Poland in the time to come.

After a period of stabilisation in the first four months of 2008 the annual growth of prices of consumer goods and services increased to 4.8% in July and August and subsequently fell to 4.5% in September 2008. The rise in inflation in the period June–August 2008 resulted primarily from increased growth of prices of energy and some services, including those related to flat maintenance. The still high annual growth of food prices also contributed to the elevated level of inflation in that period. The decrease in inflation in September 2008 was mainly fuelled by a significant decline in annual growth of food and non-alcoholic beverage prices.

In the period analysed the factor conducing to a rise in inflation was the increase in prices of energy commodities in global markets that had also been observed in previous quarters. This translates into a rise in prices of energy and certain services in the domestic market with some lag. The rise in administered prices, determined by decisions of central and local government entities, also contributed to a rise in inflation. Additional factors that pushed inflation up were rising domestic demand and cost pressure resulting from tight labour market conditions. On the other hand, the disinflationary influence of decreases in the prices of goods imported from low cost countries and strongly influenced by globalisation persisted. Conductive to curbing inflation was also the appreciation of the nominal effective exchange rate of the zloty observed until July 2008.

In the period June–September five of six core inflation measures increased. Only the 15% trimmed mean, after a temporary increase, declined in September to the level of May 2008. In September 2008 the annual growth of all core inflation measures exceeded the NBP inflation target (2.5%), and the growth of two of them (core inflation excluding most volatile and fuel prices and core inflation excluding most volatile prices) exceeded the

annual CPI growth. In September 2008, core inflation excluding food and energy prices rose to 2.9%, i.e. the highest level since May 2002.

In the period July–September 2008 the inflation expectations of bank analysts in 11-month horizon remained at a level close to the upper limit for deviations from NBP inflation target (3.5%). In October 2008 inflation expectations of bank analysts decreased to 3.2%. In the survey of households' inflation expectations the proportion of respondents expecting the price growth to pick up in the 12 months to come as compared with inflation observed at the moment of the survey and the proportion of respondents expecting the price growth to continue at the same level increased from 74% in June 2008 to around 80% in the period June–September 2008 and subsequently decreased to 76% in October 2008. The objectified measure of inflation expectations of individuals increased to 5.2% in October 2008 (from 4.3% in June 2008).

In 2008 Q1 and Q2 import prices expressed in PLN were falling, which was supported by the nominal appreciation of the zloty exchange rate. Since 2007 Q4 export prices are also decreasing. As a result of export prices declining more quickly than import prices in the first half of 2008, the *terms of trade* deteriorated. The drop of transaction prices in imports took place despite a significant year-on-year rise in oil prices. In 2008 Q3 the global markets witnessed the first drop in oil prices in quarter-on-quarter terms since 2007 Q1. The decline in current oil prices was accompanied by the drop in its forecasted prices both for 2008 and 2009.

2008 Q3 brought a decline in the annual growth of the Producer Price Index to 2.1% y/y. The growth in producer prices in the domestic market outpaced the total producer price growth by over 3 percentage points, which was connected with export price decline in that period. This decline was the result of the appreciation of the nominal effective zloty exchange rate. Compared to 2008 Q2 the growth of producer prices in industry increased in the sections *Production and supply of electricity, gas and water* and *Mining and quarrying*. The contribution of *Manufacturing*, the section whose contribution to the PPI growth was the largest in previous quarters, decreased substantially.

Despite better than expected GDP data for 2008 Q2, the subsequent quarters will see a marked decline in economic growth. According to GUS estimates, in 2008 Q2 GDP in real terms grew by 5.8% y/y, i.e. at a slightly slower pace than that recorded in 2008 Q1 and higher than expected in the previous *Report*. The most important factors in GDP growth continued to be the rise in consumption and investment. As a result of import growth exceeding export growth, the contribution of net exports to GDP growth has continued to be negative since 2005 Q4. The past few months saw decelerating employment growth, yet the unemployment was falling. The average wage in the economy was growing faster than labour productivity, which led to a significant rise in unit labour costs. These processes were accompanied by a rise in core inflation and a growing current account deficit.

In 2008 Q2 private consumption growth decreased slightly to 5.5% y/y (as compared with 5.6% y/y in 2008 Q1) and slightly exceeded the expectations of the previous *Report*. According to GUS estimates, 2008 Q2 saw a decline in public consumption (by 1.2% y/y), while this category was expected to rise according to the June *Report*. In 2008 Q2 gross fixed capital formation continued to rise quickly – its growth reached 15.2% y/y. As a result, the investment rate (the ratio of investment to GDP) increased to 22.0%.

In 2008 Q2 the growth of gross value added remained high, in accordance with expectations from the previous *Report*, and was higher than in 2008 Q1 (6.1% y/y in comparison with 5.5% y/y). Contributions of major sections of the economy (industry, construction and market services) to the total growth of value added in 2008 Q2 were similar to those recorded in 2008 Q1. On the other hand, value added in non-market services and in agriculture, in contrast to the previous quarter, were conducive towards increasing the growth of gross value added in the economy.

The current account deficit rose in 2008 Q2 compared to 2007 Q2, which resulted from a deepening of the external trade deficit and the deficit on income; a rise in the positive balance on services and on transfers had the opposite effect. The current account deficit in relation to GDP (in terms of four quarters) did not change compared to the previous quarter and amounted to 4.9%; in the same period of the previous year this ratio stood at 3.9%. The combined deficit of the current and the capital account relative to GDP, in turn, decreased to 3.3% in 2008 Q2 (as compared with 3.6% in 2008 Q1); in the same period of the previous year this ratio stood at 3.2%.

According to preliminary estimates of the Ministry of Finance, in the period January–September 2008 the central budget recorded a deficit of PLN 4.2 billion. The central budget performance at the end of September 2008 was significantly better than expected. It was primarily the result of low expenditure realisation, due to, among others, the postponement of some tasks to subsequent months of 2008 and the delay in the realisation of investment projects financed by EU funds. Available data indicate that the deficit of the general government sector, which according to the draft *Budget Act for the Year 2009* will amount to 2.5% of GDP in 2008, may turn out to be lower. Nevertheless, forecasts of this deficit are subject to uncertainty, particularly with respect to the level of investment outlays implemented by the central budget and local government units.

In 2008 Q2 the number of working persons in the economy was still growing, albeit markedly more slowly than in the previous quarters. Weakening demand for labour in 2008 Q2, particularly in industry, found its reflection in the dampening of growth in the number of persons employed in the corporate sector. Monthly data for the corporate sector indicate employment has been stable also in 2008 Q3. The percentage of employers who are experiencing difficulties in hiring both skilled workers and workforce in general has been decreasing, yet it remains high. The rise in the number of persons working in the economy still contributed to the decrease in the rate of unemployment, both registered and calculated on the basis of BAEL data. The unemployment rate and the number of unemployed according to BAEL slid to the lowest levels in the survey history (respectively 7.1% and 1196 thousand in 2008 Q2). It can be expected, though, that the decline in the unemployment rate will be halted in the coming quarters. The economically active figure increased in 2008 Q2 by 0.8% y/y to 16,885 thousand and it was the second consecutive quarter of rising labour supply in annual terms. Since 2008 Q1 the labour participation ratio has also been increasing (in 2008 Q2 it grew by 0.4 percentage points y/y to 53.9%). The rise in the participation ratio was particularly strong in the group of people aged 45–60/65, which may indicate that the favourable situation in the labour market contributed to older persons becoming economically active.

In 2008 Q2 the growth of nominal wages further accelerated both in the economy (reaching 11.6% y/y compared to 10.1% y/y in 2008 Q1) and in the corporate sector (12.1% y/y compared to 11.4% y/y in 2008 Q1). The data for 2008 Q3, in turn, indicate a decrease in the wage growth in the corporate sector. 2008 Q2 saw a slight acceleration in labour productivity in comparison to 2008 Q1 (2.2% y/y compared to 1.5% y/y), but the increase in the wage growth resulted in unit labour costs rising faster in 2008 Q2 than in the previous quarter (by 9.2% y/y compared to 8.5% y/y) and at the same time the fastest since 1998 Q4.

On 8 October 2008, the Fed, the European Central Bank (ECB), the Bank of Sweden, the Bank of England, the Bank of Canada and the Swiss National Bank (SNB) announced a joint decision to cut the key interest rates. Moreover, the Bank of Japan expressed its support for the action of the other banks, keeping, however, its interest rates unchanged, while the People's Bank of China cut its interest rates. Since the publication of the previous *Report* the Fed has cut its interest rate by 50 basis points to 1.50%, in a joint action with other central banks. The forward market expects that the federal funds rate to be reduced to 1.00% by the end of 2008. In July 2008 the ECB raised its key interest rate by 25 basis points to 4.25%, and then lowered it by 50 basis points to 3.75% in a joint decision undertaken by central banks on 8 October 2008. The forward market expects a further drop in the ECB's key interest rate to 3.00–3.25% by the end of 2008 and to 2.50% over the horizon of the first half of 2009. In Poland analysts expect the reference rate in 2008 Q4 at the level of 6.00–6.25%, whereas over a one-year horizon they expect a decrease of the reference rate to 5.00–5.50%.

Since the publication of the previous *Report* yields on US and euro-area Treasury bonds have declined significantly. The increase in risk aversion led to the selling out of riskier financial assets (e.g. shares) and the investing of the withdrawn funds in safer securities, e.g. Treasury bonds of developed countries. Since mid-September the volatility of Treasury bond yields in the United States and the euro area has increased markedly due to heightened tensions in global financial markets. At the beginning of July 2008 the yields on Polish Treasury bonds reached a four-year high, and then temporarily followed a falling trend. The trend stopped in the second half of September and reversed at the beginning of October. In the second half of October the increase in yields on Polish treasury bonds accelerated markedly due to a further increase in risk aversion and the associated sell-off of emerging markets' assets.

The domestic equity market remained under the strong influence of the overall sentiment prevailing in international markets. Since the publication of the previous *Report* share prices on the Warsaw Stock Exchange continued to fall, following several months of relative stabilisation at levels established after the slump of January 2008.

In 2008 Q2 the biggest real estate markets still displayed an imbalance between the demand for and supply of flats. Due to the still persisting high, in relation to income, prices of flats and the deteriorating availability of mortgage loans, the demand for flats stabilised, which coincided with an increase in the supply of newly completed flats. Asking prices in the primary market stabilised, whereas sale prices were lowered indirectly, by means of various special offers for buyers. In the secondary market prices followed a somewhat falling trend.

Since the publication of the previous *Report* the nominal exchange rate of the zloty depreciated against the euro and the US dollar, the scale of depreciation against the dollar being significantly larger than against the euro. In this period a marked depreciation against the euro of the Hungarian forint and the Czech koruna also could be observed.

Corporate lending growth amounted to 26.5% y/y in September 2008. Since April 2008 its growth has stabilized on a high level, despite worsening of the economic climate in the corporate sector. Whereas the income situation of households remained positive, over the recent months the growth of loan debt in this sector, in turn, has followed a path of steady decline (to 38.9% y/y in September 2008), which has been the most notable for mortgage loans. In view of the growing risk aversion observed in global financial market, the recent weeks saw banks tighten their lending criteria in the case of corporate loans as well as loans to households. The main factor behind the tightening of the credit policy was uncertainty about the future economic outlook. According to NBP survey studies banks expect a further tightening of their loan policies in 2008 Q4.

During the meeting in June 2008, the Monetary Policy Council increased the NBP interest rates by 0.25 percentage points. In July, August, September and October 2008 the Council decided to keep NBP rates unchanged: the reference rate 6.00%, the lombard rate 7.50%, the deposit rate 4.50% and the rediscount rate 6.25%.

Minutes of the MPC decision-making meetings held in June, July, August and September 2008 together with the *Information from the meeting of the Monetary Policy Council* in October 2008 are presented in chapter "Monetary policy in June–October 2008". *Minutes* from the MPC meeting held in October will be published on 20 November 2008 and so will be included in the next *Report*.

Chapter 4 of the *Report* presents the projection of inflation and GDP prepared by the NBP staff and based on the NECMOD model, which is one of the inputs into the Council's decision-making process on the NBP interest rates. Under constant interest rates, there is a 50-percent probability that projected inflation will lie within the range of 4.2–4.4% in 2008 (compared to 3.8–4.7% in the June projection), 3.9–5.7% in 2009 (compared to 2.5–5.8%) and 1.9–4.5% in 2010 (compared to 0.1–5.7%). According to the October projection, the annual GDP growth will remain, with a 50-percent probability, within the range of 5.0–5.3% in 2008 (compared to 4.3–5.5% in the June projection), 1.9–3.7% in 2009 (compared to 3.4–6.2%) and 2.7–4.5% in 2010 (compared to 3.8–6.8%).

Due to considerable deterioration of global economic growth outlook and the ensuing lowering of forecasts for commodity prices and inflation across the world observed after 26 September 2008, the impact of those changes on inflation and GDP outlook throughout the projection horizon was assessed with the use of the NECMOD model. This assessment, based on data released until 16 October 2008, indicates that under constant interest rates, there is a 50-percent probability that projected inflation may lie within the range of 4.2–4.4% in 2008 (compared to 3.8–4.7% in the June projection), 3.1–5.3% in 2009 (compared to 2.5–5.8%) and 1.5–4.3% in 2010 (compared to 0.1–5.7%). In turn, the annual GDP growth may lie, with a 50-percent probability, within the range of 4.9–5.2% in 2008 (compared to 4.3–5.5% in the June projection), 1.7–3.5% in 2009 (compared to 3.4–6.2%) and 2.4–4.3% in 2010 (compared to 3.8–6.8%). This assessment does not take into account data released after 16 October 2008.

Inflationary processes

1.1 Inflation indicators

After a period of stabilisation in the first four months of 2008 the annual growth of prices of consumer goods and services increased to 4.8% in July and August and subsequently fell to 4.5% in September 2008 (Figure 1.1).

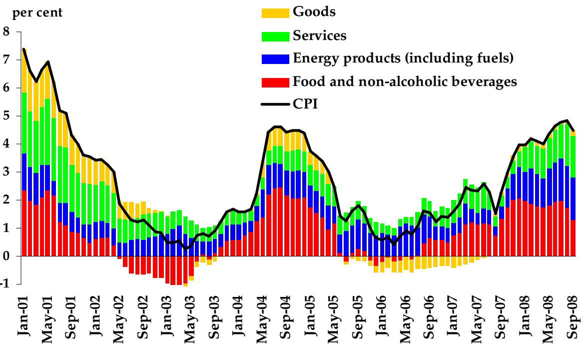
The rise in inflation in the period June–August 2008 resulted primarily from increased growth of prices of energy and some services, including those related to flat maintenance. The still high annual growth of food prices also contributed to the elevated level of inflation in that period. The decrease in inflation in September 2008 was mainly fuelled by a significant decline in annual growth of food and non-alcoholic beverage prices.

In the period analysed the factor conducing to a rise in inflation was the increase in prices of energy commodities in global markets that had also been observed in previous quarters. This translates into a rise in prices of energy and certain services in the domestic market with some lag. The rise in administered prices, determined by decisions of central and local government entities, also contributed to a rise in inflation. Additional factors that pushed inflation up were rising domestic demand and cost pressure resulting from tight labour market conditions.

On the other hand, the disinflationary influence of decreases in the prices of goods imported from low cost countries and strongly influenced by globalisation persisted. Conductive to curbing inflation was also the appreciation of the nominal effective exchange rate of the zloty observed until July 2008.

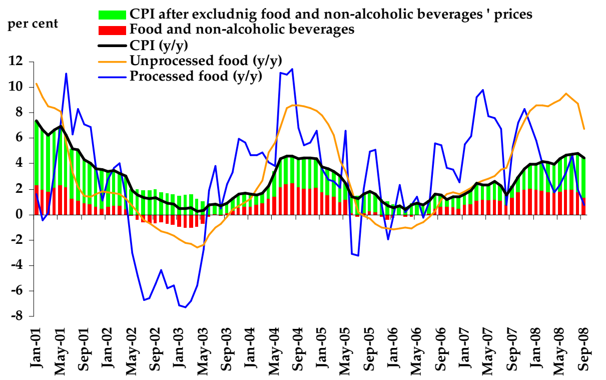
Global factors that contributed to the rise in inflation in Poland were also reflected in the high

⊡ **Figure 1.1:**
CPI and main categories of prices (y/y).



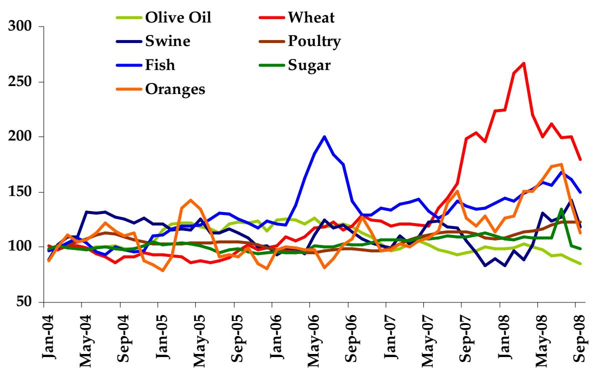
Source: GUS data, NBP calculations.

□ **Figure 1.2:**
CPI and main categories of prices – food and non-alcoholic beverages (y/y).



Source: GUS data, NBP calculations.

□ **Figure 1.3:**
Prices of agricultural commodities in the global markets (2004 Q1 = 100).



Source: IMF data, NBP calculations.

but decreasing inflation in many countries across the world (Table 1.1), and in the record high reference value for the inflation criterion (cf. subsection: Inflation and the Maastricht criterion).

In the coming months a gradual decrease in current inflation is expected, fuelled by a decline in prices of a number of agricultural and energy commodities in the word markets.

Food and non-alcoholic beverages prices

In the period May–July 2008, the growth in the prices of food and non-alcoholic beverages, after a gradual decline that had lasted since January 2008, was again on the rise to decrease significantly in August and September 2008. As a result of favourable supply conditions in the market for fruit and vegetables in the period June–August unprocessed food prices fell significantly. In the period July–September the growth in processed food prices also declined, which was driven, among others, by decreasing prices of basic agricultural products, mainly milk, in the domestic market.

The growth in prices of food and agricultural commodities in global markets (Figure 1.3) is expected to decline in the near time, which will be driven by current favourable supply conditions in the market for agricultural crops. On the other hand, the decrease in food prices may be limited due to the high annual growth of meat prices.

Table 1.1: CPI inflation (y/y) in selected countries.

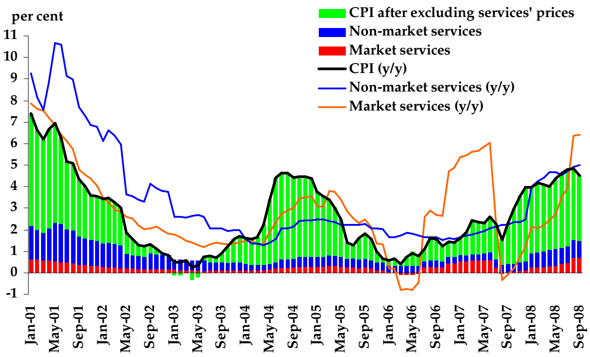
Change y/y(per cent)	2007				2008								
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Austria	2.1	2.8	3.1	3.6	3.2	3.2	3.5	3.3	3.7	3.9	3.8	3.7	3.7
Belgium	1.5	2.2	2.9	3.1	3.5	3.6	4.4	4.2	5.2	5.8	5.9	5.4	5.5
Finland	2.6	2.7	2.8	2.6	3.9	3.7	3.8	3.5	4.2	4.3	4.4	4.7	4.7
France	1.5	2.0	2.4	2.6	2.8	2.8	3.2	3.0	3.3	3.6	3.6	3.2	3.0
Greece	2.9	3.1	3.9	3.9	3.9	4.4	4.4	4.4	4.9	4.9	4.9	4.7	4.6
Spain	2.7	3.6	4.1	4.2	4.3	4.4	4.5	4.2	4.6	5.0	5.3	4.9	4.5
Netherlands	1.3	1.6	1.9	1.9	2.0	2.2	2.2	2.0	2.3	2.6	3.2	3.2	3.1
Ireland	4.6	4.8	5.0	4.7	4.3	4.8	5.0	4.3	4.7	5.0	4.4	4.3	4.3
Luxembourg	2.1	2.9	3.2	3.4	3.3	3.1	3.5	3.5	4.0	4.3	4.9	4.0	4.0
Germany	2.7	2.8	3.2	3.1	2.8	2.8	3.1	2.4	3.0	3.3	3.3	3.1	2.9
Portugal	2.1	2.6	2.8	2.7	2.9	2.9	3.1	2.5	2.8	3.4	3.1	3.0	3.1
Slovenia	3.5	5.1	5.7	5.6	6.4	6.5	6.9	6.5	6.4	7.0	6.9	6.0	5.5
Italy	1.7	2.1	2.4	2.6	3.0	2.9	3.3	3.3	3.6	3.8	4.1	4.1	3.8
USA	2.8	3.5	4.3	4.1	4.3	4.0	4.0	3.9	4.2	5.0	5.6	5.4	4.9
China	6.2	6.5	6.9	6.5	7.1	8.7	8.3	8.5	7.7	7.1	6.3	4.9	4.6
Denmark	1.2	1.7	2.5	2.3	2.9	3.1	3.1	3.2	3.4	3.8	4.0	4.3	4.2
Sweden	2.2	2.7	3.3	3.5	3.2	3.1	3.4	3.3	3.9	4.2	4.1	4.3	4.4
United Kingdom	1.8	2.1	2.1	2.1	2.2	2.5	2.5	3.0	3.3	3.8	4.4	4.7	5.2
Poland	**2.3**	**3.0**	**3.6**	**4.0**	**4.0**	**4.2**	**4.1**	**4.0**	**4.4**	**4.6**	**4.8**	**4.8**	**4.5**
Czech Republic	2.8	4.0	5.0	5.4	7.5	7.5	7.1	6.8	6.8	6.7	6.9	6.5	6.6
Slovakia	2.8	3.3	3.1	3.4	3.8	4.0	4.2	4.3	4.6	4.6	4.8	5.0	5.4
Hungary	6.4	6.7	7.1	7.4	7.1	6.9	6.7	6.6	7.0	6.7	6.7	6.5	5.7
Estonia	7.2	8.5	9.1	9.6	11.0	11.3	10.9	11.4	11.3	11.4	11.1	11.0	10.5
Lithuania	7.1	7.6	7.8	8.1	9.9	10.8	11.3	11.7	12.0	12.5	12.2	12.0	11.0
Latvia	11.4	13.2	13.7	14.1	15.7	16.7	16.7	17.4	17.9	17.7	16.6	15.7	14.9

Source: Eurostat, GUS, domestic statistical offices data.
National indices are not fully comparable due to methodological differences (including different weighting systems and different methods of measurement).

Services prices

In the period analysed the prices of services continued to rise. Annual growth of those prices increased significantly, which resulted from a markedly stronger rise in the growth of prices of market services and a slight rise in the growth of prices of non-market services (Figure 1.4).

□ **Figure 1.4:**
CPI and main categories of prices – services (y/y).



Source: GUS data, NBP calculations.

The rise in annual growth of prices of market services to 6.4% y/y in August and September 2008 from 2.7% y/y in May was mainly driven by a further price growth in the group of *restaurant and hotel* services and in organised travel services, as well as the growth in prices of Internet services. The increase in the prices of market services results from the growing consumption demand and the growth of unit labour costs in this sector.

The further high growth in prices of services related to flat maintenance, including sewerage services, water supply and costs of the administration and management of flats, as well as a sharp rise in prices of waste disposal services in January 2008 contributed to a sustained growth in prices of non-market services. The prices of medical, educational and transportation services also increased.

The factor that contributed to increased growth in services prices in August 2008 was a sharp rise in the prices of Internet services resulting from the fading of the statistical base effect connected with the drop of those prices in August 2007[1].

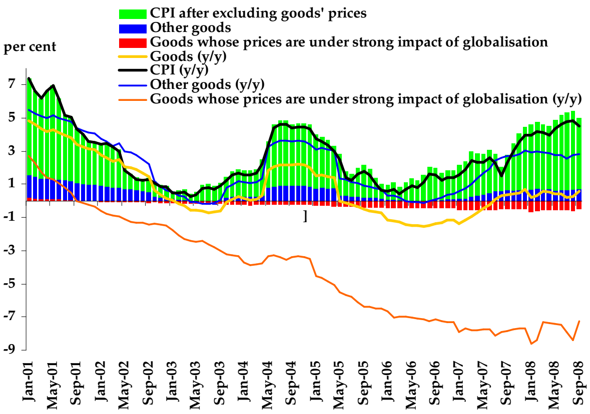
[1]August 2007 saw a sharp drop in the prices of Internet services (by 31.8% m/m), which resulted from a promotional decrease of those prices offered by one of the Internet service providers. Until July 2008, the annual price index of Internet services continued to reduce the growth of CPI and the core inflations indicators. The statistical base effect connected with the drop of those prices in August 2007 faded in August 2008, which *ceteris paribus* was conducive to increasing the annual CPI growth and core inflation indicators in that month. Despite the small share of prices of Internet services in the CPI basket, fluctuations in those prices observed since 2005 have been significant enough to cause considerable decreases or increases of the total CPI as well as those categories in which these services are classified. Changes in the prices of Internet services and their impact on inflation were also analysed in previous *Reports*.

Table 1.2: CPI and core inflation indices.

Change y/y (per cent)	2007			2008								
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
CPI	**3.0**	**3.6**	**4.0**	**4.0**	**4.2**	**4.1**	**4.0**	**4.4**	**4.6**	**4.8**	**4.8**	**4.5**
Core inflation indices excluding:												
Regulated prices	2.9	3.4	3.7	3.8	3.7	3.8	3.8	3.9	4.3	4.4	4.4	4.1
Most volatile prices	2.9	3.5	4.1	4.2	4.2	4.2	4.3	4.5	4.8	4.7	5.0	4.6
Most volatile prices and fuel prices	2.6	3.0	3.4	3.6	3.8	3.9	4.2	4.4	4.7	4.5	4.9	4.7
Food and energy prices	1.0	1.1	1.3	1.6	1.8	2.0	2.1	2.1	2.2	2.2	2.7	2.9
Food and fuel prices ("net" inflation)	1.4	1.5	1.7	1.9	2.5	2.7	2.8	3.2	3.4	3.5	4.0	4.3
15% trimmed mean	2.9	3.2	3.4	3.7	4.2	4.2	4.1	4.5	4.9	4.8	4.8	4.5
Change m/m (per cent)	**2007**			**2008**								
	Oct	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
CPI	**0.6**	**0.7**	**0.3**	**0.7**	**0.4**	**0.4**	**0.4**	**0.8**	**0.2**	**0.0**	**-0.4**	**0.3**
Core inflation indices excluding:												
Regulated prices	0.8	0.7	0.3	0.9	0.1	0.4	0.4	0.6	0.1	-0.3	-0.6	0.5
Most volatile prices	0.8	1.1	0.8	0.3	0.0	0.3	0.3	0.0	0.1	0.5	0.0	0.3
Most volatile prices and fuel prices	0.9	1.0	0.9	0.4	0.1	0.3	0.3	-0.2	-0.1	0.5	0.2	0.5
Food and energy prices	0.2	0.1	0.2	0.5	0.1	0.3	0.3	0.2	0.3	0.2	0.1	0.3
Food and fuel prices ("net" inflation)	0.3	0.2	0.2	0.7	0.6	0.3	0.2	0.6	0.3	0.3	0.2	0.4
15% trimmed mean	0.3	0.3	0.2	0.5	0.3	0.3	0.3	0.4	0.4	0.3	0.1	0.2
Core inflation indices – seasonally adjusted (TRAMO/SEATS):												
CPI	0.4	0.6	0.5	0.4	0.4	0.3	0.1	0.5	0.4	0.3	0.1	0.2
Core inflation excluding food and energy prices	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3
"net" inflation	0.2	0.3	0.3	0.4	0.5	0.3	0.3	0.4	0.4	0.3	0.5	0.4

Source: GUS data, NBP calculations.
In June 2008 the NBP introduced a new measure of core inflation – **core inflation excluding food and energy prices.** This measure excludes from the CPI the prices of food and non-alcoholic beverages as well as the prices of fuels and energy products (electricity, gas, heating, etc.). The structure and interpretation of core inflation excluding food and energy prices are close to the formerly used measure of 'net' core inflation. Changes in the prices of energy products, which have recently been subject to increased volatility, constitute supply shocks for the Polish economy distorting the image of the total trend in the price level. Therefore, it is justified to exclude them from the new measure of core inflation. It is the NBP's intention to replace the former, most commonly used measure of 'net' inflation with the new measure. Core inflation excluding food and energy prices was also used in the macroeconomic model NECMOD to prepare the inflation projection presented in chapter IV of the *Report*.

⊡ **Figure 1.5:**
CPI and main categories of prices – goods (y/y).



Source: GUS data, NBP calculations.

Goods prices

In the period June–September 2008, the prices of goods[2] slightly rose, which was driven mainly by the rise in prices of tobacco products[3]. The annual growth of prices in this group increased to 0.6% in September compared to 0.4% in May 2008. The decline in goods prices in the period analysed continued to be fuelled by the decrease in prices of goods strongly affected by globalisation[4], the considerable part of which is imported from low cost countries (Figure 1.5). The scale of price declines in this group rose significantly in July and August 2008 as a result of strong seasonal reductions in clothes and footwear prices, followed by a marked decline in September triggered by a rise in the prices of these goods. In September 2008 the annual growth of prices of other goods remained at the level of May 2008. Conducive to decreasing the prices of these goods in the period analysed was the decrease in the prices of household appliances and goods of the means of transportation group. On the other hand, the prices of the remaining groups of goods in this category increased.

Energy prices

In the period analysed the annual growth of energy prices was high, which was driven by the rise in fuel prices and the earlier significant increases in gas and electricity prices. In June and July 2008 the rise in fuel prices, which resulted from increasing oil prices in world markets, contributed to the acceleration of energy

[2]In accordance with the definition adopted in the *Report*, the goods category does not include food, non-alcoholic beverages and energy products (along with fuels)

[3]After excluding tobacco products from the category of goods the average monthly price growth in this group was negative. The high growth in prices of tobacco products is connected with the annual increases of excise tax resulting from adjustment to the EU minimum excise rates. The rise in retail prices of tobacco products is spread over time owing to, among others, the high stock of these products maintained by producers.

[4]This group of goods includes: clothing, footwear, audio and television equipment, photographic equipment, IT equipment, musical instruments, games and toys, hobby, sports and camping equipment for outdoor recreation, electric appliances for personal hygiene.

prices growth. In August and September, following the declining oil prices, fuel prices decreased.

The growth in energy prices is expected to remain high owing to the already effected and the expected price increases. The weakening of the zloty against the US dollar observed since August 2008 may also have the same effect. On the other hand, a decline in oil prices in the world markets will be conductive to a lower growth of fuel and other oil-related energy prices (natural gas).

Core inflation

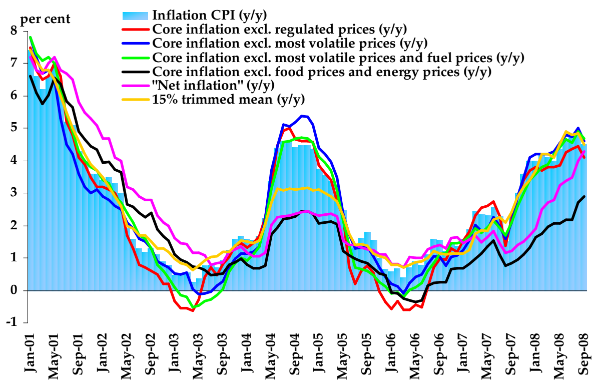
In the period June–September five of six core inflation measures increased (Figure 1.6). Only the 15% trimmed mean, after a temporary increase, declined in September to the level of May 2008. In September 2008 the annual growth of all core inflation measures exceeded the NBP inflation target (2.5%), and the growth of two of them (core inflation excluding most volatile and fuel prices and core inflation excluding most volatile prices) exceeded the annual CPI growth. In September 2008, core inflation excluding food and energy prices rose to 2.9%, i.e. the highest level since May 2002[5].

Inflation and the Maastricht criterion

In the period June–September 2008, the 12-month moving average HICP inflation in Poland, taken into account in the assessment of compliance with the Maastricht inflation criterion by a particular country, increased by 0.6 percentage point to 4.2%. At the same time, the reference value rose by 0.6 percentage point to 4.2%, the highest level since the establishment of the euro area. Since February 2008, the 12-month moving average HICP inflation in Poland has been equal to the reference value (Figure 1.7).

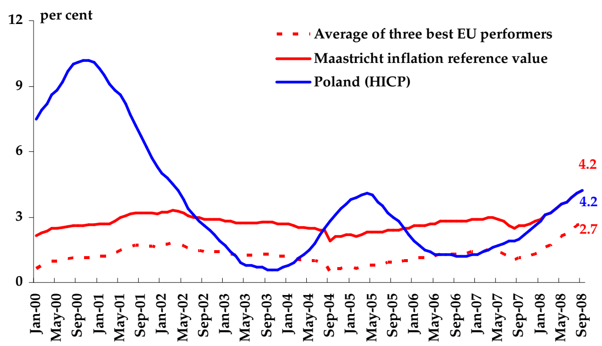
[5]The fading of the statistical base effect connected with the price cuts of Internet services in August 2007 contributed to a rise in core inflation excluding the price of food and energy prices of 0.1 percentage point in August 2008. In July 2008 the annual growth of prices of Internet services reduced the growth of this core inflation indicator by 0.3 percentage points.

□ **Figure 1.6:**
CPI and core inflation measures.



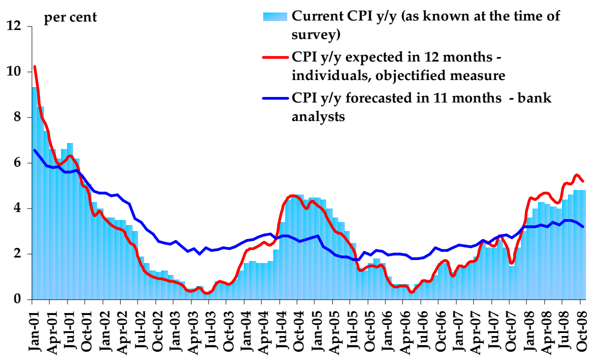
Source: GUS Data, NBP calculations.

□ **Figure 1.7:**
HICP inflation in Poland (12-month moving average) and the Maastricht criterion (y/y).



Source: Eurostat data, NBP calculations.

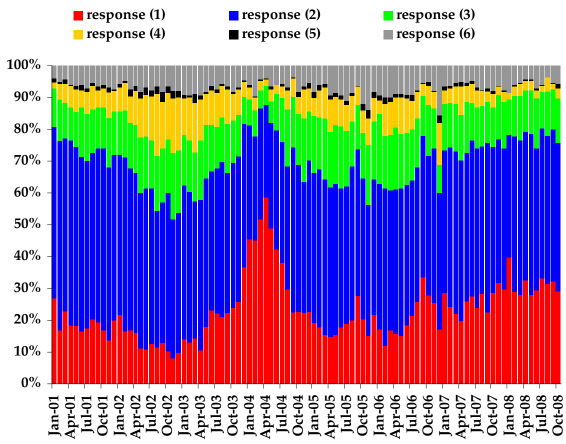
□ **Figure 1.8:**
Inflation expectations of individuals and inflation forecasts of bank analysts.



Source: Ipsos, Reuters, GUS, NBP calculations.

1.2 Inflation expectations

□ **Figure 1.9:**
Inflation expectations of individuals – responses to the question asked by Ipsos.



Source: 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 period July–September 2008 the inflation expectations of bank analysts in 11-month horizon remained at a level close to the upper limit for deviations from NBP inflation target (3.5%). In October 2008 inflation expectations of bank analysts decreased to 3.2% (Figure 1.8).

In the survey of households' inflation expectations the proportion of respondents expecting the price growth to pick up in the 12 months to come as compared with inflation observed at the moment of the survey and the proportion of respondents expecting the price growth to continue at the same level increased from 74% in June 2008 to around 80% in the period June–September 2008 and subsequently decreased to 76% in October 2008. The objectified measure of inflation expectations of individuals increased to 5.2% in October 2008 (from 4.3% in June 2008). The increase in expected inflation in October 2008 as compared to June resulted from changes in current inflation; changes in the structure of responses in Ipsos consumer surveys were conducive towards lowering the expected inflation.

Determinants of inflation

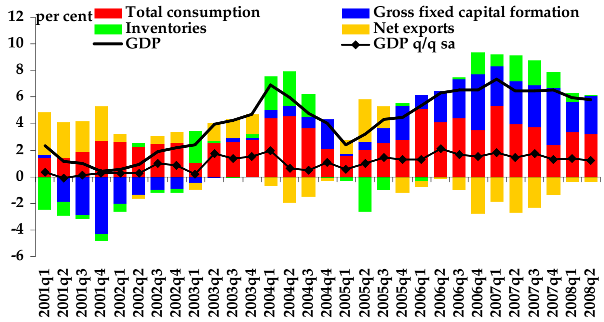
Despite better than expected GDP data for 2008 Q2, the subsequent quarters will see a marked decline in economic growth. According to GUS estimates, in 2008 Q2 GDP in real terms grew by 5.8% y/y, i.e. at a slightly slower pace than that recorded in 2008 Q1 and higher than expected in the previous *Report*. The most important factors in GDP growth continued to be the rise in consumption and investment. As a result of import growth exceeding export growth, the contribution of net exports to GDP growth has continued to be negative since 2005 Q4. The past few months saw decelerating employment growth, yet the unemployment was falling. The average wage in the economy was growing faster than labour productivity, which led to a significant rise in unit labour costs. These processes were accompanied by a rise in core inflation and a growing current account deficit. CPI inflation rose as compared with the previous *Report* mainly as a result of accelerated growth in energy prices and prices of some services. The heightened CPI inflation is still, to a large extent, the result of the previously observed strong growth in the prices of food and agricultural products and energy commodities in the global markets as well as considerable increases in administered prices in Poland.

2.1 Demand

In 2008 Q2 real GDP rose by 5.8% y/y (compared to 6.0% y/y in 2008 Q1), i.e. faster than expected in the previous *Report* (Table 2.1, Figure 2.1)[6]. The growth of both private consumption and gross fixed capital formation remained high and exceeded the expectations from the previous *Report*. As a result, domestic demand continued to rise at a high pace (of 6.0% y/y in 2008 Q2 as compared with 6.2% y/y in 2008 Q1). Imports were growing faster than exports, which added to the continued negative contribution of net exports to GDP growth.

[6]The *Report* contains the national accounts data in average annual prices of the previous year seasonally adjusted by the NBP and not the seasonally adjusted data in constant prices of 2000 as reported by the GUS. For this reason, the seasonally adjusted growth of GDP and its components presented in the *Report* may differ from those presented by the GUS.

⊡ **Figure 2.1:**
Contribution of aggregate demand components to GDP growth.



Source: GUS data.

Table 2.1: GDP and aggregate demand components growth rates.

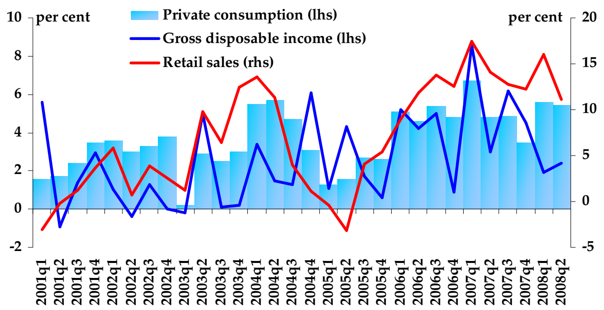
Change q/q seasonally adjusted (per cent)	2006				2007				2008	
	q1	q2	q3	q4	q1	q2	q3	q4	q1	q2
GDP	1.3	2.1	1.7	1.5	1.8	1.4	1.8	1.3	1.4	1.2
Domestic demand	2.1	1.9	2.0	2.7	2.1	1.8	2.0	1.5	1.4	1.3
Total consumption	1.7	1.1	1.2	1.3	1.3	0.8	1.3	0.8	1.0	0.7
Private consumption	1.8	1.3	1.2	1.4	1.3	0.8	1.7	0.9	1.4	1.0
Gross capital formation	3.7	4.9	5.4	8.2	5.3	5.6	4.4	3.8	2.4	3.1
Gross fixed capital formation	2.1	5.7	4.4	4.7	5.1	3.0	4.0	3.4	3.7	3.3

Source: NBP calculations on the basis of GUS data.

In the NBP's assessment, the coming quarters should see a dampening of GDP growth in comparison with the first half of 2008. Due to economic slowdown in countries that are Poland's main trading partners, a weakening of exports growth is expected. The foreign trade balance will remain negative, but will not have a significant impact on GDP growth. Private consumption and gross fixed capital formation will remain the dominant factors in GDP growth, but their growth will be lower than in the first half of 2008.

2.1.1 Consumption demand

□ **Figure 2.2:**
Growth of private consumption, gross disposable income and retail sales (y/y, constant prices).



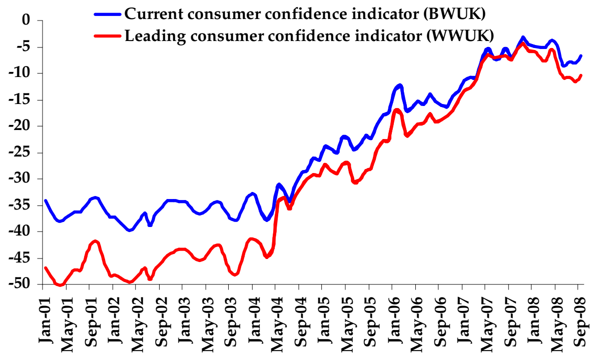
Source: GUS data.

In 2008 Q2 private consumption growth decreased slightly to 5.5% y/y (as compared with 5.6% y/y in 2008 Q1) and slightly exceeded the expectations of the previous *Report*. According to GUS estimates, 2008 Q2 saw a decline in public consumption (by 1.2% y/y), while this category was expected to rise according to the June *Report*.

The high growth in private consumption in 2008 Q2 resulted from the steadily increasing household disposable income (Figure 2.2), which was mainly driven by strong growth in income from paid employment, especially in the corporate sector (nominal aggregate wage growth by 17.6% y/y) and this year's indexation of old-age and disability pensions. The purchasing power of households was additionally reinforced by continuing fast growth in consumption loans (see Chapter 2.5.3 Credit and money). On the other hand, increased CPI inflation was conducive towards lower real consumption demand. As a result, in 2008 Q2 growth in retail sales (in constant prices) reached 11.1% y/y, as compared with 16.0% y/y in 2008 Q1; in 2008 Q3 the retail sales growth decreased to 8.0% y/y.

In 2008 Q3 consumer sentiment measured with consumer confidence indicators deteriorated as compared to 2008 Q2, yet remained at a historically high level (Figure 2.3). Consumer expectations worsened relative to the previous quarter mainly as a result of lower assessments of the future situation of the domestic economy. Thus, consumption growth should be expected to decline in the coming quarters as reflected in the decreasing retail sales growth.

Figure 2.3:
Consumer confidence indicators.



Source: GUS, NBP data.
Since January 2004 surveys have been conducted on a monthly basis (previously quarterly).

2.1.2 General government demand

According to preliminary estimates of the Ministry of Finance, in the period January–September 2008 the central budget recorded a deficit of PLN 4.2 billion[7]. The rise in central budget deficit since the last *Report* was driven by a significant increase in budget expenditure and a slight dampening of budget revenue growth, mainly due to weaker growth of indirect tax payments. The central budget performance at the end of September 2008 was still significantly better than expected[8]. It was primarily the result of low expenditure realisation, due to, among others, the postponement of some tasks to subsequent months of 2008 and the delay in the realisation of investment projects financed by EU funds. Budget expenditure rose between January and September 2008 by 12.5% y/y, while tax revenue increased by 8.9% y/y. In 2008 Q4 a further acceleration of growth in budget expenditure should be expected, but according to preliminary estimates of the Ministry of Finance[9] the expenditure may be lower than envisaged in the Budget Act for

[7]In the corresponding period of 2007 a budget surplus of PLN 0.2 billion was recorded, and in 2006 a deficit of PLN 14.6 billion.

[8]After the first nine months of 2008, the Ministry of Finance envisaged a deficit of PLN 16.7 billion., i.e. 61.6% of the annual plan.

[9]Estimates included in the draft *Budget Act for the Year 2009*.

the Year 2008. Assuming that the favourable revenue situation continues, the Ministry foresees the central budget deficit to reach PLN 22.9 billion in 2008, i.e. less than the assumed PLN 27.1 billion.

Strong economic growth and favourable situation in the labour market positively affected the revenue of other units of the general government sector, mainly revenue of special purpose funds from contributions and of local government units from taxes. The Social Security Fund, in spite of a significant decrease in revenue due to lower disability pension contributions combined with a rise in benefit payments[10], fulfilled its statutory tasks without raising bank loans. The National Health Fund recorded high revenue, driven - apart from the favourable economic situation - by the increase in the health insurance contribution basis resulting from the reduced disability pension contribution. In turn, the Labour Fund has been recording large financial surpluses since the beginning of 2008 due to both high revenue from contributions and low expenditure. Also local government units recorded a large budget surplus, which after six months of 2008 amounted to PLN 12.2 billion (as compared with PLN 11.3 billion in the corresponding period of 2007), in spite of lower growth in revenue from personal income tax, attributed to the family allowance applicable in 2008.

Available data indicate that the deficit of the general government sector, which according to the draft *Budget Act for the Year 2009* will amount to 2.5% of GDP in 2008 (in line with ESA'95 methodology), may turn out to be lower. Nevertheless, forecasts of this deficit are subject to uncertainty, particularly with respect to the level of investment outlays implemented by the central budget and local government units[11].

[10]The decline in revenue of the Social Security Fund was related to the lowering disability pension contribution: in July 2007 it was reduced from 13% to 10% of the contribution basis, and in January 2008 further cut to 6%. On the other hand, the rise in benefit payments was due to the indexation of old-age and disability pensions in 2008 according to a new calculation scheme (inflation rate increased by 20% of real wage growth), as well as the concluded liquidation of the so-called old pension portfolio.

[11]The realisation of the annual plan of budget investment outlays and expenditure related to the utilisation of

The outlook for the general government sector in 2009 is discussed in the *Opinion of the Monetary Policy Council on the Draft of the Budget Act for the Year 2009*[12].

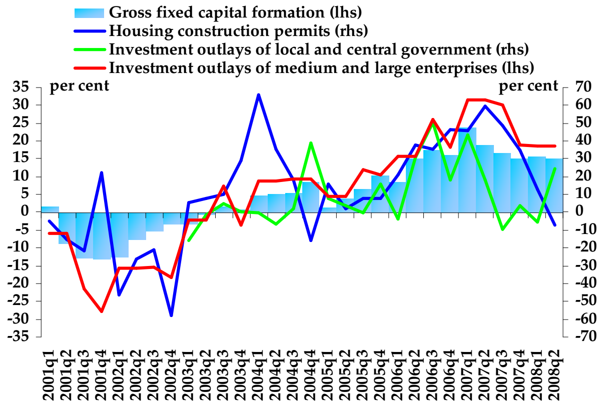
2.1.3 Investment demand

In 2008 Q2 gross fixed capital formation continued to rise quickly – its growth reached 15.2% y/y (Figure 2.4). As a result, the investment rate (the ratio of investment to GDP) increased to 22.0% (Figure 2.5)[13].

High investment activity in 2008 Q2 was noted in particular in the corporate sector and in the general government sector. In non-financial enterprises with more than 49 employees, investment outlays on new fixed assets rose markedly more slowly than in the previous year, but still fast – at a rate of 21.6% y/y (in current prices). An even faster growth was recorded in the general government sector[14], while business climate in housing construction deteriorated.

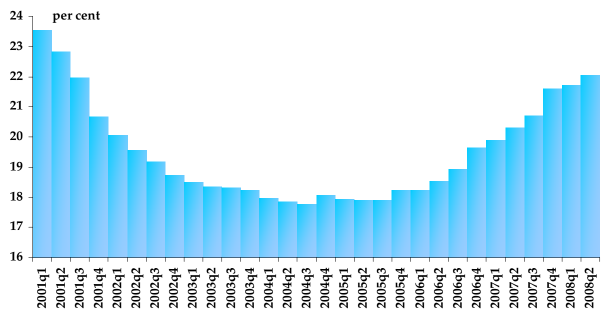
In 2008 Q2 the contribution of outlays on the purchase of machinery, equipment, tools and means of transport in investment outlays of the non-financial corporate sector declined in comparison with 2007 Q2 and amounted to 63.2%, while the contribution of outlays on buildings and structures increased. Changes in the composition of outlays were due, on the one hand, to the appreciation of the zloty exchange rate, which brought about a decrease in purchase costs of imported fixed assets and, on the other, to quickly rising prices of construction and assembly output.

Figure 2.4:
Investment in the economy (y/y).



Source: GUS data, Ministry of Finance data, NBP calculations.
* Due to lack of data on investment outlays of enterprises in Q1 and Q2 of each year, the chart presents the growth for the first half of a year.

Figure 2.5:
Investment to GDP ratio (gross fixed capital formation to GDP in nominal terms; quarterly data, cumulated over last 4 quarters.)



Source: GUS data, NBP calculations.

EU funds remained low after nine months of 2008. However, it should be noted that this situation may change as a significant part of this expenditure is usually realised in the last months of the year.

[12]The *Opinion of the Monetary Policy Council* will be available on the NBP website (http://www.nbp.pl).

[13]Investment rate is calculated on the basis of data for the past four quarters. Among the new twelve EU Member States only three (Malta, Cyprus and Hungary) recorded a lower investment rate than Poland in the last four quarters.

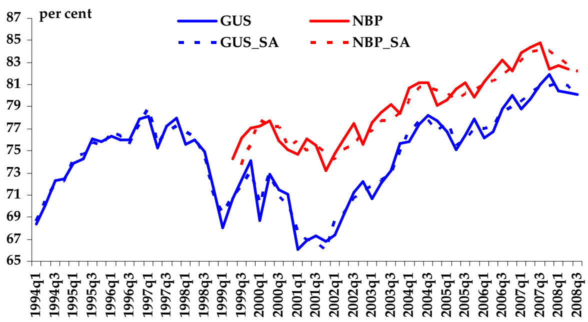
[14]The plan of budget expenditure for 2008 envisages much higher expenditure on investment projects than those carried out in 2007. As a result, despite high annual growth of investment expenditure in 2008 Q2 in the general government sector, the degree of realisation of this plan remains low.

Table 2.2: Decomposition of gross fixed capital formation in Poland.

Contribution (per cent)	2006				2007				2008	
	q1	q2	q3	q4	q1	q2	q3	q4	q1	q2
Products of agriculture, forestry and fisheries	0.0	0.0	0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.1
Metal products and machinery	31.7	29.3	29.9	28.6	33.3	29.1	29.2	27.8	32.3	29.1
Transport equipment	11.1	11.2	10.8	11.4	10.9	11.1	11.0	9.2	11.9	11.1
Construction work: housing	17.0	17.0	15.5	13.1	15.5	15.5	15.6	10.9	16.1	16.6
Construction work: other constructions	36.8	38.8	40.2	43.0	37.0	40.5	40.2	48.0	35.5	39.8
Other products	3.5	3.7	3.6	3.7	3.0	3.7	3.8	4.0	4.1	3.3

Source: Eurostat data.

□ **Figure 2.6:**
Production capacity utilisation in industry (GUS) and in the corporate sector (NBP).



Source: GUS data, NBP business survey.
The production capacity utilisation obtained from the GUS business survey is significantly lower from one obtained from the NBP business survey. However, the changes in this indicator are similar in both surveys. The difference is due to the fact that the two surveys are based on different enterprise samples. The GUS sample includes ca. 3500 enterprises from manufacturing excluding waste processing. The NBP sample in September 2008, in turn, included 894 enterprises 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.

In the coming quarters a further rise in investment may be expected, but its growth will significantly decline in comparison with the first half of 2008. This has been confirmed by NBP economic climate surveys, which show that in 2008 Q4 respondents are planning to start significantly fewer investment projects than in 2008 Q3 and in the corresponding period of 2007[15]. Enterprises are motivated to continue their investment activity by the still high, though decreasing, production capacity utilisation[16] (Figure 2.6). Investment activity is also encouraged by the still good, though deteriorating, financial condition of enterprises and the favourable outlook for inflow of structural funds as well as the high, though decreasing, rate of return on invested capital (Figure 2.7).

On the other hand, factors that will be negatively affecting corporate investment over the next few quarters include a bleaker sales outlook[17], a further significant tightening of banks' lending policies in the case of both large, small and medium enterprises[18], growing costs of business opera-

[15]See: *The Condition of the Non-financial Enterprises in the Fourth Quarter of 2008*, NBP.

[16]See: *The Condition of the Non-financial Enterprises in the Fourth Quarter of 2008*, NBP.

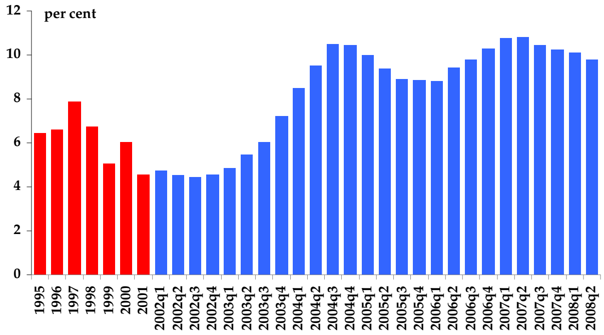
[17]Results of NBP survey studies suggest that optimism about the future demand has declined in the enterprise sector.

[18]Both the results of NBP survey studies (cf. *Senior Loan Officer Opinion Survey on Bank Lending Practices and Credit Conditions. Fourth Quarter 2008*) and NBP economic climate studies (cf. *The Condition of the Non-financial Enterprises in the Fourth Quarter of 2008*, NBP) point to a tightening of lending policies.

tions (including wages and energy), as well as increased costs of capital. The assessment of the profitability of planned investment projects and, consequently, the corporate investment activity will also be negatively affected by the increase in uncertainty and significant worsening of economic climate in global markets, including Poland's main trading partners.

Growing inflow of EU funds contributes to persistently favourable outlook for investment activity in the central and local government sectors. In contrast, there is growing uncertainty as to the housing market's developments in the conditions of flat price reductions observed in recent months and a strong drop in asset prices in other markets.

□ **Figure 2.7:**
Return on capital employed in enterprises.



Source: GUS data, NBP estimates.
Return on capital employed calculated as operational profit to total assets minus short-term liabilities: annual data and quarterly data (cumulated over last 4 quarters)
Data for enterprises with at least 49 employees.

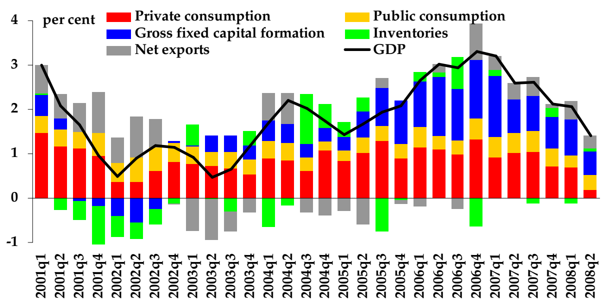
2.1.4 External demand and current account balance of payments[19]

External demand

In the euro area, which is Poland's largest export market, economic growth declined to 1.4% y/y in 2008 Q2 (compared to 2.1% y/y in 2008 Q1) and was the lowest since 2003[20]. A weakening of economic activity was observed in all major economies of this region[21]. The weakening of euro area economic growth was mainly connected with a decline in the growth of household consumption. Moreover, the contribution of investments and net exports to GDP growth was smaller as compared with the previous quarter (Figure 2.8).

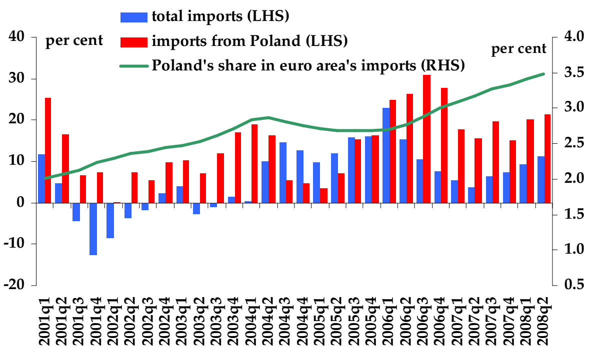
The decline in the contribution of net exports to euro area economic growth resulted from a stronger decline in export growth than in the growth of imports. The factors contributing to a

□ **Figure 2.8:**
Decomposition of the euro area GDP growth.



Source: Eurostat data.

□ **Figure 2.9:**
Euro area's total imports and imports from Poland (y/y) and Poland's share in euro area's imports.



Source: Eurostat data.

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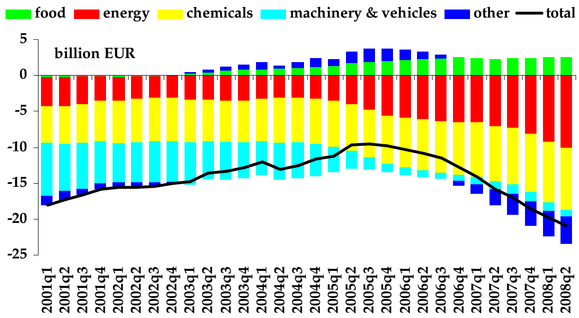
[19] Export and import data presented in this chapter refer to values expressed in EUR.

[20] Quarter to quarter analysis shows that the real GDP in the euro area declined in 2008 Q2 by 0.2%, representing the first GDP decline since the establishment of the euro area.

[21] In 2008 Q2, GDP in Germany rose by 1.7% y/y (compared to 2.6% y/y in 2008 Q1), in France by 1.1% y/y (compared to 2.1% y/y), and in Italy GDP declined by 0.1% y/y (compared to a rise by 0.3% y/y in 2008 Q1).

⊡ **Figure 2.10:**
Polish trade balance broken down into main groups of goods (cumulated over last 4 quarters).



Source: GUS data.

decline in euro area export growth were the further decline in the value of exports to the United States and Japan and a low growth of exports to the United Kingdom, which was connected with the weakening economic activity in those countries that are the key trade partners of the euro area[22]. The weak rise in exports to the developed countries contrasted with a relatively high growth in sales to other countries, in particular to oil exporters, China and new EU member states[23].

Since the publication of the previous *Report* there has been a further significant downward revision in forecasts of economic growth in the euro area both for 2008 and 2009[24]. Factors that point to the continuation of slowdown in economic growth in 2008 Q3 are primarily the stronger declines in industrial output and retail sales as well as the worsening assessment of the economic situation on the part of both enterprises and households. A decline in future export growth of this region may be driven by the expected weakening of economic growth of euro area's main trading partners[25]. The recently observed depreciation of the euro against the US dollar and the halted

[22]In 2008 Q2 GDP rose in the United States by 2.1% y/y (compared to 2.5% y/y in 2008 Q1), and import demand declined by 1.9% y/y (compared to a fall by 1.0% y/y in 2008 Q1). On the other hand, GDP in the United Kingdom rose by 1.5% y/y (compared to 2.3% y/y in 2008 Q1), and import demand by 3.1% y/y (compared to 3.4% y/y).

[23]In 2008 Q2 the value of euro area exports to the developed countries rose by 1.9% y/y, while exports to other countries increased by 12.3% y/y. The fastest rise was observed in exports to oil exporting countries.

[24]The consensus forecast published by *The Economist* in October 2008 assumes that economic growth in the euro area in 2008 will reach 1.2% y/y (compared to 1.7% y/y forecast in June 2008) and will decline in 2009 to 0.6% y/y (compared to 1.5% y/y).

[25]The consensus forecast published by *The Economist* in October 2008 assumes that GDP growth in the United States in 2008 will amount to 1.6% y/y (compared to 1.2% y/y forecast in June 2008), and in 2009 it will decline to 0.6% y/y (compared to 1.5% y/y). Higher growth expectations for 2008 resulted from a larger-than-expected contribution of net exports to the GDP of the United States and the persisting relatively high growth of household consumption in 2008 Q2 (as a result of tax stimulation). In turn, the consensus forecast for the United Kingdom published in October 2008 assumes that economic growth in 2008 will amount to 1.1% y/y (compared to 1.7% y/y forecast in June 2008) and to 0.1% y/y in 2009 (compared to 1.4% y/y).

euro appreciation against the British pound may slightly improve the situation of European exporters.

Despite relatively low total import growth of the euro area, the growth of imports from Poland remained relatively high in 2008 Q2 (Figure 2.9)[26]. The rise in export growth to the euro area contributed to an increase in Polish export growth[27]. Poland's exports to CIS and developing countries also rose faster in 2008 Q2 than in the previous quarter. On the other hand, a certain decline was observed in the growth of Polish exports to new EU member states, which was driven mainly by a weaker growth in the exports of parts and accessories[28].

The growth of Polish exports broken down into main groups of goods was strongly diversified in 2008 Q2. These differences reflect, to some extent, the sensitivity of individual groups of goods to zloty exchange rate fluctuations. Growth in the exports of machines and transportation equipment, which display low sensibility to zloty exchange rate fluctuations, was the strongest, while the growth in exports of other processed goods[29], where zloty exchange rate fluctuations are of more importance, was less than half as high. A strong increase in oil prices – similarly as in 2008 Q1 – was conductive to the value of Poland's imports rising quicker than the value of exports in 2008 Q2[30], which contributed to a further widen-

[26]According to Eurostat data, in 2008 Q2 euro area imports from Poland rose by 21.3% y/y (compared to 20.2% y/y in 2008 Q1). Among the main trading partners of the euro area, higher import growth was recorded only in the case of Norway and Russia, i.e. the major oil suppliers.

[27]According to GUS data, in 2008 Q2 the value of Polish exports rose by 19.9% y/y (compared to 16.5% y/y in 2008 Q1). The acceleration in export value growth resulted from both a higher growth of the volume (9.9% y/y in 2008 Q2 compared to 9.1% y/y in 2008 Q1) and a stronger rise in transaction prices (9.1% y/y in 2008 Q2 compared to 6.8% y/y in 2008 Q1).

[28]Exports of parts and accessories represent, to a large extent, trade operations between branches of multinational corporations operating in Central and Eastern Europe and are closely connected with the activity of the euro area export sector.

[29]Exports of *manufactured goods classified chiefly by material* and *miscellaneous manufactured articles* – cf. sections 6 and 8 according to SITC.

[30]The value of Poland's imports grew by 20.7% y/y in 2008 Q2 (compared to 18.7% y/y in 2008 Q1). The rise in the

Table 2.3: Polish export and import competitiveness measures.

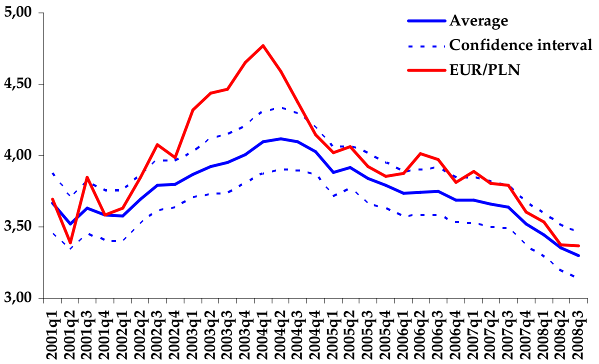
Change (per cent)		2006				2007				2008	
		q1	q2	q3	q4	q1	q2	q3	q4	q1	q2
Export prices / Unit labour costs*											
y/y		4.3	13.9	17.7	16.7	13.5	5.7	4.0	-0.7	0.7	-1.8
	q/q	3.4	7.5	4.4	0.5	0.6	0.1	2.8	-4.1	2.1	-2.4
Import prices / Domestic producer prices**											
y/y		-2.0	3.5	0.9	0.5	2.1	-3.0	-4.0	-3.9	-3.1	-2.0
	q/q	2.1	1.3	-0.9	-1.8	3.6	-3.7	-1.9	-1.8	4.5	-2.7
REER ULC***											
y/y		-3.5	-5.6	-8.2	-4.6	-4.6	3.6	6.4	9.2	14.0	18.1
	q/q	-0.7	-5.1	-1.7	3.0	-0.6	3.0	0.9	5.7	3.8	6.7

Source: NBP's calculations based on Eurostat, OECD and NBP data.
* Unit labour cost (ULC) index is calculated as the ratio of payroll growth to labour productivity growth, measured as output (volume) in manufacturing per person employed in this sector.
** Domestic PPI in manufacturing.
*** Estimates on the basis of monthly GUS data and ECB data. REER ULC – real effective exchange rate deflated with unit labour costs in manufacturing. Minus denotes depreciation.

ing of Poland's trade deficit (Figure 2.10).

In 2008 Q2 there was a deterioration in the competitive position of both domestic exporters an producers (Table 2.3). At the same time, the NBP's economic climate surveys show that the appreciation of the zloty nominal exchange rate observed since July 2008 was accompanied by a strengthening of the threshold exchange rate of export profitability declared by enterprises. In 2008 Q3 the nominal exchange rate of the zloty stabilised against the euro with a parallel further appreciation of the threshold exchange rate (Figure 2.11), which may have been conductive to limiting the worsening competitiveness of Polish exports. The appreciation of the threshold exchange rate is favoured by the high ratio of imports expenditure to revenue from export sales[31].

□ **Figure 2.11:**
Threshold exchange rate of exports profitability (EUR/PLN) declared by enterprises.



Source: NBP data and estimates.
The threshold exchange rate - at which exports become unprofitable, is determined as the average of responses to a question (see below) included in the survey of NBP quick monitoring addressed at enterprises *Information Concerning the Condition of the Corporate Sector and the Economic Climate*. The survey covers non-financial enterprises representing all NACE (PKD) sections (except for Agriculture, Forestry and Fisheries) of both public and non-public sector, including small and medium-sized enterprises and large entities.
Survey question: "What is the threshold level of the foreign exchange rate at which exports will become (is) unprofitable (in zloty)?"

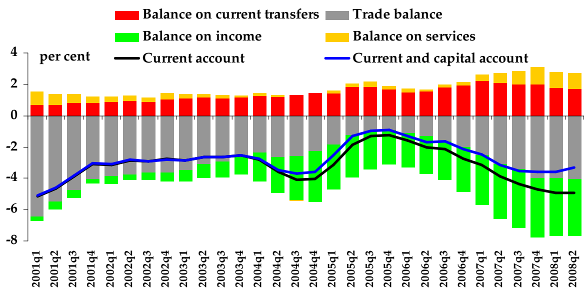
import value growth resulted from the increase in transaction prices that was stronger than in 2008 Q1 (10.7% y/y compared to 6.4% y/y). On the other hand, the growth in import volume decreased (9.0% y/y compared to 11.6% y/y). The value of imports excluding fuels rose by 18.7% y/y in 2008 Q2. The negative trade balance in the group of fuels relative to GDP increased from 2.5% after 2007 Q2 to 3.0% after 2008 Q2.

[31]According to GUS F-01/I-01 reports, the ratio of imports expenditure to revenue from exports sales amounted to 89.4% in the examined population of exporters.

Current account balance

The current account deficit rose in 2008 Q2 compared to 2007 Q2, which resulted from a deepening of the external trade deficit and the deficit on income; a rise in the positive balance on services and on transfers had the opposite effect. The current account deficit in relation to GDP (in terms of four quarters) did not change compared to the previous quarter and amounted to 4.9%[32]; in the same period of the previous year this ratio stood at 3.9%. The combined deficit of the current and the capital account relative to GDP, in turn, decreased to 3.3% in 2008 Q2 (as compared with 3.6% in 2008 Q1); in the same period of the previous year this ratio stood at 3.2% (Figure 2.12).

⊡ **Figure 2.12:**
Current account and its main components.



Source: NBP data.

2.2 Output

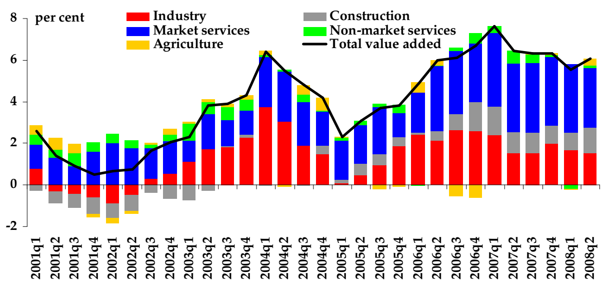
Table 2.4: Value added and its components.

Change q/q seasonally adjusted (per cent)	2006				2007				2008	
	q1	**q2**	**q3**	**q4**	**q1**	**q2**	**q3**	**q4**	**q1**	**q2**
Value added – total	1.3	2.1	1.6	1.7	1.8	1.2	1.8	1.4	1.0	1.6
Industry	2.7	3.0	2.7	2.1	2.2	1.8	2.9	2.9	-1.9	2.2
Construction	-1.5	9.2	4.0	5.4	5.0	-0.5	4.3	1.5	7.4	3.4
Market services	1.5	1.7	1.5	1.4	1.7	1.5	1.7	1.3	1.4	1.2

Source: NBP calculations on the basis of GUS data.

In 2008 Q2 the growth of gross value added remained high, in accordance with expectations from the previous *Report*, and was higher than in 2008 Q1 (6.1% y/y in comparison with 5.5% y/y; Figure 2.13).

⊡ **Figure 2.13:**
Sector contribution to annual gross value added growth.



Source: NBP calculations on the basis of GUS data.

Contributions of major sections of the economy (industry, construction and market services) to the total growth of value added in 2008 Q2 were similar to those recorded in 2008 Q1. On the other hand, value added in non-market services

[32]Upon publication of data on the current account for 2008 Q2, the NBP adjusted historical data; on 22 October 2008 the GUS, in turn, published the updated GDP data for 2007 and the first half of 2008. After accounting for these adjustments, the current account deficit amounted to 4.9% of GDP after 2008 Q1 rather than 4.0% as given in the previous *Report*.

and in agriculture, in contrast to the previous quarter, were conducive towards increasing the growth of gross value added in the economy.

In the NBP's assessment, the coming quarters will see a markedly lower growth of value added than in the first half of 2008.

2.3 Labour market

2.3.1 Employment and unemployment

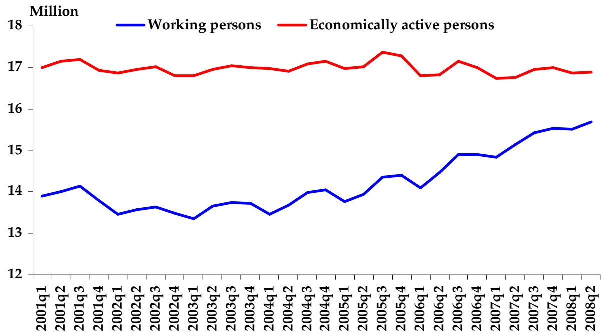
In 2008 Q2 the number of working persons in the economy was still growing, albeit markedly more slowly than in the previous quarters (Figure 2.14 and Table 2.5). The number of working persons according to BAEL (Labour Force Survey) reached once again its highest level in the survey history (i.e. since 1992)[33]. Lower growth of the number of working persons resulted mainly from lower growth of employment in industry, i.e. in the sector which, to a large extent, had been responsible for the high growth of the number of working persons in the previous quarters. Also the growth of working persons in the services sector, which had generated most new jobs till 2007 Q4, decreased slightly. The number of persons working in agriculture continued to fall.

Weakening demand for labour in 2008 Q2, particularly in industry, found its reflection in the dampening of growth in the number of persons employed in the corporate sector (Figure 2.15). Monthly data for the corporate sector indicate that employment was stable also in 2008 Q3.

Lowering demand for labour was also indicated by the falling number of vacancies reported by employers to labour offices. In 2008 Q2 this number dropped markedly in annual terms and amounted to 333 thousand, i.e. 9.0% y/y less than in 2007 Q2.

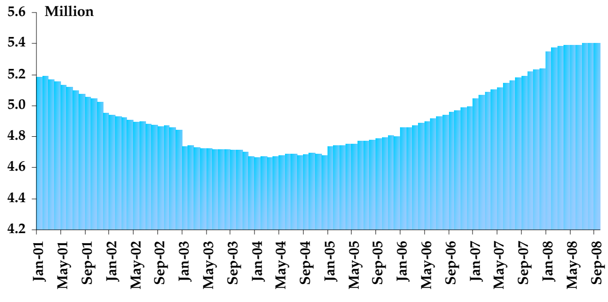
The percentage of employers who are experiencing difficulties in hiring both skilled work-

Figure 2.14:
Working persons and the economically active in the economy (according to BAEL).



Source: GUS data.

Figure 2.15:
Employment in the enterprise sector.



Source: GUS data.

[33] Quarterly data on the number of working persons based on corporate reporting do not include persons working in micro-firms (employing less than 9 persons), private farming and state budget entities performing activities in the area of national defence and public security.

Table 2.5: Working population according to BAEL in selected sections.

	Working persons in 2008q2		Growth in 2008q1		Growth in 2008q2		Growth in 2008q1	Growth in 2008q2
	thousands	structure	y/y thousands	y/y percent	y/y thousands	y/y percent	q/q seasonally adjusted (per cent)	q/q seasonally adjusted (per cent)
Total	15,689	100.0	676	4.6	537	3.5	4.0	3.5
Total excluding private agriculture	13,586	86.6	741	5.8	551	4.2	5.1	4.2
Place of residence								
urban areas	9,756	62.2	417	4.5	373	4.0	4.4	3.9
rural areas	5,933	37.8	259	4.6	163	2.8	4.2	2.8
Economic sector								
agriculture	2,269	14.5	-77	-3.5	-32	-1.4	-3.5	-2.6
industry	4,955	31.6	490	11.0	326	7.0	9.4	7.2
services	8,454	53.9	265	3.2	237	2.9	3.5	2.9
Ownership sector								
public	4,245	27.1	50	1.2	34	0.8	0.9	0.8
private	11,444	72.9	626	5.9	502	4.6	5.7	4.5
Employment status								
hired employees	12,008	76.5	632	5.6	464	4.0	4.9	4.0
employers and self-employed	3,032	19.3	65	2.2	107	3.7	2.0	2.1
contributing family workers	650	4.1	-20	-3.2	-33	-4.8	-4.1	-5.4
Type of job contract								
fixed-term contract	3,237	20.6	44	1.4	-12	-0.4	1.9	0.8
permanent contract	8,771	55.9	587	7.2	475	5.7	6.1	5.9

BAEL data were seasonally adjusted with TRAMO/SEATS on a sample beginning 1995 Q1.
Source: GUS data, NBP calculations.

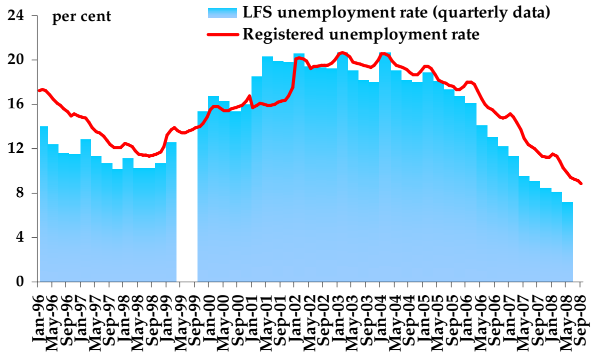
ers[34] and workforce in general[35] has been decreasing, yet it remains high.

The rise in the number of persons working in the economy still contributed to the decrease in the rate of unemployment, both registered and calculated on the basis of BAEL data (Figure 2.16). The unemployment rate and the number of unemployed according to BAEL slid to the lowest levels in the survey history (respectively 7.1%

[34]According to GUS business tendency survey, in September 2008 the shortfall of skilled employees in construction was declared by 55.0% of employers (as compared to 58.8% one year before). Lower demand for labour in manufacturing industry pushed the percentage in this sector down to 28.0% in 2008 Q3 (as compared to 29.6% in the corresponding period of 2007).

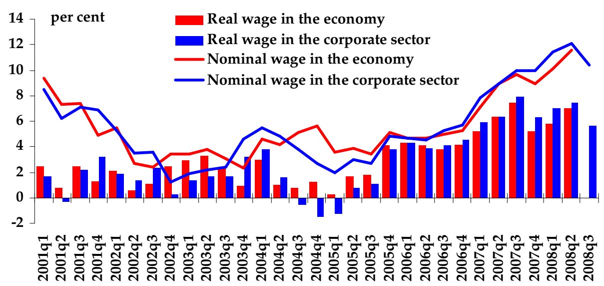
[35]In 2008 Q3, 11.4% of manufacturing companies declared problems with finding workers, compared to 16.2% one year before.

Figure 2.16:
Unemployment rate registered by labour offices and BAEL (Labour Force Survey).



Source: GUS data.
Data in the whole sample are adjusted for the results of the 2002 National Census.
The BAEL survey was not conducted in 1999 Q2 nor in Q3.
There are two reasons for the differences between the unemployment rate according to BAEL and the registered unemployment rate: (1) Different definition of unemployed person. Persons registered as unemployed in Labour Offices do not necessarily comply with the definition of unemployment used in the BAEL survey (unemployed, actively seeking employment and able to undertake employment immediately); on the other hand, not all the BAEL unemployed get registered in Labour Offices. According to historical data, in the periods of lower unemployment the registered unemployment rate was higher than the BAEL unemployment rate which may suggest that amidst higher demand for labour there is a growing number of persons failing to meet the criteria of unemployed person according to BAEL registered by Labour Offices. (2) Different definition of population to which the number of the unemployed is referred. While calculating the BAEL unemployment rate the number of economically active consists of the number of unemployed together with the number of persons qualified as employed in the BAEL survey. While calculating the registered unemployment rate the number of the unemployed is divided by the GUS estimated number of the employed in a particular month.

Figure 2.17:
Annual percentage growth of wages in the economy and in the corporate sector (nominal and real).



Source: GUS data, NBP calculations.

and 1196 thousand in 2008 Q2). It can be expected, though, that the decline in the unemployment rate will be halted in the coming quarters.

The economically active figure increased in 2008 Q2 by 0.8% y/y to 16,885 thousand and it was the second consecutive quarter of rising labour supply in annual terms (after an increase of 0.9% y/y in 2008 Q1). In 2006 and 2007 the number of economically active persons declined, which exacerbated employers' problems with finding skilled workforce. Since 2008 Q1 the labour participation ratio has also been increasing (in 2008 Q2 it grew by 0.4 percentage points y/y to 53.9%). The rise in the participation ratio was particularly strong in the group of people aged 45–60/65, which may indicate that the favourable situation in the labour market contributed to older persons becoming economically active. The rise in the percentage of persons active in the labour market could also be triggered by the return of some Polish workers from economic migration.

Results of the NBP's economic climate surveys[36] indicate that in 2008 Q3 employers' forecasts concerning employment deteriorated for the third consecutive quarter. For the first time since 2005 forecasts predict a drop in employment in industry and transport, while in construction and services excluding transport an increase of employment is still expected, though its scale has been revised downwards.

2.3.2 Wages and productivity

In 2008 Q2 the growth of nominal wages further accelerated both in the economy (reaching 11.6% y/y compared to 10.1% y/y in 2008 Q1) and in the corporate sector (12.1% y/y compared to 11.4% y/y in 2008 Q1; Figure 2.17). The data for 2008 Q3, in turn, indicate a decrease in the wage growth in the corporate sector.

2008 Q2 saw a slight acceleration in labour productivity[37] in comparison to 2008 Q1 (2.2% y/y compared to 1.5% y/y), but the increase in the

[36] See: *The Condition of the Non-financial Enterprises in the Fourth Quarter of 2008*, NBP.

[37] Labour productivity in the economy: GDP in constant average annual prices from the previous year per one person working in the economy according to the BAEL.

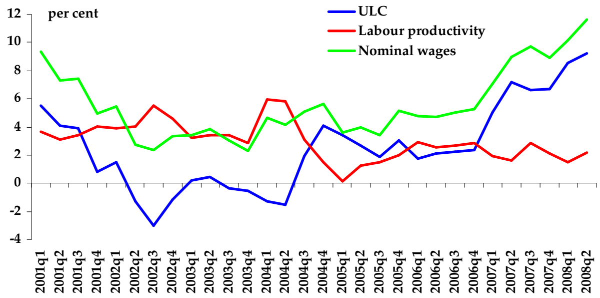
wage growth resulted in unit labour costs rising faster in 2008 Q2 than in the previous quarter (by 9.2% y/y compared to 8.5% y/y)[38] and at the same time the fastest since 1998 Q4 (Figure 2.18).

High growth of unit labour costs also persists in industrial enterprises (Figure 2.19)[39]. It is conducive to the continued cost pressure in enterprises.

According to the NBP's economic climate surveys[40], the percentage of enterprises that are planning wage rises decreased in 2008 Q4. However, the average amount of planned wage rises increased slightly in comparison with plans declared in the previous quarter[41]. On the other hand, the percentage of enterprises for which wage growth constituted the main reason for rising the prices of their products remained low. Among the enterprises which declared that they would raise wages in 2008 Q4, this percentage amounted to 4.4%.

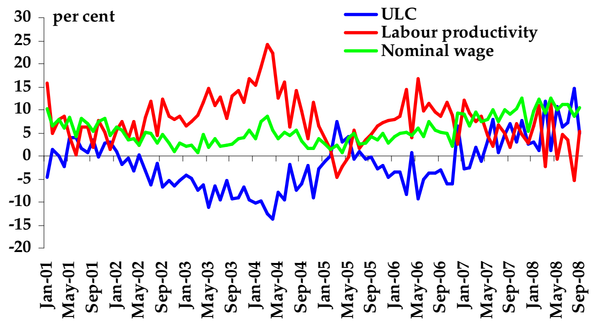
Further growth in wages in the economy may be triggered by wage rises in the public sector. In 2008 Q2 a marked increase in wages waw observed in this sector, particularly in public administration (13.7% y/y compared to 6.7% y/y in 2008 Q1), education (11.5% y/y compared to 6,0% y/y) and health service (18.2% y/y compared to 14.9% y/y).

Figure 2.18:
Annual growth of labour productivity, nominal wages and unit labour costs (ULC) in the economy.



Source: GUS data, NBP calculations.

Figure 2.19:
Annual growth of labour productivity, nominal wages and unit labour costs (ULC) in industry.



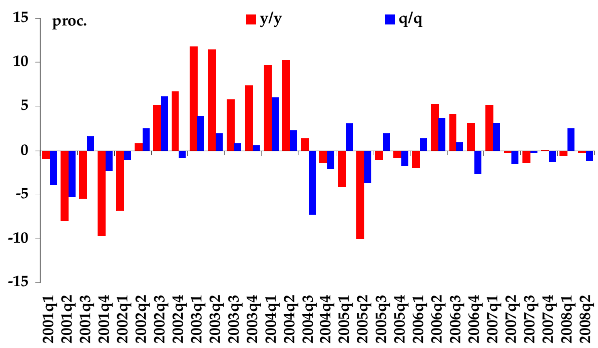
Source: GUS data, NBP calculations.

2.4 Other costs and prices

2.4.1 External prices

In 2008 Q1 and Q2 import prices expressed in PLN were falling (Figure 2.20), which was sup-

Figure 2.20:
Zloty denominated import prices.



Source: GUS data.

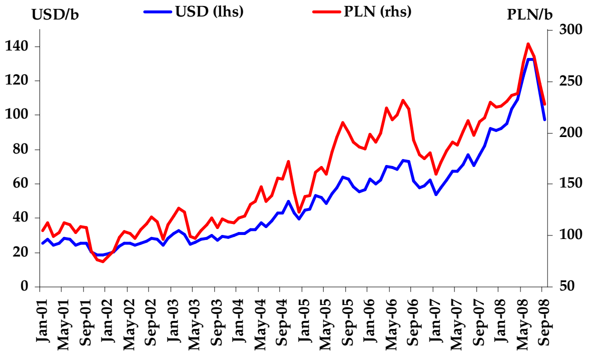
[38]Unit labour costs in the economy: nominal aggregate wages in the economy (average nominal wage in the economy multiplied by the number of people working in the economy according to the BAEL) in relation to GDP (in constant average annual prices from the previous year).

[39]Unit labour cost in industry: the ratio of the average gross nominal wage in industry to the labour productivity in industry (labour productivity in industry: the ratio of industrial output in constant prices to the average employment in the sector).

[40]See: *The Condition of the Non-financial Enterprises in the Fourth Quarter of 2008*, NBP.

[41]The average planned rise in the group of enterprises that envisage such development amounts to 6.1%.

□ **Figure 2.21:**
Brent crude oil prices in USD and PLN.



Source: The US Department of Energy (www.eia.doe.gov) data, NBP caluculations.

ported by the nominal appreciation of the zloty exchange rate. The drop of transaction prices in imports took place despite a significant year-on-year rise in oil prices[42]. Meanwhile, the prices of other imported goods as a whole still showed a falling tendency initiated in 2007 Q3. Since 2007 Q4 export prices are also decreasing. As a result of export prices declining more quickly than import prices in the first half of 2008, the *terms of trade* deteriorated.

In 2008 Q3 the global markets witnessed the first drop in oil prices in quarter-on-quarter terms since 2007 Q1[43] (Figure 2.21). This development was driven by diminishing demand for oil in developed countries, mainly in the United States, and by fears of the financial market crisis spreading to the global economy – particularly to developing countries, which thus far were characterised by relatively high growth of demand for oil. The decline in current oil prices was accompanied by the drop in its forecasted prices both for 2008 and 2009[44]. The decline in oil prices will probably meet with OPEC reaction, adjusting the volume of supply to weakening demand. The strong volatility of oil prices observed in recent weeks makes expectations concerning future oil prices subject to significant uncertainty (particularly considering that the level of prices is at present more affected by the situation in the global financial markets than by changes in demand and supply).

[42] In 2008 Q1 oil import prices expressed in PLN rose by 42.0% y/y and in 2008 Q2 by 30.9% y/y.

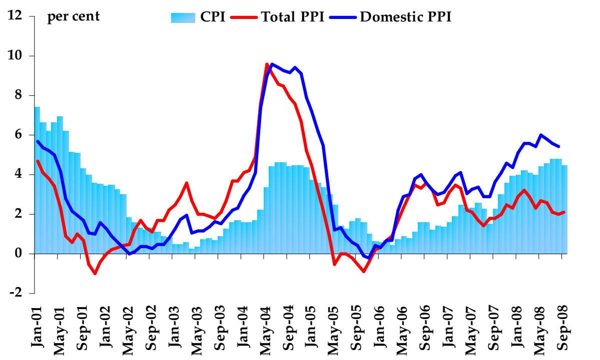
[43] Till 11 July 2008 oil prices followed a rising trend, reaching an apex of 147.5 USD/b, and then decreased rapidly in spite of the conflict between Russia and Georgia (resulting in suspension of supplies from Azerbaijan), the decision taken by OPEC to lower production, and the suspension of oil extraction and processing in the Gulf of Mexico due to tornadoes (which contributed to a marked drop in the stocks of oil and oil products in the United States).

[44] Between June and October 2008 the US Energy Department lowered the oil price forecasts for 2008 by 10.6 USD/b (to 111.6 USD/b) and for 2009 by 14.0 USD/b (to 112.0 USD/b).

2.4.2 Producer prices in industry[45]

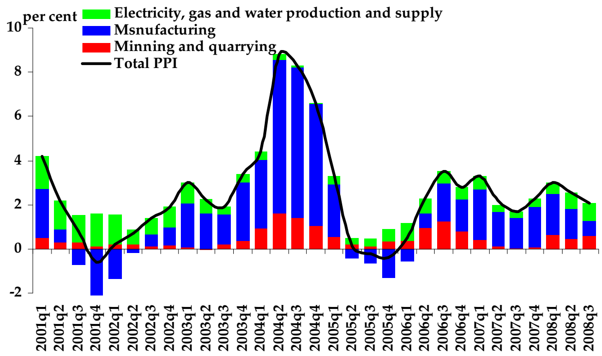
2008 Q3 brought a decline in the annual growth of the Producer Price Index to 2.1% y/y (Figure 2.22, Figure 2.23). The growth in producer prices in the domestic market outpaced the total producer price growth by over 3 percentage points, which was connected with export price decline in that period. This decline was the result of the appreciation of the nominal effective zloty exchange rate. Compared to 2008 Q2 the growth of producer prices in industry increased in the sections *Production and supply of electricity, gas and water* and *Mining and quarrying.* In 2008 Q3 the highest producer price growth was recorded in *Mining.* The largest contribution to the total PPI growth came from *Production and supply of electricity, gas and water.* The contribution of *Manufacturing*, the section whose contribution to the PPI growth was the largest in previous quarters, decreased substantially (Figure 2.23).

□ **Figure 2.22:**
CPI and PPI (y/y).



Source: GUS data.

□ **Figure 2.23:**
Contribution of producer prices growth in PPI total annual growth.



Source: GUS data.

2.5 Financial markets[46]

2.5.1 Asset prices and interest rates

Short-term interest rates

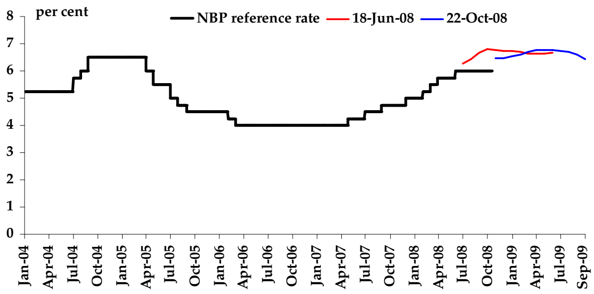
Since the publication of the previous *Report* the Monetary Policy Council raised the reference rate to 6.00%. The only increase – of 25 basis points – was effected in June 2008, while at its meetings in July, August and September the Council decided to leave interest rates unchanged. The interest rate increase at the meeting in June 2008, and no interest rate change in July, August and September had been expected by the majority of analysts.

[45]Total producer prices in industry and in three main sections (i.e. *Mining and quarrying, Manufacturing* and *Production and supply of electricity, gas and water*) referring to a specific month are published in the next calendar month, while the prices in particular divisions of *Manufacturing* and producer prices in the domestic market are available with a longer time lag (of about two months).

[46]The cut-off date for the data presented in this section is 23 October 2008.

Analysts surveyed by Reuters in October 2008 expected the reference rate in 2008 Q4 at the level of 6.00–6.25%[47]. Analysts' expectations with respect to the level of NBP interest rates in 2008 were thus similar to those in the June survey. However, over a one-year horizon, analysts expected the reference rate at 5.00–5.50%[48].

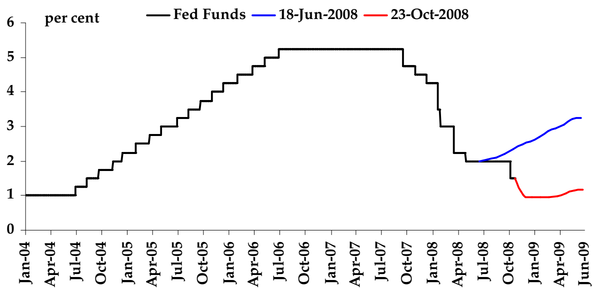
Figure 2.24:
Monetary policy expectations in Poland – actual developments and expected NBP interest rate.



Source: Reuters data, NBP calculations.

Market expectations as reflected in 3M WIBOR FRAs could point to a rise in the NBP interest rate over a one-year horizon. However, given the distortions in the market for Treasury bonds (a 100 basis-point increase in yields on 2-year Treasury bonds between 17 and 22 October) FRA quotations could have risen due to dynamic changes in the credit risk premium. It also should be emphasized that the marked growth in money-market interest rates is not the result of a lack of liquidity but of a lack of mutual trust among financial institutions, which due to the persisting high uncertainty in the market are not willing to extend credit with longer maturity. In order to improve the functioning of the money market the National Bank of Poland widened the range of monetary policy instruments used by introducing in October 2008 the so-called "Confidence Package". Should it become necessary, the Package allows for the provision of liquidity to the market, both in the Polish zloty and in foreign currencies.

Figure 2.25:
Monetary policy expectations in the United States – actual developments and expected Fed Funds rate.



Source: Bloomberg data, NBP calculations.

On 8 October 2008, the Fed, the European Central Bank (ECB), the Bank of Sweden, the Bank of England and the Bank of Canada announced a joint decision to cut the key interest rates by 50 basis points. At the same time the Swiss National Bank (SNB) announced its decision to cut its key interest rate by 25 basis points. Moreover, the Bank of Japan expressed its support for the action of the other banks, keeping, however, its interest rates unchanged, while the People's Bank of China cut its interest rates by 27 basis points. In the case of the majority of the forego-

[47] In the survey of 22 October 2008 56% of analysts expected that the key interest rate of the NBP would remain at 6.00% in 2008, 39% of them saw it at 6.25% and 5% expected the rate to reach 6.50%.

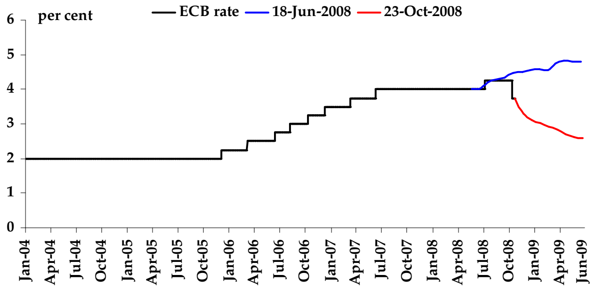
[48] 33% of analysts expected that in December 2009 the key interest rate of the NBP would reach 5.00%, 19% of them saw it at 5.25% and 29% expected the rate to reach 5.50%.

ing central banks, the decision was taken in an emergency mode, i.e. outside the normal schedule of meetings of these banks' decision-making bodies. In stating the grounds for the decision, the central banks emphasized the possibility of further joint actions. They also pointed out that in some economies the inflationary pressure is easing, partly due to significant decreases in the prices of energy and other raw materials and decreases in inflation expectations, which remain anchored at a level consistent with price stability. They emphasized as well that the observed intensification of the financial crisis increases the risk of lower economic growth and consequently decreases the risk of heightened inflation.

Since the publication of the previous *Report* the Fed has cut its interest rate by 50 basis points to 1.50%, in a joint action with other central banks. Expectations of the future path of US interest rates have changed significantly since the end of June 2008. In line with forward market quotations it is currently expected that by the end of 2008 the federal funds rate will be reduced by another 50 basis points to 1.00% (Figure 2.25). Over the horizon of the first half of 2009 the forward market expects the federal funds rate at 1.25%. Expectations of a reduction of the Fed interest rate by the end of 2008 are based on fears of a more pronounced slowdown in economic growth in the United States in the face of the intensification of the financial-market crisis. It needs to be emphasized that in the last month these expectations have been highly volatile.

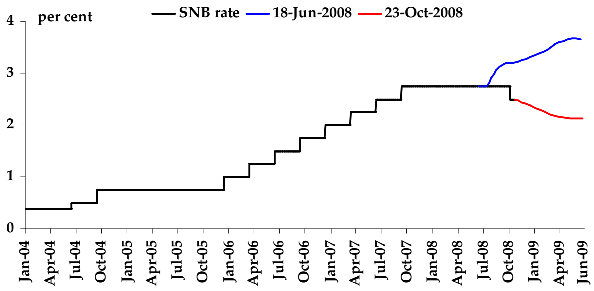
In July 2008 the European Central Bank raised its key interest rate by 25 basis points to 4.25%, and then lowered it by 50 basis points to 3.75% in a joint decision undertaken by central banks on 8 October 2008. Current forward market quotations suggest expectations of a further drop in interest rates in the euro area to 3.00–3.25% by the end of 2008. Over the horizon of the first half of 2009 the forward market expects that the ECB interest rate will be further reduced to 2.50% (Figure 2.26). Expectations of the reduction of the refinancing rate are related to the risk of a much more pronounced slowdown in economic activity in the euro area (in 2008 Q2 real GDP growth in the euro zone dropped to -0.2% q/q).

Figure 2.26:
Monetary policy expectations in the euro area – actual developments and expected ECB interest rate.



Source: Bloomberg data, NBP calculations.

Figure 2.27:
Monetary policy expectations in Switzerland – actual developments and expected SNB rate.

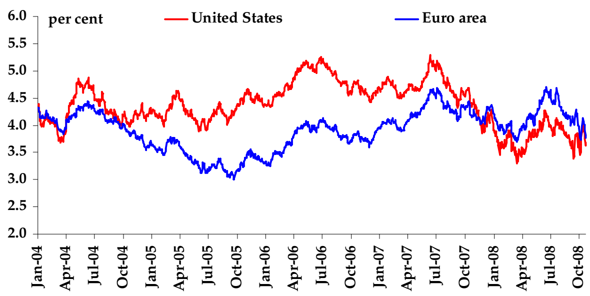


Source: Bloomberg data, NBP calculations.

Since the publication of the previous Report the Swiss National Bank reduced its interest rate by 25 basis points (as part of the joint decision of central banks on 8 October 2008) to 2.50%. According to the SNB the economic situation in Switzerland's external environment will probably contribute to a further deterioration of domestic economic conditions, which so far had been evolving in accordance with SNB expectations. Current market expectations point to a reduction of the SNB interest rate to 2.000–2.25% over the next nine months (Figure 2.27).

Long-term interest rates and the equity market

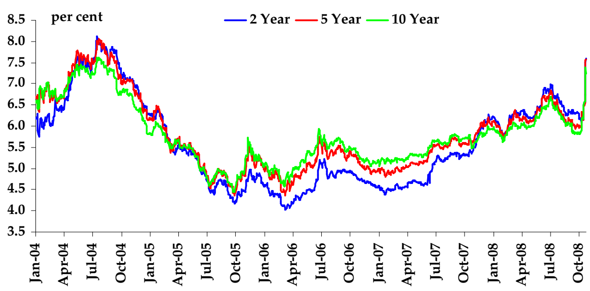
Figure 2.28:
Yields of 10-year US and euro area bonds (y/y).



Source: Bloomberg data.

Since the publication of the previous *Report* yields on US and euro-area Treasury bonds have declined significantly due to the uncertainty concerning the scale and duration of the slump in economic growth in the United States and the euro area. Since mid-July 2008 an increase in uncertainty in global financial markets could be observed, related to fears that the crisis in the US economy would intensify and its consequences would spread to other countries. The increase in risk aversion led to a change in investment preferences, which involves selling out riskier financial assets (e.g. shares) and investing the withdrawn funds in safer securities, e.g. Treasury bonds of developed countries (Figure 2.28). Since mid-September the volatility of Treasury bond yields in the United States and the euro area has increased markedly due to heightened tensions in global financial markets, as well as fears of the negative impact of the costly banking-sector bailout plans on public finances in the United States and the euro area member states.

Figure 2.29:
Yields of the Polish benchmark bonds (y/y).



Source: Reuters data.

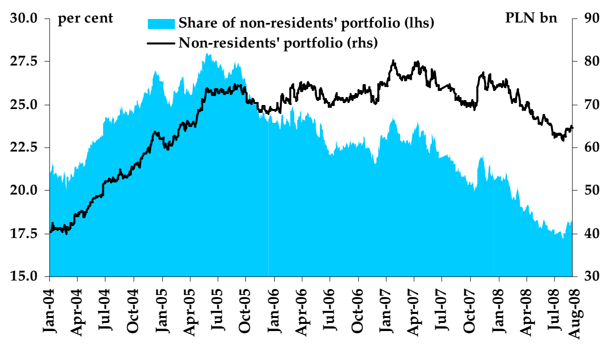
At the beginning of July 2008 the yields on Polish Treasury bonds reached a four-year high, and then temporarily followed a falling trend (Figure2.29). This development was related to the favourable impact of both external and internal factors. The crucial external factor was the decline in German government bond yields, while the main domestic determinant of Polish bond yields decreases was the decline of the expected target level of the key NBP interest rate.

Economists expected inflation to reach a high of 5.0% y/y in August 2008, but the inflation rate in that month reached 4.8% y/y. Yield decreases temporarily accelerated after the Prime Minister's declaration of 10 September 2008 concerning the date of Poland's entry into the euro area as it intensified markets' expectations of Poland's quicker adoption of the common currency (the so-called 'convergence game'). The difference between the four-years-ahead five-year interest rates in Poland and in the euro area, implied from IRS contracts, i.e. the so-called convergence spread PLN 4x5, narrowed in October 2008 to 62 basis points from more than 100 basis points at the end of June 2008. As recently as in the July Reuters survey, analysts pointed to the year 2013 (the median) as the most likely date of Poland's entry into the euro area. However, in the second half of October 2008 the convergence spread widened again to 121 basis points. The trend decline in yields on Polish Treasury bonds stopped in the second half of September and reversed at the beginning of October. In the second half of October the increase in yields on Polish treasury bonds accelerated markedly and the recent high yield levels previously were observed in July 2004. The conditions on the domestic debt market were determined by a further increase in risk aversion coupled with the associated sell-off of emerging markets' assets, and by the intensification of the financial crisis in Hungary, which witnessed a significant decline in government-bond prices and a weakening of the Hungarian forint.

Having reached the level of 215 basis points in July 2008, the spread between the Polish 10-year Treasury bond and the corresponding German bond shrank temporarily to 160 basis points in September, which – as mentioned above – was to a great extent influenced by the Prime Minister's declaration concerning the date of Poland's entry into the euro area. However, the strong growth of yields on Polish bonds in October 2008, resulting from the global increase in risk aversion, contributed to a renewed increase in the spread to 350 basis points.

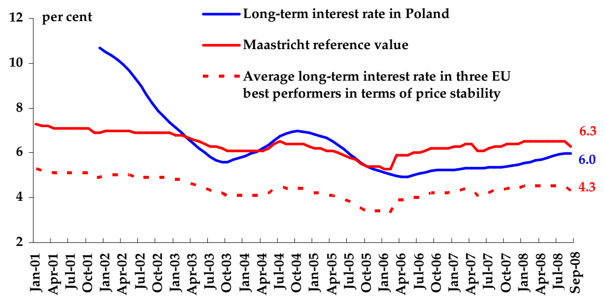
In the last few months the yields on Polish long-term bonds in average annual terms, used to ver-

Figure 2.30:
Non-residents' participation in the Polish Treasury bond market.



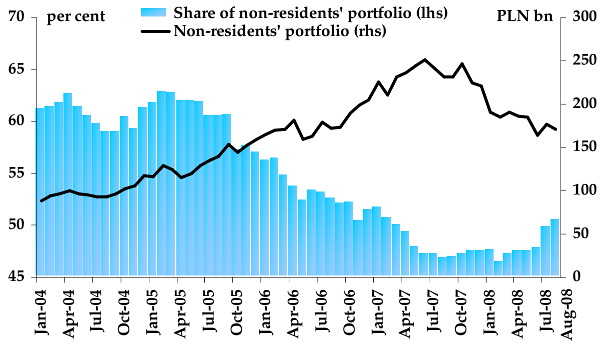
Source: National Depository for Securities (KDPW) data.

Figure 2.31:
Average annual yield (12-month moving average) for long-term Treasury bonds in Poland versus the reference value for the Maastricht criterion.



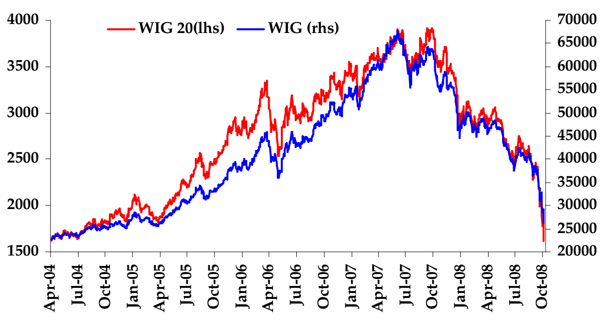
Source: NBP estimates based on Eurostat data.

□ **Figure 2.32:**
Non-residents' participation in the Polish equity market – on the basis of market value of stocks.



Source: NBP data.

□ **Figure 2.33:**
WIG and WIG 20 stock exchange indices.



Source: Reuters data.

ify compliance with the Maastricht interest-rate criterion, have been rising slowly, whereas the Maastricht reference value remained at a stable level (Figure 2.31). Since the end of 2005 Poland has been complying with the interest rate criterion.

Between May and August 2008 the value of the Treasury bond portfolio held by non-residents decreased. The decline in non-residents' involvement in the domestic securities markets resulted mainly from the growth in risk aversion among foreign investors (Figure 2.30).

The situation in the domestic equity market remained under the strong influence of the overall sentiment prevailing in international markets. Since the publication of the previous *Report* share prices on the Warsaw Stock Exchange (WSE) continued to fall, following several months of relative stabilisation at levels established after the slump of January 2008 (Figure 2.33).

In June a big sell-off took place on the WSE, which resulted in Warsaw indices falling to two-year lows. The WIG20 index lost 10.8% in comparison with May 2008, and 33.9% compared to the all-time high reached in October 2007. The continuation of the falling trend that began on the stock market in the second half of 2007 resulted from both external (sell-offs in world equity markets, high oil prices) and internal factors (strong zloty discouraging foreign investors from purchasing Polish shares). Despite an adverse situation in the securities market, June saw a slight inflow of foreign investment (Figure 2.32). In the first half of July the falling trend that began in June continued, but in mid-July the sentiment changed and share prices rose, partly compensating for the previous declines. This temporary enthusiasm at stock exchanges around the world should be attributed to better-than-expected financial results of American banks and to the improvement in consumer sentiment in the United States. The decline in the price of oil also contributed to the increase in share prices. In July WIG 20 rose by 6.2% on the strength of bank shares included in the index, and foreign investors continued to buy Polish shares. The inflow of foreign investment continued in August, when the main indices of the Warsaw Stock Exchange recorded only minor declines. However, in September and in October shares plummeted on the WSE. As a result of a panic sell-off WIG20 fell 33.0% between 1 and 23 October. In this period the Polish stock exchange was strongly influenced by foreign markets, where bad macroeconomic data and the deteriorating condition of the banking sector in the United States and Western Europe rapidly brought the world's major indices down to lows unseen for many years. In addition, the strong decline in share prices on the WSE could have resulted from a rise in risk aversion among foreign investors who retreated from emerging markets.

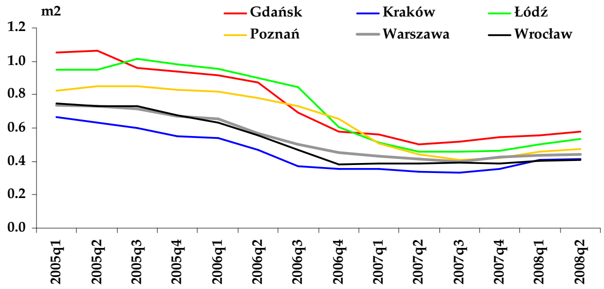
Home prices

In line with expectations, in 2008 Q2 the biggest real estate markets still displayed an imbalance between the demand for and supply of flats. Due to the still persisting high, in relation to income, prices of flats and the deteriorating availability of mortgage loans, the demand for flats stabilised – the increase in mortgage loans in the first half of 2008 was only a little (10%) higher than in the corresponding period of 2007 and mainly resulted from an increase in the average loan value and not from the rise in the number of granted loans.

The stabilisation of demand coincided with an increase in the supply of newly completed flats, which in the first half of 2008 grew in the six biggest cities by 56% in comparison with the corresponding period of 2007. There was also an increase in the supply of housing investments underway and building concessions. Moreover, the marked increase in flat supply was also prompted by the appearance on the market of new flats bought in previous periods for investment purposes.

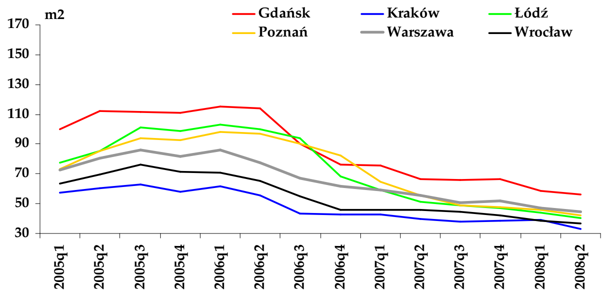
A significant increase in the supply of flats in the primary market and the simultaneous stabilisation of demand brought about a stabilization of asking prices, whereas sale prices were lowered indirectly, by means of various special offers for buyers. In contrast to the previous quarter, in 2008 Q2 this trend applied not just to the biggest cities, where flat prices increase

Figure 2.34:
Availability of flats (number of square metres of a flat that can be purchased for local average gross monthly salary in corporate sector at average price in primary and secondary housing market).



Source: NBP, GUS data.

Figure 2.35:
PLN credit availability of flats (number of square metres of a flat the purchase of which can be financed with a PLN-denominated housing loan, given the income equals local average salary adjusted for the social minimum)



Source: NBP, GUS data.

Table 2.6: Change in the average price of a flat in selected local markets.

	Dec 2004 y/y (per cent)	Dec 2005 y/y (per cent)	Dec 2006 y/y (per cent)	Dec 2007 y/y (per cent)	Sep 2007 q/q (per cent)	Dec 2007 q/q (per cent)	Mar 2007 q/q (per cent)	Jun 2008 q/q (per cent)	Jun 2008 Average price (PLN/m^2)
	Primary market								
Poland (total)	9.1	7.9	51.5	21.1	2.9	-1.8	1.4	0.3	7609
Most important housing markets in Poland†‡	8.9	12.6	56.1	19.7	2.5	-0.2	0.8	0.9	8294
Capitals of voivodships‡	9.1	15.0	45.2	22.7	3.5	-1.5	0.7	-0.6	7902
Small and medium towns‡	10.6	7.0	10.4	95.7	14.0	-4.3	-0.1	1.1	6435
Warsaw	12.8	12.9	54.3	13.1	4.1	-1.7	2.7	3.2	9100
Cracow	13.1	22.3	67.4	15.7	2.9	-3.2	-1.9	-5.3	7651
Wroclaw	4.8	17.9	101.2	8.1	-4.3	7.4	5.1	2.6	8090
Gdansk	12.0	15.7	63.7	22.6	1.0	-9.8	-0.5	-3.1	6613
Gdynia	6.6	8.5	46.0	48.5	6.0	5.8	-5.9	-8.7	7031
Poznan	8.9	3.0	18.9	119.2	12.2	1.6	-5.2	3.4	8681
Lodz	4.7	-5.3	67.4	37.8	-0.6	-1.0	4.8	-6.5	5950
	Secondary market								
Poland (total)	0.9	8.7	77.6	10.9	0.3	-2.7	-3.0	-4.0	5183
Most important housing markets in Poland‡†	7.2	-1.6	84.1	4.6	1.1	-8.5	2.6	1.0	7280
Capitals of voivodships‡	2.2	4.5	82.2	3.6	-0.3	-3.4	-1.4	-2.4	5742
Small and medium towns‡	7.4	9.6	49.4	47.7	1.0	0.4	1.8	-3.8	4632
Warsaw	6.9	15.1	55.6	14.5	4.9	-7.8	6.4	-3.7	9542
Cracow	12.5	31.3	62.4	8.4	1.9	-2.8	-10.6	4.0	7553
Wroclaw	16.6	13.8	74.8	11.1	3.8	-1.5	0.9	0.0	7265
Gdansk	6.5	18.9	82.5	24.2	-4.4	7.4	1.6	-1.6	7059
Gdynia	10.5	17.7	77.8	10.4	-6.5	3.3	4.8	0.5	7050
Poznan	14.8	4.5	49.4	36.7	1.7	-2.7	0.0	-2.1	6261
Lodz	4.9	3.9	74.5	47.3	2.2	3.5	-6.3	-4.6	4398

†Warsaw, Cracow, Wroclaw, Gdansk, Gdynia, Poznan, Lodz. The selection was based, among other things, on the number of transactions, the housing construction volume and the potential for development.
‡Average weighted with the number of offers in the sample (cities' weigts vary depending on the size of the sample).
Source: NBP estimates based on the data from the *PONT Info Nieruchomości* asking price database.

lasted longest, but also to smaller local markets. In the secondary market prices followed a somewhat falling trend. In comparison to the previous quarter price drops steepened particularly in the case of flats with worse locations and built in large-panel technology. The values of availability-of-flats and credit-availability-of-flats indices were stable in 2008 Q2 (as the outcome of the rise in flat prices, wages and interest rates), at a level similar to the one observed since the end of 2006 and the beginning of 2007 (Figures 2.34, 2.35, 2.36).

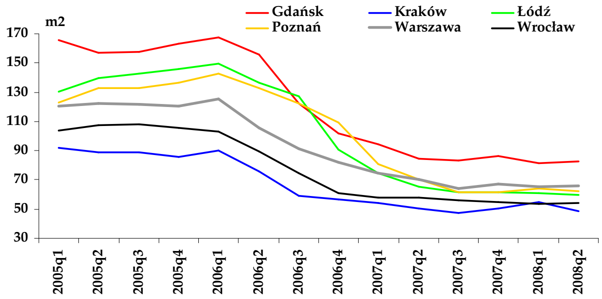
According to Sekocenbud data on the prices of buildings, the cost of building one square metre in multi-family housing constructions increased in 2008 Q2 by 23% y/y, mainly on account of the increase (by 44% y/y) in labour costs as well as indirect costs and profit (by 36% y/y each).

2.5.2 Exchange rate

In the period from 30 June to 23 October 2008 the nominal exchange rate of the zloty depreciated against the euro and the US dollar, the scale of depreciation against the dollar being significantly larger than against the euro. In this period a marked depreciation against the euro of the Hungarian forint and the Czech koruna also could be observed (Figure 2.37).

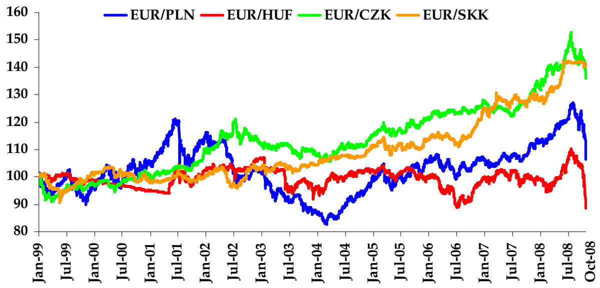
In the analysed period the shifts in the zloty exchange rate were determined by both global and domestic factors. In July 2008 the zloty exchange rate continued to appreciate, among others on the strength of the relatively good condition of the Polish economy and the interest-rate disparity between Poland and the euro area. In August the zloty started to depreciate in response to the situation in global currency markets (the rise in risk aversion and the sell-off of emerging-market currencies) and the deteriorating current account balance. It should be noted that the weakening against the euro of the zloty, as well as of other currencies of the region, took place in a period when the depreciating trend of the American dollar against the euro reversed. In mid-September the zloty appreciated temporarily. This could have resulted from investors' positive assessment of the investment climate in the regional currency markets, among others due to the joint statement by Poland's Prime Minister and the Monetary Policy Council concerning their cooperation towards Poland's compliance with the Maastricht criteria in 2011. At the end of September and in October the zloty weakened again as a result of growing risk aversion among foreign investors and the associated sell-off of emerging-market currencies.

Figure 2.36:
CHF credit availability of flats (number of square metres of a flat the purchase of which can be financed with a CHF-denominated housing loan, given the income equals local average salary adjusted for the social minimum).



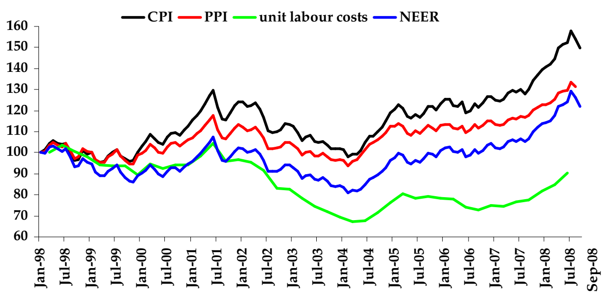
Source: NBP, GUS data.

Figure 2.37:
Nominal exchange rates of CEE-4 currencies against the euro (increase denotes appreciation).



Source: EcoWin data.

Figure 2.38:
Zloty real and nominal effective exchange rate (increase denotes appreciation).



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

Available data (covering the period ending in September 2008) indicate a continuing appreciation trend of the real exchange rate of the zloty, observed since the beginning of 2005 (Figure 2.38). In 2005-2007 this trend was accompanied by a significant reduction in exchange rate volatility. A faster pace of the zloty's nominal appreciation in 2008 was also reflected in its real appreciation.

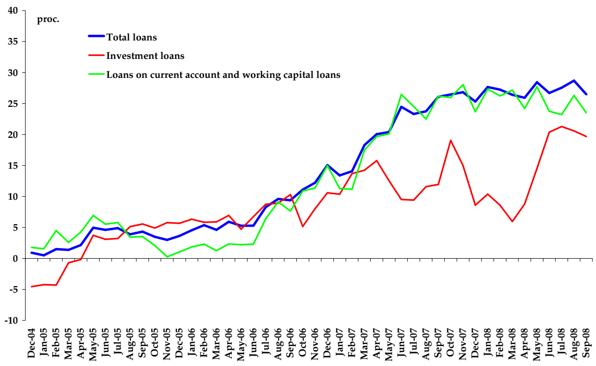
2.5.3 Credit and money[49]

Credit

Corporate lending growth amounted to 26.5% y/y in September 2008. Since April 2008 its growth has stabilized on a high level (Figure 2.39), despite worsening of the economic climate in the corporate sector.

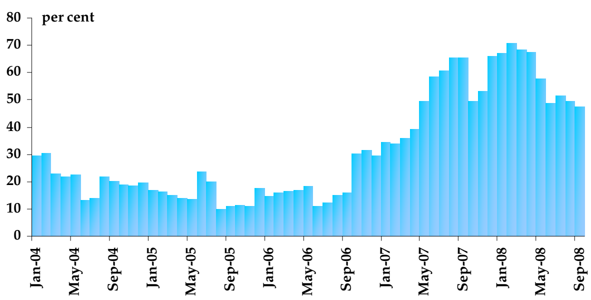
Since the release of the previous *Report* changes has been observed in the structure of long-term loans contracted by the corporate sector. Although the fastest growth was still observed in loans for the purchase of real estate, its rate diminished in relation to April 2008 to reach 47.5% y/y (compared to 67.4% y/y in April 2008). The analysed period brought about the rise in demand of the corporate sector for investment loans used for expanding capacity utilization. The annual growth of this category rose to 19.7% y/y in September 2008 (compared to 8.8% y/y in April 2008). A slight decline occurred in demand for short-term loans for financing operating activity. Their value rose by 23.5% y/y in September 2008, i.e. went down by 0.7 pps. in relation to April 2008. As follows from the economic climate survey conducted by the NBP[50], the surveyed enterprises indicated that their own funds would remain the main source of funding new investments in 2008 Q4 (43.5% of respondents provided

Figure 2.39:
Loans to enterprises (y/y).



Source: NBP data.

Figure 2.40:
Loans to enterprises for the purchase of real estate (y/y).



Source: NBP data.

[49]The annual percentage changes in loans, deposits and monetary aggregates presented in this chapter refer to variables adjusted for the impact of fluctuations in the zloty exchange rate against main foreign currencies. As regards household and corporate deposits the analysis covered the deposits included in M3 aggregate as well as those from outside M3.

[50]See: *The Condition of the Non-financial Enterprises in the Fourth Quarter of 2008*, NBP.

Table 2.7: Foreign loans of Polish enterprises (EUR).

Change y/y (per cent)	2006		2007				2008	
	q3	q4	q1	q2	q3	q4	q1	q2
non-trade loans	22.4	30.8	32.0	35.1	28.7	21.6	24.7	27.6
trade loans	18.4	17.0	23.2	22.6	24.2	20.8	21.4	17.6

Source: NBP data.

this answer, fewer by 1 pps than in the previous quarter). At the same time the enterprises' interest in investments financed with bank loans increased, their share rose by 1 pp in comparison to 2008 Q2, to reach 37%. Whereas increasing bank indebtedness was planned primarily by enterprises in a very good economic condition. Lowering the share of loan debt in the sources of funding was anticipated first of all by smaller economic entities, up to 49 employees.

Foreign debt remained an important source of corporate financing. At the end of 2008 Q2 this category increased by 25.5% y/y compared to 2007 Q2 (the annual increase in debt amounted to 24.7% y/y at the end of 2008 Q1[51]. Whilst non-trade loans rose to 27.6% y/y, and trade loans increased by 17.6% y/y (Table 2.7).

In view of the growing risk aversion observed in global financial market, the recent weeks saw banks tighten their corporate lending criteria – as loan margins rose considerably and collateral requirements strengthened. The main factor behind the tightening of the credit policy was uncertainty about the future economic outlook. According to NBP survey studies[52] banks expect a considerable tightening of their corporate loan policies in 2008 Q4.

Whereas the income situation of households remained positive, the growth of indebtedness of this sector has steadily declined over the recent months – it declined by 2.1 pps to reach 38.9% y/y as compared to April 2008 (Figure 2.41).

[51] Calculations based on data on corporate foreign debt denominated in the euro.

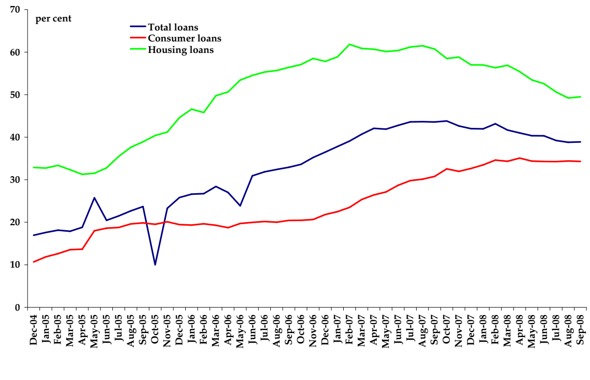
[52] See: *Senior Loan Officer Opinion Survey on Bank Lending Practices and Credit Conditions. Fourth Quarter 2008*, NBP.

Table 2.8: Average interest rates in commercial banks: new PLN denominated loans and deposits and selected foreign currency loans (major currencies).

per cent	2007				2008							
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Households												
Total deposits	4.0	4.0	4.1	4.2	4.3	4.7	4.9	5.1	5.1	5.2	5.2	5.4
Total loans	11.2	11.5	11.7	11.6	12.3	12.5	12.5	13.1	13.6	13.6	13.8	13.7
Consumption loans	14.1	14.2	14.3	13.7	14.6	14.7	14.7	15.1	15.3	15.3	15.5	15.5
Housing loans in PLN	6.4	6.6	6.7	6.9	7.0	7.2	7.4	7.7	7.8	8.0	8.3	8.4
Housing loans in CHF	4.6	4.5	4.5	4.6	4.6	4.6	4.6	4.8	4.7	4.63	4.68	4.71
Enterprises												
Total deposits	4.2	4.5	4.6	4.2	4.7	5.0	5.3	5.5	5.4	5.6	5.6	5.6
Total loans	6.6	6.4	6.7	7.2	6.9	7.3	7.3	7.8	7.7	8.3	8.1	8.2

Source: NBP data.

□ **Figure 2.41:**
Loans to households (y/y).



Source: NBP data.

Households used loans mainly to finance housing expenses. Even though the growth in housing loans contracted by 5.9 pps between April and September, it remained very high (49.5% y/y). Housing loans slowed down as banks introduced more stringent criteria of granting mortgage loans, including primarily tightening their crediting conditions as regards loans denominated in foreign currency further to *Recommendation S*. Moreover, some households may have postponed their decisions of house purchase awaiting further price declines in the real estate market. Even though credit conditions for foreign currency loans were tightened, loans denominated in Swiss franks offered interest lowered than the zloty ones. Therefore, the demand for foreign currency loans remained strong.

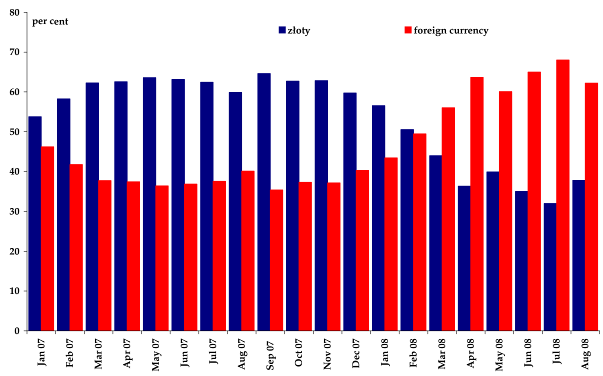
Data concerning the structure of new lending confirm that housing expenses are financed primarily with foreign currency loans (Figure 2.42). Significant growth is observed in the value of new CHF loans, which accounted for 62% of the total of new housing loans in August 2008. Interest rate on those loans, after a considerable rise in April, has remained relatively stable thereafter (under rather small fluctuations in LIBOR CHF rate observed over the analysed period).

In the context of the expected economic slowdown banks have recently tightened their criteria for granting housing loans. Loan margins, noninterest costs of loans, and the required own contribution rose. Furthermore, restrictions were imposed on granting loans denominated in foreign currencies and on a loan repayment term. Banks anticipate further tightening of loan policies in 2008 Q4, as the outlook for global economic growth deteriorates.

Since the release of the previous *Report* the growth rate of consumption loans has stabilized at about 35% *y/y*.The slowdown in this segment of the loan market reflected the deteriorating households' assessment of their future income situation stemming from the anticipated economic downturn. The slowdown in consumption loan growth also reflected a steady rise in banks' lending costs. In 2008 until August the average interest on new consumption loans in the zloty rose by 1.8 pps, to reach 15.5%.

In the months to come one should not expect any improvement in households' sentiment, which would translate into higher growth in consumption spending and stimulate a considerable rise in demand for loans. It is probable that lending activities will be restricted due to, among others, the tightening of credit policy in the consumption loan segment in 2008 Q4 announced by banks[53].

Figure 2.42:
Housing loans to households (m/m changes in PLN bn)



Source: NBP data

Deposits and monetary aggregates

The slowdown in economic growth coincided with the deterioration of key economic and financial indices of enterprises[54]. The above developments were due to rapidly growing cost of activities in the wake of wage rise and higher prices of commodities used in production. Even though debt servicing capacity of the enterprise sector decreased by 3 pps. in comparison to the previous quarter, it remained at the level high of 92%[55].

[53] See: *The Condition of the Non-financial Enterprises in the Fourth Quarter of 2008*, NBP.

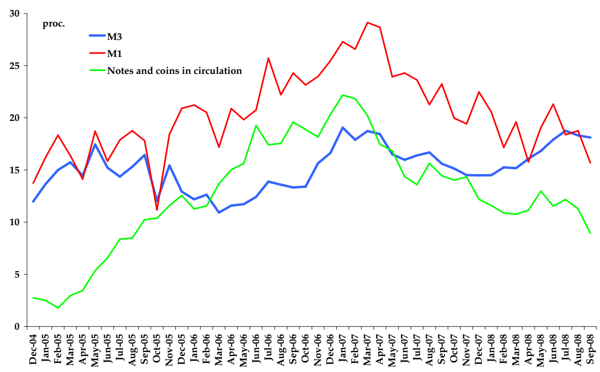
[54] cf.:*Financial results of non-financial enterprises in January–June 2008*, GUS and *The Condition of the Non-financial Enterprises in the Fourth Quarter of 2008*, NBP.

[55] See: *The Condition of the Non-financial Enterprises in the Fourth Quarter of 2008*, NBP.

In August 2008 nearly PLN 140 billion was deposited in this accounts of the corporate sector which show that economic entities have considerable potential for continuing to finance both their current activities and pro-developmental projects.

As in the period covered in the previous *Report*, further reallocation of households' financial assets was observed: the accrual of fund in bank accounts coincided with the decline in investing in investment funds and other non-bank forms of saving. In recent months the competition in the banks' term deposits strengthened, and that caused an increase in interest paid on them. Furthermore, in the wake of deteriorating situation in the financial markets and rising risk aversion, bank deposits became an attractive form of investment. Some part of funds was re-allocated to household bank accounts from investment funds. In the period May–August 2008 the difference between new investments and withdrawal of assets previously invested in investment funds units reached PLN 9 billion (in the first four months of 2008 the net balance of households' assets in investment funds was much higher and amounted to PLN 16.3 billion). In August 2008 the annual growth of household deposits equaled to 24.5% y/y, i.e. went up by 5.3 pps since April 2008. At the same time, there was further decline in the value of investment funds assets (by 20.3 pps, down to -34.8% y/y) and households' stock exchange investments (by 19.4 pps, down to -35% y/y).

□ **Figure 2.43:**
M1, M3, and notes and coin in circulation (y/y).



Source: NBP data.

The growth of M3 supply, following a period of significant rise in the first half of 2008, in the recent months stabilized at a level marginally above 18% y/y (Figure 2.43). The continued high growth of money supply was fuelled by considerable demand for loans on the part of households and enterprises. M3 was also strongly affected by the change in households' investment preferences, which was observed since 2007 Q4. This sector has deposited more and more of its funds in bank accounts included in M3 aggregate. Previously, some part of those funds was placed in the capital market, *i. a.*, via investment funds. Changes in the corporate deposits, the growth of which declined considerably, had a reverse effect on the growth of M3. Among components of monetary aggregates, the fastest growth occurred in less liquid components of M3 aggregate (particularly term deposits with the maturity up to 2 years), since April 2008 their annual growth has increased by 5 pps, to reach 21.4% y/y. At the same time, the growth of M1 aggregate edged down – by 0.1 pps, to stand at 15.7% y/y. Following a steady growth in the notes and coin in circulation (by 11–13% y/y), September brought about a decline in its rise to 8,9% y/y.

Monetary policy in June–October 2008

During the meeting in June 2008, the Monetary Policy Council increased the NBP interest rates by 0.25 percentage points. In July, August, September and October 2008 the Council decided to keep NBP rates unchanged: the reference rate 6.00%, the lombard rate 7.50%, the deposit rate 4.50% and the rediscount rate 6.25%.

What follows in the next part of the chapter are *Minutes of the MPC decision-making meetings* held in June, July, August and September 2008 together with the *Information from the meeting of the Monetary Policy Council* in October 2008.

Minutes of the MPC decision-making meeting held on 25 June 2008

During the meeting the Monetary Policy Council discussed the outlook for the future inflation developments in the context of the past, current and, primarily, anticipated economic situation.

The discussion at the meeting focused on: labour market situation, the outlook for economic growth and the exchange rate developments. The Council discussed the influence of these factors on the future inflation in Poland in view of the June inflation projection.

The Council paid a lot of attention to the outlook for CPI inflation in Poland in the coming quarters. Some members of the Council pointed out that according to the June inflation projection based on the NECMOD model, the forecast inflation would be gradually decreasing starting from 2009 Q1 and, in line with the central projection path, it would be approaching the inflation target faster than expected in the February projection. Those members emphasised that the increased inflation resulting from food and fuel price growth in the world markets is observed in many other countries, including the euro area. They assessed that - similarly to many other countries - the period of heightened inflation may prove longer than expected so far. At the same time, they pointed out that in May, despite a rise in regulated prices, inflation in Poland was still at the lowest level among the Central and Eastern European countries, which was, among others, due to the monetary policy conducted in Poland in the earlier period.

The Council members indicated that CPI inflation in May rose to 4.4% and that in the months to come it may be even higher, among others, due to the statistical base effect. They emphasised that at the beginning of 2009 a further increase in electricity prices triggered by their deregulation may be conducive to a rise in CPI inflation. Some Council members indicated that, in line with the June projection, core inflation net of food and energy prices would be gradually growing and in 2009-2010 it would run above

2.5%, which - in the opinion of those members - signals the build-up of demand pressure in the economy.

While discussing the outlook for economic growth in Poland, it was pointed out that in May the growth of industrial output was markedly lower than expected, which had been previously signalled by business sentiment indicators. In the opinion of some Council members, this may indicate a slowdown in the Polish economy in the nearest future. Those members argued that lower activity in the world economy, particularly in the euro area, together with the recently observed appreciation of zloty exchange rate would both contribute to the slowdown of the economic growth in Poland. They emphasised that in view of the June projection based on the NECMOD model, the forecast GDP growth in the second half of 2008 would be lower than the growth of potential GDP, which would be conducive to easing the inflationary pressure. Moreover, they argued that the composition of GDP in 2008 Q1 was favourable in terms of inflation outlook, as private consumption growth was lower and investment growth higher than GDP growth. Other members of the Council, in turn, pointed out that GDP growth in 2008 Q1 was higher than expected and most probably higher than potential GDP growth. While assessing the outlook for economic growth, those members highlighted that the data on industrial output in May were difficult to interpret due to the different calendar of public holidays than in 2007 and that the retail sales growth in May was relatively high. Those members believed that the slowdown in economic activity in Poland would probably not be significant. They argued that in the time to come the consumption growth would not mark a significant decrease, among others, due to the continuously high growth of wages and loans to households and the rising share of consumer loans in total loans granted to households.

While addressing labour market developments, the continuation of a strong wage growth and unfavourable relation between wage and labour productivity growth were pointed out. It was emphasised that in May unit labour costs in industry increased significantly due to the drop in the industrial output growth and a high wage growth. It was underlined that in line with June projection based on the NECMOD model, the forecast wage growth in the economy throughout the projection horizon would be faster than labour productivity growth and thus unit labour costs would continue to rise. Some Council members pointed out that 2008 Q1 brought an increase in the share of wage costs in total costs of enterprises, which was conducive to raising the inflationary pressure. Those members assessed that the heightened pressure on wage growth in some public sector enterprises may be leading to wage increases in the coming period and, consequently, also to rising prices of products manufactured by those enterprises. They also argued that the heightened current inflation was one of the factors contributing to increasing the wage pressure in the public finance sector. In the opinion of some Council members, this raised the risk of second-round effects in the time to come.

Moreover, some Council members argued that high wage growth and the increased CPI inflation, due to the mechanism of old-age and disability pension indexation, would increase the expenditure of the state budget in 2009 and in subsequent years, which would be conducive to deepening the deficit of the public finance sector. In this context it was pointed out that the expected slowdown of economic growth and the ensuing decline in the growth of the central budget tax revenue would also be contributing to increasing the budget deficit.

Other Council members, however, assessed that the high growth of wages was to a large extent connected with the ongoing convergence of the Polish economy with richer EU member states. They pointed out that wage costs still made a relatively low contribution to the total costs of enterprises, and emphasised that in view of business tendency surveys the percentage of enterprises which reported rising costs of wages as an important factor behind the rising prices of their products remained low. In the assessment of those Council members, the risk of second-round effects was currently far lower than in the 1970s. They also argued that increasing employment under tight labour market conditions, at least in the short term, results in lowering the average labour productivity due to: declining capital-to-labour ratio, employing people whose qualifications are lower than those of the already employed and a high share of the services sector (where productivity growth is relatively low) in the employment growth, all of which had a joint effect of raising unit labour costs. They assessed that the expected activity slowdown in the Polish economy should, with some time lag, lead to curbing the wage growth. Moreover, some Council members believed that the demands of substantial pay rises in the public finance sector would not be satisfied in the nearest future.

While analysing the exchange rate developments and their impact on the economy, a significant appreciation of the zloty in the recent period was underlined. It was emphasised that the exchange rate appreciation tightened Poland's monetary conditions and was conducive to easing the inflationary pressure, as the prices of imported goods denominated in zloty were falling. In this context it was pointed out that the current zloty exchange rate was stronger than in the June projection based on the NECMOD model and thus future inflation might prove lower than it followed from the projection. It was argued at the same time that the currently observed zloty exchange rate appreciation would result, with some time lag, in a growing current account deficit. Some Council members believed that the rising deficit should be curbing inflationary pressure by stepping up the growth of the demand for imported goods at the expense of the demand for domestic goods. On the other hand, some Council members assessed that the expected slowdown in economic growth in Poland should be conducive to a reduction of the current account deficit.

Some Council members pointed out that the zloty exchange rate appreciation and rising unit labour costs were conducive to worsening financial results of exporters. They argued that this may lead to a decrease in the scale of investments undertaken by exporting enterprises and, consequently, a decrease in potential GDP growth. In the opinion of those members, in view of weakening activity in the economies of Poland's most important trade partners and the ensuing decline in the foreign demand for Polish products, enterprises will react to the worsening of their financial results by raising the prices of products destined for the domestic market, which in turn will be adding to the domestic inflationary pressure.

While addressing the developments in the environment of the Polish economy, the uncertainty concerning the economic situation in the United States, the euro area and the United Kingdom was pointed out. It was stressed that the decrease in indicators of economic climate in Germany was signalling a deteriorating situation in this economy. It was assessed that the slowdown of euro-area economic growth may be delayed in time but would certainly come. It was argued that the cycle of monetary policy easing in the United States most probably came to an end, while in the euro area signals emerged of a monetary policy tightening in the near future. It was emphasised that in case monetary policy was tightened in the euro area or the United States, an increase of the NBP interest rates would not result in a further widening of the interest rate differential between Poland and those economies. Some Council members assessed that the global level of interest rates was currently too low, which meant that in order to bring inflation down it was necessary to tighten monetary policy both in the developed and developing economies. In this context attention was drawn to the dilemmas of central banks facing the risk of stagflation, i.e. a situation when a decline in economic activity is accompanied by heightened inflation. The appropriate monetary policy response to a rise in inflation caused by factors independent of the domestic monetary policy was also discussed.

The members of the Council emphasised the lack of structural reforms, including the public finance reform, which are of great importance for shaping the long-term outlook for economic growth and inflation. In the opinion of the Council members, abandoning the public finance reform may lead to a non-optimal policy mix. It was also emphasised that without a clearly defined path of harmonising the rates of indirect taxes with the EU requirements and without a detailed liberalisation programme of the energy market, the assessment of future price growth path, particularly as regards administered prices, is problematic.

The Council also discussed an optimal communication policy of the central bank's decision-making body with the environment with a view to influencing the financial markets expectations as to the future monetary policy. On this occasion the great importance of the central bank's communication was stressed for the formation of inflation expectations in the situation when, due to strong and persistent price shocks in the commodity markets, inflation may remain at a heightened level for a longer period. In this context the Council emphasised that the lack of any precise declaration on the part of the government about the planned date of Poland's accession to the euro area may in the current situation become a factor impeding the pursuit of the optimal monetary policy.

While considering the interest rate decision, the Council assessed that the probability of inflation remaining above the inflation target in the monetary policy transmission horizon is higher than the probability of inflation running below the target. This assessment was supported by the inflation outlook presented in the June projection and also by the latest data on inflation and high wage growth outpacing the labour productivity growth. Such an assessment justified raising interest rates at the current meeting. The Council also discussed the future path of NBP interest rates. In the opinion of some Council members bringing inflation down to the target in the medium term may require a further monetary policy tightening in the coming months. Other Council members, however, argued that a further monetary policy tightening might result in an excessive appreciation of zloty exchange rate. They pointed out that the increased current inflation was to a large extent the effect of factors beyond the influence of the domestic monetary policy and argued that the expected lowering of the economic growth should be conducive to easing the inflationary pressure.

A motion to raise the key NBP interest rates by 25 basis points was put forward at the meeting and passed. The Council raised the interest rates to the following levels: the reference rate to 6.00%, the lombard rate to 7.50%, the deposit rate to 4.50% and the rediscount rate to 6.25%.

Minutes of the MPC decision-making meeting held on 30 July 2008

During the meeting the Monetary Policy Council discussed the outlook for the future inflation developments in the context of the past, current and, primarily, anticipated economic situation.

The discussion at the meeting focused on exchange rate developments and their impact on economic growth, external balance and inflation, the outlook for economic growth in Poland, the labour market situation and the assessment of the risk of second-round effects. The Council discussed the influence of these factors on future inflation in Poland.

The Council paid close attention to the fact that as a result of the strengthening of the zloty so far, the present level of the exchange rate considerably outstripped that accounted for in the June inflation projection, which is likely to bring inflation down in the future. At the same time, some members of the Council pointed out that the recently observed appreciation of the zloty might have outpaced the appreciation of the equilibrium exchange rate. Some members of the Council argued that apart from the continuing interest rates differential between Poland and the euro area and the United States, expectations of further interest rate hikes in Poland, stimulating the inflow of short-term capital, might also have contributed to zloty strengthening. Given a low risk premium and favourable fundamentals of the Polish economy, subsequent interest rate hikes may, in the opinion of those members of the Council, bring further strong appreciation of the zloty. Other members of the Council argued that the anticipated economic slowdown in Poland might contribute to zloty depreciation. They also reasoned that at present it is difficult to assess whether factors which had led to zloty appreciation were of permanent nature. Those members pointed out that exchange rate developments are, to a great extent, affected by non-fundamental and external factors whose impact on the exchange rate is hardly predicable. Therefore, in their opinion, a depreciation of the zloty exchange rate cannot be ruled out.

In the discussion about the consequences of zloty appreciation it was pointed out that it contributed to curbing inflation by decreasing imported inflation, including by easing the impact of oil price growth in the world markets on domestic prices. Some members of the Council pointed out that the appreciation of the zloty exchange rate surpassing the appreciation of the equilibrium exchange rate might, with a time lag, negatively affect economic activity in Poland by decreasing the competitiveness of Polish exports, which would be conducive to increasing the negative contribution of net exports to GDP growth and might curb corporate investment activity. In the opinion of those members of the Council, a worsening outlook for Polish exports is signalled by the findings of the NBP's economic condition survey indicating a marked drop in 2008 Q2 in margins of enterprises manufacturing export products, a fall in the number of export contracts and an appreciation of the actual exchange rate outstripping the appreciation of the average exchange rate ensuring exports profitability declared by enterprises. Attention was also paid to GUS data on foreign trade deficit in 2007 which after revision proved higher than previously estimated, which was mainly connected with stronger import growth. In the opinion of some members of the Council this means that zloty appreciation may have a stronger impact on Polish foreign trade than previously estimated. Those members pointed out that the zloty appreciation will in subsequent quarters further deepen the foreign trade deficit which would also be influenced by the economic slowdown abroad.

On the other hand, it was pointed out that according to preliminary national accounts data for 2008 Q1 export growth was maintained at a level close to the import growth despite the appreciation of the zloty exchange rate. It was also indicated that import growth might be connected not only with exchange rate appreciation but also with a strong growth of domestic demand. It was argued that wage growth outpacing labour productivity growth was also conducive to deteriorating competitiveness of Polish manufacturers.

The Council paid considerable attention to the role of the exchange rate in the conduct of monetary policy. Some members of the Council argued that in a small open economy, such as the Polish economy, changes in the exchange rate, in particular in relation to the equilibrium exchange rate, contribute significantly to a tightening of monetary conditions and should be taken into account in the decisions about interest rates. They pointed out that although the exchange rate appreciation is an effective channel of curbing inflation, excessive currency strengthening poses a risk of too severe an economic slowdown and of a worsening external balance. Other members argued that the recent strong appreciation of the zloty exchange rate could be temporary and therefore changes in the exchange rate should be treated as a neutral factor while taking decisions on interest rate. Some members of the Council pointed out that due to the specific character of exchange rate markets, the exchange rate can persistently deviate from the equilibrium exchange rate.

While discussing the outlook for economic growth, some members of the Council indicated that June data on lower than expected growth in industrial output, falling growth in retail sales and deteriorating economic conditions indicators in June and July together with information on lower capacity utilization in 2008 Q3 pointed to a gradual slowdown of the economic growth in Poland. Those members pointed out that limited investment and consequently lower GDP growth might also result from the likely deterioration of profit ratios of enterprises. Moreover, in the judgment of those members of the Council the second half of 2008 might be expected to see GDP growth below potential output growth which should be conducive to lowering the inflationary pressure. Yet, other members of the Council pointed out that the scale of the anticipated slowdown was limited and might not be sufficient to bring inflation down to the target over the monetary policy horizon. Moreover, despite a certain decline, credit aggregates continued to display a high growth rate which, in the opinion of those members, supported the inflationary pressure.

In the discussion about the labour market situation, it was reasoned that high wage growth and growing unit labour costs continued to be major risk factors to inflation in the medium term. It was indicated that the economic slowdown had not curbed wage pressures yet. Some members of the Council pointed out that, as suggested by the findings of the NBP's business tendency survey, the outlook for employment and wage growth deteriorated in 2008 Q3 for the second consecutive time, and employment growth in enterprises was on a downward path. In the opinion of those members, 2008 H2 might see a gradual softening of the labour market which would be driven by the expected growth in economic activity and a lower scale of Poles' economic migration abroad. Some members of the Council also pointed out that an economic slowdown and related decreasing labour demand as well as worsening financial condition of enterprises should contribute to lowering the wage growth.

It was argued during the discussion that heightened current inflation together with adaptive inflation expectations posed a risk of inflation remaining at a relatively high level. It was also emphasized that the recent heated public debate about the price growth contributed to boosting inflation expectations. Yet, in the opinion of some members of the Council the impact of inflation expectations on wage growth should decrease together with weakening economic conditions. In the opinion of those members the recently observed strong appreciation of the zloty exchange rate bringing down inflation expectations constitutes an additional factor reducing the risk of second-round effects.

At the meeting the current inflation developments were also discussed. It was pointed out that despite the increase in the consumer price index recorded in June (being primarily the result of a higher growth in the prices of food, fuels and certain services), inflation in Poland, similarly as in Slovakia, was the lowest in the region. It was also emphasized that the 12-month moving average HICP inflation taken into account while assessing the compliance with the Maastricht price stability criterion, despite its increase, still had not exceeded the reference value, which was due to fact that the currently observed rise in inflation is global in character.

At the same time, it was pointed out that June had seen an increase in all core inflation measures which, in the opinion of some Council members, corroborated growing inflationary pressure. While analyzing core inflation measures net of food and energy prices, it was emphasized that since mid-2006 this indicator had been on a steady rising path, and the June inflation projection pointed to its further growth and persistently high level in 2009. It was also noted that the past few years had seen core inflation net of food and energy prices running considerably below CPI inflation which, in case this relation continued, might mean the CPI inflation will remain above the inflation target also in 2009 or even beyond. On the other hand, some members of the Council pointed out that the expected decline in economic growth, the recent strengthening of the exchange rate and the previous interest rate hikes could bring inflation down close to the inflation target in the monetary policy horizon, albeit the expected rise in administered prices would be a factor supporting increased inflation.

While discussing the changes in the external environment of the Polish economy, some members of the Council emphasized persisting uncertainty about the duration of the slowdown in the world economy and its impact on economic growth in Poland. The data on the United States suggest, in the judgment of those members, that the fiscal impulse implemented in the United States has been largely offset by rising fuel prices and will drive only a short-lived acceleration of economic growth. According to the latest forecasts, the second half of 2008 should bring further slowdown in the US economy which might continue also in 2009. Moreover, those members pointed to a deteriorating growth outlook in the European economy, particularly in Germany which so far had reported relatively high economic growth.

Some members of the Council pointed out that considering the sources of the currently elevated inflation, central banks pursuing inflation targeting strategy did not aim at bringing inflation down to the target fast as this might result in an excessive decline in economic growth. In this context, it was pointed out that in Poland the measures which could lower the inflationary pressure and consequently reduce the costs of bringing inflation down to the target were structural reforms, including the reform of public finances. The reform of public finances should limit the pro-cyclicality of fiscal policy.

Potential further increases in interest rates were discussed at the meeting. Some members of the Council emphasized that the risk of inflation expectations being maintained at a heightened level and a strong rise in wages and unit labour costs combined with the anticipated only slight slowdown in economic activity weighted in favour of increasing interest rates at the July meeting. It was argued that the outlook for inflationary processes was largely affected by the developments in real interest rates which, despite the previous interest rate increases, continued to fall. Yet, the majority of the Council members judged that the strong appreciation of the zloty exchange rate, the expected softening of the labour market and the anticipated slowdown in economic growth coupled with the already implemented interest rate hikes would constitute factors bringing inflation down to the target in the medium term, yet, a more comprehensive assessment of the risk of inflation continuing at a heightened level would be possible after analysing the data to be released in the coming months. Moreover, those members indicated that too large a scale of interest rate hikes might favour excessive appreciation which, coupled with a deteriorating outlook for economic growth abroad would constitute a risk of a significant weakening of exports and pose a risk of a considerable economic slowdown in Poland and further rising of external imbalance. These arguments, in the opinion of the majority of the Council members, justified keeping interest rates unchanged at the present meeting.

A motion to raise the key NBP interest rates by 25 basis points was put forward at the meeting. The motion did not pass. The Council kept the interest rates unchanged: the reference rate at 6.00%, the lombard rate at 7.50%, the deposit rate at 4.50% and the rediscount rate at 6.25%.

Minutes of the MPC decision-making meeting held on 27 August 2008

During the meeting the Monetary Policy Council discussed the outlook for future inflation developments in the context of the past, current and, primarily, anticipated economic situation.

The discussion at the meeting focused on exchange rate developments and their impact on economic growth, external balance and inflation, the outlook for economic growth in Poland and abroad and the situation in the labour market. The Council discussed the influence of these factors on future inflation in Poland.

While analysing the impact of exchange rate developments on the outlook for inflation and economic growth in Poland, attention was paid to the depreciation of the exchange rate of the zloty and other currencies of the region, both against the US dollar and the euro, which was observed in August 2008. It was indicated that at present it was difficult to assess whether the observed zloty depreciation would be of permanent nature. Yet, some members of the Council pointed to the risk of zloty depreciation in the context of the anticipated economic slowdown in Poland. Moreover, they indicated that changes in the exchange rate of the euro against the US dollar might be important for future zloty exchange rate developments. Those members emphasised that in the case of further depreciation of the zloty, the exchange rate would cease to be the factor curbing inflation in Poland. At the same time it was pointed out that the slowdown in the global economy, including in the EU economies, might result in lower demand for Polish exports which would contribute to the depreciation of the equilibrium exchange rate. Other members of the Council also pointed out that despite the recently observed depreciation, the exchange rate of the zloty continued to be considerably stronger than in the previous quarters. They argued that although exchange rate appreciation constituted a factor curbing imported inflation, further interest rate hikes might lead to a renewed appreciation of the zloty exchange rate, which could negatively affect the competitiveness of Polish manufacturers and, as a result, economic activity in Poland.

While analysing the developments of the zloty exchange rate, the Council discussed the impact of the appreciation on the external balance of the Polish economy. It was pointed out that according to preliminary data in the first half of 2008 the foreign trade deficit had deepened. Attention was also paid to the fact that preliminary data suggested changes in the structure of financing of the current account deficit of the balance of payments, reflected in a decline of foreign direct investment and a growth in portfolio investment in 2008 Q2. Some members of the Council argued that the rise in the foreign trade deficit had probably been driven by a strong appreciation of the zloty exchange rate leading to deteriorating competitiveness of Polish producers both on the domestic market as well as on foreign markets. Other members of the Council pointed out, however, that import growth outstripping export growth could have been connected with high growth in domestic demand, hence, considering the expected economic slowdown in Poland, import growth should be expected to decline. Besides, those members reasoned that in the longer term wage growth outpacing labour productivity growth might be a more important factor leading to deteriorating competitiveness of Polish exports.

While addressing changes in the external environment of the Polish economy, attention was paid to the persisting, despite relatively high GDP growth in 2008 Q2, unfavourable outlook for economic growth in the United States, as well as deeper than expected deterioration in economic conditions in certain EU economies. Particular attention was paid to strong economic slowdown, deteriorating economic conditions indicators and further worsening of consumer sentiment in economies which constitute the main markets for Polish exports - Germany, France, Italy and Great Britain. The worsening outlook for exports in the euro area was also pointed to, particularly for German exports, which, due to the strong trade links between Polish and German exporters, might translate into a decline in Polish exports.

During the discussion, attention was paid to a considerable drop in fuel prices in the global market observed since early July 2008, noting, at the same time, that at present it was difficult to assess whether this phenomenon was of permanent nature. Some members of the Council argued that due to the anticipated further deterioration in business conditions in the developed countries, the risk of further strong growth of fuel prices in the global market had declined. Moreover, those members indicated that slower growth in global demand might also translate into curbing the rising prices of other commodities which would be conducive to reducing global inflation.

While discussing the outlook for economic growth in Poland, it was pointed to the signs of economic slowdown i.e. lower that expected growth in industrial output and further decline in manufacturing orders in July 2008, deteriorating financial results of enterprises and growing share of semi-finished goods and work-in-progress, goods and finished products in the structure of inventories in the first half of 2008 as well as a deterioration of the majority of economic conditions indicators. Some members of the Council pointed out that a further decline in GDP growth might by triggered by limited investment, which could be driven by deteriorating profit ratios of enterprises. Moreover, they argued that further weakening in business conditions in the EU might - through falling demand for Polish exports - lead to a deeper-than-currently-anticipated decline in economic growth in Poland. Other members of the Council pointed out, however, that GDP growth in 2008 Q2 had probably been higher than anticipated in the June projection, which suggested that the scale of subsequent decline in economic growth might be smaller that projected. They also indicated that drawing conclusions about changes in economic activity in Poland based on the monthly data on industrial output was subject to uncertainty, especially taking into account the growing share of services in the structure of the Polish economy.

While analysing the situation in the labour market it was pointed to persistently high growth in wages and unit labour costs running well above the level anticipated in the June projection. Some members of the Council argued that the relation between wage growth and labour productivity growth might deteriorate in the near future due to the expected economic slowdown and the resulting decline in labour productivity growth. On the other hand, other members of the Council reasoned that the economic slowdown would contribute to lower labour demand, and consequently, with a certain time lag, would curb wage pressure, whereas the persistently relatively high investment growth would be conducive to growth in labour productivity. They also paid attention to the diminishing importance of wage pressure as a growth barrier indicated by enterprises in the NBP's business condition surveys and gradually declining employment growth amidst continued growth in economic activity. Moreover, those members argued that tensions in the labour market would be eased as a result of declining migration outflows, due to, among other things, weakening in business conditions in Great Britain and other EU countries. It was also pointed out that high wage growth was partly related to the process of convergence of the Polish economy with richer countries of the EU.

When assessing the impact of the persistently high wage growth on inflationary processes, some members of the Council argued that amidst continuing fast growth in demand, entrepreneurs might tend to pass on the increase in labour costs to prices. Moreover, attention was paid to the fact that growing consumer demand driven by rising income of households was conducive to growing inflationary pressure as indicated by the rise in core inflation, including growth in the prices of services, which had been observed for several quarters. Those members also pointed out that the anticipated rise in CPI in August 2008 created a risk of a rise in inflation expectations. On the other hand, some members of the Council indicated that the previous month saw inflationary expectations stabilising and that an economic slowdown in Poland would limit the risk of second-round effects. They also pointed out that the impact of a rapid wage growth on inflation might be mitigated by the decline in the share of labour costs in the total costs of enterprises, observed in the previous years.

Some members of the Council pointed out that factors contributing to persisting demand pressure might include, apart from rapid wage growth, still high although declining credit growth, including high growth in consumer loans. Other members of the Council argued, however, that as a result of the declining value of financial assets of households and the growth in new loans, asset encumbrance had been growing which should limit households' future borrowing capacity. They also emphasised that an economic slowdown might have the same effect. At the same time it was pointed out that the possible growth in interest-rate differentials might have a limited impact on the growth in credit aggregates due to the possibility of zloty-denominated loans being substituted by foreign-currency-denominated loans. On the other hand, it was argued that an interest rate rise should be conducive to a decline in credit growth, among other things, through influencing the expectations of future income of households.

The meeting also addressed current inflation developments. It was pointed out that in July core inflation net of food and energy prices continued to run at the level recorded in June 2008, and the acceleration of CPI inflation as compared with the previous month had been driven by the increasing growth of food, energy and fuel prices. The attention was also paid to the fact that inflation in Poland, similarly as in Slovakia, continued to be the lowest in the region. It was also emphasised that the 12-month moving average HICP inflation taken into account while assessing the compliance with the Maastricht price stability criterion, despite its increase, still had not exceeded the reference value.

While discussing the decision on interest rates, some members of the Council pointed out that the scale of economic slowdown might not be sufficient to bring inflation down to the target over the monetary policy horizon. Moreover, curbed appreciation of the zloty coupled with the risk of exchange rate depreciation connected with the expected slowdown in the Polish economy, falling real interest rates - despite the already implemented interest rate increases - and the risk of inflation expectations continuing at a heightened level justified, in their opinion, raising interest rates at the present meeting. In the judgement of those members, delaying subsequent interest rate increases might boost the costs of bringing inflation down to the target. In the opinion of other members of the Council, considerable economic slowdown abroad, signs of economic slowdown in Poland, the already implemented interest rate increases and the expected decline in wage pressure would constitute factors bringing inflation down to the target in the medium term. Those members also pointed out that interest rate rise could be conducive to the appreciation of the zloty exchange rate which would pose a risk of a deeper economic slowdown in Poland and further rising of external imbalance. Moreover, they argued that a more comprehensive assessment of the risk of inflation continuing at a heightened level in the medium term would be possible after analysing the data to be released in the coming months.

A motion to raise the key NBP interest rates by 25 basis points was put forward at the meeting. The motion did not pass. The Council kept the interest rates unchanged: the reference rate at 6.00%, the lombard rate at 7.50%, the deposit rate at 4.50% and the rediscount rate at 6.25%.

Minutes of the MPC decision-making meeting held on 24 September 2008

During the meeting the Monetary Policy Council discussed the outlook for the future inflation developments in the context of the past, current and, above all, anticipated economic situation.

The discussion at the meeting focused on: the outlook for inflation and economic growth in Poland and in the world economy, situation in the labour market in Poland and the prospects of Poland's entry to the euro area.

When analysing the economic growth developments in Poland, it was pointed out that GDP growth in 2008 Q2 had been much higher and in 2008 Q3 would probably be also higher than expected in the June projection. Some Council members, however, pointed to the rise in contribution of gross fixed capital formation and a drop in contribution of total consumption to GDP growth in 2008 Q2, which might indicate easing the upward pressure on consumer prices. These members argued as well that the drop in industrial output, bigger than expected reduction of growth in construction and assembly output and marked deterioration of economic climate indices in the corporate sector in August 2008 signaled significant weakening of economic activity in Poland in the coming quarters. They also pointed out that a lowering of the demand for Polish exports, due to the significant deterioration of economic growth in countries which are Poland's main trading partners, would be conducive to the decline in GDP growth. The similar impact would be exerted by the appreciation of the zloty observed in the first half of the year, which reduces the competitiveness of Polish producers in foreign markets and in the domestic market, and the weakening of consumption demand related to the probable deterioration of situation in the labour market.

While discussing the situation in the external environment of the Polish economy, further marked deterioration of outlook for economic growth in the United States and the euro area was noted. The fall in industrial output in these economies as well as further deterioration of economic climate indices were underscored. Some members of the Council pointed out that the crisis in the housing market and financial markets would contribute to a significant drop in consumer demand in the US economy. These members also emphasized that the support granted to financial institutions by the government of the United States would reduce the possibility of further demand stimulation by means of fiscal policy. Demand might be further reduced by regulations tightening criteria for granting loans, which were likely to be introduced in the United States. It was pointed out that the intensification of turmoil in financial markets in the United States would probably translate to the situation in the banking sector of some of the EU economies and would be an additional factor dampening economic activity in these countries.

With respect to the situation in the labour market in Poland, attention was drawn to the continuous decline in employment growth since the beginning of the year and the decline in wage growth in the corporate sector in August 2008. Some members of the Council argued that it might indicate that declining economic activity in Poland would be accompanied by relatively fast easing of wage pressure. These members also pointed out that the growth in labour supply in Poland related to possible increased returns of Poles from EU countries in which the current and anticipated economic situation had significantly deteriorated might also be conducive to the decline in wage growth. Other members of the Council, however, emphasized that wage growth remained strong and might remain at a heightened level due to the lag between the weakening of economic activity and deterioration of the situation in the labour market. In their assessment, that effect, coupled with decreasing GDP growth, might lead in the nearest future to further drop in labour productivity and consequently to the increase in unit labour costs. Other members of the Council also pointed out that the decline in wage growth might be reduced by the process of convergence of the Polish economy to more developed EU economies where the share of compensations in GDP is much higher than in Poland. Furthermore, some members emphasized that a fast rise in unit labour costs might in the longer horizon significantly reduce the competitiveness of Polish enterprises, including exporters.

The development of monetary aggregates in Poland was also discussed during the meeting. Some members of the Council drew attention to a still very strong growth in consumer credits, emphasizing that it would probably support continuously high demand pressure. At the same time, these members pointed out that the high growth of broad money supply observed for the last several years might indicate the persistence of inflationary pressure in the economy. Other members of the Council, however, noted that credit growth might be reduced by possible tightening of criteria for granting loans, as well as by the decrease in creditworthiness of households related to their deteriorating financial situation as a result of a significant drop in value of their assets.

When analysing inflation developments in Poland, it was noted that the harmonized index of consumer pirces (HICP) in Poland in August 2008 was still the lowest among the countries of the region and also lower than in the majority of the countries of the euro area. Attention was also drawn to the lower than expected CPI inflation in August 2008 and to the decline in food and oil prices in global markets, which should be conducive to lowering inflation over the following few months. Some members of the Council pointed, however, to a significant rise in core inflation net of food and energy prices in August 2008. At the same time, it was emphasised that this measure of core inflation had been lower till July 2008 due to the promotional Internet price reduction last year, and its level observed since August 2008 better reflects price processes in the economy. Some members of the Council drew attention to the risk of core inflation remaining in the coming quarters above the NBP inflation target and the CPI inflation above the upper limit for deviations from the target due to possible increases of administered prices. Other members of the Council, however, pointed out that in the light of the probable resignation from the earlier announced deregulation of energy prices for households since the beginning of 2009, the energy price growth might be lower than earlier expected, and therefore the risk of inflation remaining at a hightened level might decline.

An important factor taken into account during the discussion was the result of the meeting between the Prime Minister and representatives of the government with the Monetary Policy Council held on 16 September 2008 concerning the perspectives of Poland's accession to the euro area. At the Council's meeting some members of the Council pointed out that complying with the Maastricht inflation criterion in 2011 may require a more restrictive monetary policy than in a situation when Poland were to meet the convergence criteria in a later period. Some of the members observed that the need to meet this criterion in 2011 and by implication to stabilise inflation at an adequate level in 2010-2011 justified the tightening of monetary policy at the current meeting. According to other members of the Council the slowdown in the Polish economy would contribute to bringing inflation down to a level enabling meeting the Maastricht inflation criterion. Moreover, some members of the Council noted that due to the uncertainty with respect to obtaining the support of the required parliamentary majority for changes in the constitution necessary from the point of view of introducing euro in Poland, there was no need to consider the possible adjustment of the monetary policy to the necessity of meeting the inflation criterion at the current meeting.

The impact of the prospects of Poland's entry to the euro area on the zloty exchange rate was also discussed during the meeting. Some members of the Council pointed out that Poland's preparations towards joining the euro area might be accompanied by the appreciation of the nominal zloty exchange rate, which would be conducive to reducing inflation. Other members of the Council observed, however, that there was a risk of the zloty depreciation if the political consultations mentioned in the joint press release of the Prime Minister and the Monetary Policy Council, did not succeed, particularly in the context of increased global risk aversion due to the turmoil in financial markets.

While discussing the decision on interest rates, some members of the Council pointed out that the scale of economic slowdown might be insufficient to reduce inflation to the target over the monetary policy horizon. Moreover, according to these members of the Council, the risk of inflation remaining above the upper limit for deviations from the target in the longer run, the risk of the exchange rate depreciation related to the turmoil in global financial markets and the possibility of revising the assessments concerning the perspective of Poland's entry to the euro area, the risk of inflation expectations remaining at an elevated level and the decreasing - despite the already implemented interest rate increases - real interest rates justified rising interest rates at the current meeting. In the assessment of these members of the Council, such decision was warranted also by perspectives of Poland's entry to the euro area outlined after the meeting with the Prime Minister and by the ensuing necessity of meeting the Maastricht inflation criterion. Furthermore, these members also pointed out that delaying interest rate increases might raise the costs of bringing inflation down to the target. According to other members of the Council, significant weakening of the economic activity in the external environment of the Polish economy, signs of economic slowdown in Poland, the already implemented interest rate increases, as well as the fall in the prices of agricultural and energy commodities in global markets would support the return of inflation to the target in medium term. These members also indicated that interest rate increases might be conducive to excessive curbing of domestic demand and - by supporting the renewed appreciation of the zloty exchange rate - to decreasing the price competitiveness of exports, and as a consequence might create the risk of a significant weakening of economic activity in Poland. According to these members of the Council, the uncertainty related to turmoil in global financial markets and the lack of political consensus regarding the date of adopting the euro warranted abstaining from the possible adjustment of the monetary policy to the necessity of meeting the inflation criterion. Moreover, they argued that a more comprehensive assessment of the risk of inflation remaining in the medium term at an elevated level would be possible after analysing the October projection of inflation and GDP and the data released in the coming months.

A motion to raise the NBP interest rates by 25 basis points was put forward at the meeting. The motion did not pass. The Council kept the interest rates unchanged: the reference rate at 6.00%, the lombard rate at 7.50%, the deposit rate at 4.50% and the rediscount rate at 6.25%.

Information from the meeting of the MPC held on 28-29 October 2008

The Council decided to keep the NBP interest rates unchanged: reference rate 6.00% on an annual basis; lombard rate 7.50%; deposit rate 4.50%; rediscount rate 6.25%.

Data that have been released recently indicate that economic growth in Poland will decrease in the coming quarters. Stronger than previously expected economic slowdown will be driven by a significant decline in economic growth abroad, increased uncertainty as to the economic outlook as well as limited credit availability and its increased costs resulting from higher risk premium incorporated in market interest rates. At the same time, information on labour market developments points to a sustained high growth of wages and a continuously unfavourable relation between wage and labour productivity growth.

Since the Council's meeting in September, turmoil in the financial markets has intensified and the situation in housing markets has continued to worsen, which results in a marked deterioration of the outlook for economic growth in the external environment of the Polish economy. At the same time, inflationary pressure in many countries is expected to ease, which will be driven by decreasing food and commodity prices in the world markets and the anticipated considerable slowdown of economic growth. The weakening of inflationary pressure and inflation expectations along with the intensified turmoil in the financial markets have urged major central banks to decrease their policy interest rates. The turmoil in the global financial markets has led to increased risk aversion, as a result of which exchange rates of many economies, including those of some Central and Eastern European countries, have depreciated considerably.

In September the annual growth of consumer prices in Poland decreased to 4.5%, remaining above the NBP inflation target of 2.5% and also above the upper limit for deviations from the target set at 3.5%. Contributing to inflation persisting at an elevated level was the increased growth of prices of services, including primarily services related to flat maintenance, and of energy prices. The annual growth of food and fuel prices declined, yet remaining at a relatively high level. The Council maintains its assessment that in the coming months inflation will continue above the upper limit for deviations from the inflation target which will, to a large extent, be the result of high, albeit declining, annual growth of food prices as well as high growth of administered prices, including energy prices.

The Council got acquainted with the projection of inflation and GDP based on the NECMOD model, prepared by the Economic Institute of the NBP, which is one of the inputs into the Council's decision-making on the NBP interest rates. The macroeconomic projection has been prepared based on data released until 26 September 2008. The annual growth of consumer prices forecast in the October projection is in 2009 higher and at the end of 2010 lower than expected in the June projection. Under constant interest rates, there is a 50-percent probability that projected inflation will lie within the range of 4.2-4.4% in 2008 (compared to 3.8-4.7% in the June projection), 3.9-5.7% in 2009 (compared to 2.5-5.8%) and 1.9-4.5% in 2010 (compared to 0.1-5.7%). According to the October projection, the annual GDP growth will remain, with a 50-percent probability, within the range of 5.0-5.3% in 2008 (compared to 4.3-5.5% in the June projection), 1.9-3.7% in 2009 (compared to 3.4-6.2%) and 2.7-4.5% in 2010 (compared to 3.8-6.8%).

Due to considerable deterioration of global economic growth outlook and the ensuing lowering of forecasts for commodity prices and inflation across the world observed after 26 September 2008, the impact of those changes on inflation and GDP outlook throughout the projection horizon was assessed with the use of the NECMOD model. This assessment, based on data released until 16 October 2008, indicates that under constant interest rates, there is a 50-percent probability that projected inflation may lie within the range of 4.2-4.4% in 2008 (compared to 3.8-4.7% in the June projection), 3.1-5.3% in 2009 (compared to 2.5-5.8%) and 1.5-4.3% in 2010 (compared to 0.1-5.7%). In turn, the annual GDP growth may lie, with a 50-percent probability, within the range of 4.9-5.2% in 2008 (compared to 4.3-5.5% in the June projection), 1.7-3.5% in 2009 (compared to 3.4-6.2%) and 2.4-4.3% in 2010 (compared to 3.8-6.8%). This assessment does not take into account data released after 16 October 2008.

In the Council's assessment, in the coming period the pressure on wage increases will probably persist, although the economic growth declining below potential output growth, weakening labour demand and deteriorating financial results of enterprises will be easing the wage pressure and, consequently, also the inflationary pressure. Increased inflation in the coming period will, to a large extent, result from the growth of administered prices. Future inflation may also be increased by rising prices of some services, which may, to some extent, result from the growth of energy prices, and by the recent considerable depreciation of the zloty exchange rate. Persistently increased inflation creates a risk of inflation expectations remaining at an elevated level.

In the medium term, easing of the inflationary pressure will be supported by the considerable slowdown in the global economy and, consequently, also by a decline in economic growth in Poland. The inflationary pressure may continue to be eased by the import of goods from low-cost countries. The previous increases of the NBP's interest rates as well as the currently observed and expected further tightening of banks' lending conditions will also contribute to lowering inflation.

The Council assessed the probability of inflation running above or below the target in the medium term to be roughly equal. The Council's decisions in the coming months will depend on the incoming information on the outlook for economic growth and inflation in Poland and abroad.

The Council will analyse the impact of developments in the domestic interbank market on the monetary policy transmission mechanism in Poland.

The Council maintains its view that Poland should join the euro area at the earliest possible date, after achieving the necessary political support for amendments in the Constitution of the Republic of Poland and other legal acts necessary for the euro adoption in Poland.

The Council has adopted the *Inflation Report - October 2008*, *Balance of Payments of the Republic of Poland in 2008 Q2*, and *Opinion of the Monetary Policy Council on the Draft Budget Act for the Year 2009*.

Projection of inflation and GDP

The inflation and GDP projection has been prepared at the Economic Institute of the National Bank of Poland. The content-related supervision over the work connected with the projection has been entrusted to a member of the NBP's Management Board, Mr. Zbigniew Hockuba. The work on the projection was coordinated by the Bureau of Macroeconomic Forecasts of the Economic Institute. The projection was prepared with the use of the NECMOD[66] macroeconomic model. The projection is an outcome of an iterative process in the course of which some of the variables were adjusted if they diverged from NBP experts' economic intuition based on their knowledge of economic processes. The Management Board of the NBP approved the projection to be submitted to the Monetary Policy Council. The projection is prepared under the assumption of constant NBP interest rates and is one of the inputs to the Monetary Policy Council's decision-making process.

The projection was prepared in the context of heightened uncertainty about macroeconomic developments in the world's major economies. During the period when the projection was being prepared. i.e. in the second half of September and the first half of October 2008, governments and central banks in developed countries took unprecedented coordinated actions aimed at ensuring the stability of financial systems and preventing the possibility of a global recession. In the same period energy commodity prices as well as prices of some food products plummeted. Due to the above, in comparison with the previous projections the current one presents a much more detailed description of risks to the baseline scenario that had been elaborated on the basis of data collected till 26 September 2008. These risks are due to the quick deterioration of prospects for global growth, and in the attempt to quantify them data available as of 16 October 2008 were taken into consideration. The probability that these risks materialise is high.

External conditions

It was assumed in the projection that 2009 will see an aggravation of the currently observed economic slowdown in the United States, the euro area and the United Kingdom resulting from the turmoil in global financial markets. Fiscal stimulation and the implementation of the plan of recapitalisation and reform of the financial system, elaborated jointly by the government and the Federal Reserve Bank, will permit to limit the scale and duration of the economic slowdown in the United States. The gradual improvement of the economic situation in the United States at the end of 2009 and in 2010 will also

[66]Current version of the model's documentation is available on the NBP web site

hasten the return of good economic climate in Europe. In connection with a renewed acceleration of economic growth and a mounting risk of rising inflation, interest rates in the US will increase slightly. In the euro area interest rates will be cut slightly in the second half of 2009. On this account, the level of interest rates in European countries will remain relatively stable till 2010.

Due to the assumed dampening of growth in developed economies in 2008, global prices of energy commodities, in particular prices of oil and gas, will drop significantly. On the other hand, high demand from developing countries will continue to be the main factor determining the level of commodity prices in the long term. The stabilisation of oil prices at ca. 106 USD/b, sustained by a significant appreciation of the US dollar, will take place in 2010.

The triggering of supply adjustments and a lower growth rate in developing countries will moderate pressure on the increase in food prices. In 2009 and 2010 a moderate decline in global prices of agricultural products is expected.

Aggregate demand

In the coming years the growth of domestic demand will slacken. The slowdown of domestic demand to ca. 3% y/y will be due to a decrease in the capital formation rate and in consumption growth. The drop in consumption growth will deepen the expected retrenchment in the growth of the public sector's current spending.

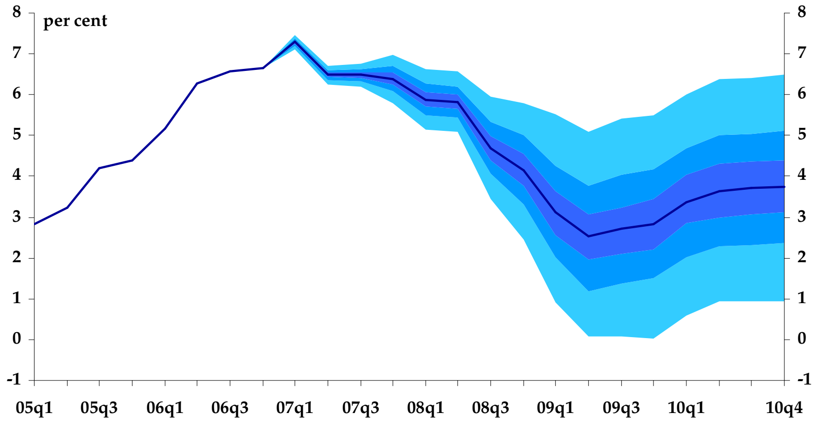
The slowdown of growth in gross fixed capital formation will to a large extent be influenced by the deterioration of economic climate in the housing market. Less favourable financial situation of households and the tightening of conditions for granting mortgage loans will translate into a reduction of demand for flats. As a result, the number of dwellings built will fall markedly.

The deteriorating sales outlook, more difficult access to loans, relatively high commodity prices coupled with the dollar's appreciation will contribute to the decline in the growth rate of gross fixed capital formation in enterprises. On the other hand, the inflow of EU structural funds supporting the development of enterprises and modernisation of agriculture will act towards sustaining the positive growth rate of enterprise investment.

Until the second half of 2010, a steady growth of outlays on public investment will be a factor reducing the fall in the capital formation rate. The necessity to maintain the general government sector deficit below 3% of GDP will have a small impact on the growth of public investment. Public investment will be strongly stimulated by the inflow of EU structural funds. On account of delays in the utilisation of funds from the EU financial perspective for the years 2006-2008 and delays in the utilisation of funds from the new financial perspective, the growth in public investment may decrease slightly at the end of 2010. As a result, investment growth since mid-2009 will develop at ca. 3% y/y with a gradually rising contribution of private investment to the growth of gross fixed capital formation in the economy and a declining contribution of public investment.

In 2009 the growth of private consumption will remain at the current level of ca. 5%, supported by the continued good situation on the labour market and the high growth of households' disposable income. At the beginning of 2009 introduction of favourable changes in the personal income tax is expected. Moreover, due to the relatively high inflation rate in 2008, the social benefits indexation coefficient will also be high. Only

□ **Figure 4.1:** Central projection and fan chart of GDP.



Source: NBP.

in the long horizon of the projection will the dampening of high wage growth and the increase in unemployment rate translate into slackening disposable income growth, and consequently to a decline in the growth rate of household consumption. The decline in consumption growth will also be affected by the decline in the value of household wealth, related to the flat-price adjustment following the drop in demand for flats.

Despite the deterioration of global economic climate in 2009 and 2010 the intensifying integration of the Polish economy with EU structures will permit to sustain the relatively high growth of exports. The exports growth rate will be lowest in 2009, and will return to ca. 10% y/y in the following year of the projection. The decline in the growth of import-intensive export production and the slackening of domestic economic activity will translate, however, into a relatively stronger reduction of imports growth. Consequently, as early as since mid-2009 the contribution of net exports to economic growth will be slightly positive.

Macroeconomic equilibrium

The central path of the GDP projection points to a slowdown in economic growth in 2009 to below 3% y/y, followed by a gradual increase to almost 4% in 2010 (Figure 4.1).

The GDP growth rate till end-2009 will remain below potential output growth. This will come as the effect of both a marked weakening of aggregate demand, and a high, above 5% growth of potential output in the first quarters of the projection. It will accelerate the closing-up and then the reversal of the positive output gap observed at the beginning of the projection horizon. On account of the decline in the capital formation rate and the one-off character of the positive impact of tax reforms of 2008-2009 on the potential product level, the growth rate of potential product over the longer horizon of the projection will decline gradually to ca. 4% y/y. Due to the simultaneous acceleration of current output growth, the output gap will stabilize at a negative level in 2010.

Over the projection horizon, the surplus of demand over supply in the labour market will gradually diminish. This development will be influenced by the reduction of enterprises' demand for labour as well as the systematic growth of the participation rate.

Due to the rigidity of real wages and in the face of lower demand for their products, enterprises will first be adjusting the level of employment. The wage growth will adjust to the deteriorating economic climate with some delay, declining below 6% y/y only in mid-2009. Over the projection horizon, however, a significant decrease in the growth of the number of working persons will take place, and growth will be negative starting from the beginning of 2009. As a result, the unemployment rate will increase gradually, reaching 12% at the end of 2010.

At the same time it is expected that the high growth of real wages observed so far, the deterioration of the prospects for jobs abroad, the significant minimal-wage increase in 2008 and 2009 and the reduction of the wage wedge will all constitute an incentive, primarily for young and older persons of working age, to enter or re-enter the labour market. The rise in the economic activity rate will also be supported by changes in the age structure of the population. The share of people in age groups with a traditionally high economic activity rate (prime age) will increase. It is estimated that the demographic factor will account for approx. 40% of the 1.5 percentage-point rise in economic activity rate in 2008-2010.

The increase in labour supply, coupled with a decrease in the growth of production capital and with high prices of energy commodities, will affect the increase of the natural unemployment rate (NAWRU). NAWRU growth will be, however, slower than the growth of the actual unemployment rate, which will lead to the closing-up of the unemployment gap over the projection horizon.

With the stabilisation of the terms of trade and despite a slight improvement of the foreign trade balance, the rising trend of the current account deficit observed in recent quarters will halt only in 2009. On account of a drop in the value of remittances from Polish migrants working abroad, the income balance will deteriorate significantly. As a result, the joint current account and capital account balance will deteriorate to -4.5% of GDP in 2009 and will remain at a similar level till the end of the projection horizon.

Cost pressure

Despite a significant decline of oil and gas prices in the last quarters of 2008, the prices of energy commodities in the world markets in the projection horizon will still remain higher than in the previous years. The high energy commodity prices, coupled with a moderate depreciation of the zloty exchange rate against the euro to about 3.50 and then its stabilisation, together with the markedly depreciating exchange rate of the euro against the dollar, will feed into the rise in imports prices and production costs, and directly into fuel and electricity prices which form part of the basket of consumer goods and services. Due to the regulation of some sectors of the energy market, the adjustment of domestic energy prices to the prices abroad will be spread over time.

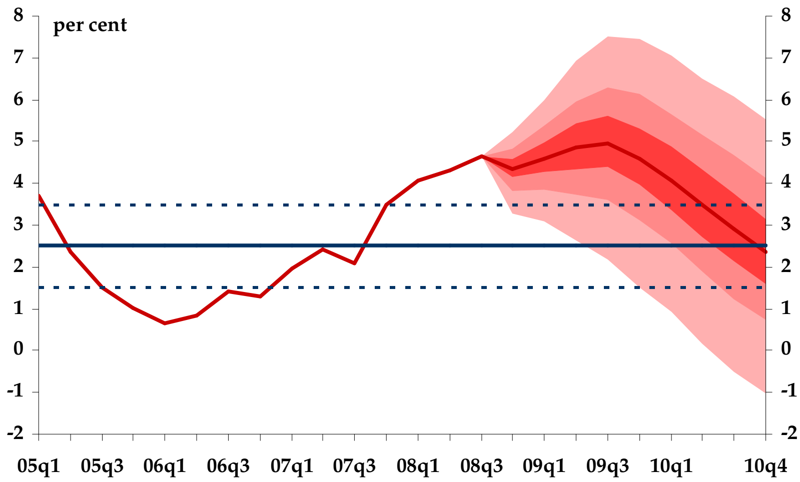
The prices of agricultural products in the world markets follow a slightly decreasing trend in the projection horizon. With the adverse changes in the zloty exchange rate against the dollar, a weakened pressure on the rise of food prices in the domestic market will be observed, however, only at the end of 2010.

The growth of real wages in the economy till mid-2009 will exceed the growth of labour productivity. This will feed into to sustained high growth of labour costs in the coming quarters. Amid weakened demand for labour and expected growth of its supply, the cost pressure will be fading, however, in the longer horizon of the projection, accompanied by the decline in the unit labour cost growth outside agriculture to 1.0%y/y at the end of 2010.

Inflation

In 2009 the high growth of consumer prices as measured by the CPI is expected to continue. Till the end of 2009 inflation will remain above the upper limit for deviations from the target, moving back to the tolerance range only in 2010 (Figure 4.2). Towards the end of the projection horizon, inflation will approach the NBP inflation target of 2.5%. The probability of inflation running above the inflation target gradually decreases to approx. 0.48 in the last quarter of the projection, with a significant increase in probability of inflation remaining within the tolerance range in 2010 in comparison with 2009.

⊡ **Figure 4.2:** Central projection, inflation fan chart and MPC's inflation target.



Source: NBP.

The growth of consumer prices next year will be significantly affected by the high growth of food and energy carrier prices. In line with the central projection path, in the first quarters of 2009, due to a surge in labour costs, core inflation will also accelerate. The easing of the inflationary pressure resulting from the decrease of prices in global markets, including prices of agricultural and energy commodities, will become more pronounced only at the end of the projection horizon due to the opposite influence of the earlier appreciation of the US dollar. On the other hand, from mid-2009 on, a gradual reduction of the cost pressure stemming from the labour market and a decline in core inflation will take place.

The table below presents the main characteristics of the probability distribution of the inflation path obtained in the October projection.

Table 4.1: Probability of forecasted inflation.

	Probability of inflation:				
	below 1.5%	below 2.5%	below 3.5%	below central projection	within (1.5%; 3.5%)
2008q3	0.000	0.000	0.000	0.000	0.000
2008q4	0.020	0.008	0.097	0.461	0.097
2009q1	0.002	0.016	0.113	0.480	0.111
2009q2	0.012	0.043	0.152	0.484	0.140
2009q3	0.020	0.071	0.179	0.480	0.159
2009q4	0.049	0.119	0.257	0.483	0.208
2010q1	0.086	0.183	0.378	0.499	0.292
2010q2	0.139	0.311	0.495	0.490	0.356
2010q3	0.231	0.416	0.600	0.491	0.369
2010q4	0.337	0.524	0.714	0.494	0.377

Source: NBP.

Construction of the fan chart

The National Bank of Poland has been publishing inflation projection together with the fan chart since August 2004. Since May 2005, when the publication of projection from the ECMOD model begun, uncertainty have been estimated on the basis of stochastic simulations of the model, taking into account uncertainty related to the forecasts of exogenous variables and to the error term. Thus, the assumption was made that if the ECMOD model was an adequate tool for setting the central projection path, it would also well assess the uncertainty of the projection.

In the present forecasting round the methodology of constructing the fan chart for inflation and GDP projection was substantially modified. Currently, the width of the fan chart is consistent with the past errors from the ECMOD/NECMOD model, at the same time depending on the current uncertainty assessment of exogenous variables. The reason behind changes in the methodology was a sufficiently long forecasting record from the ECMOD/NECMOD model and the following shortcomings of stochastic simulations:

Significant sensitivity to the structure of the forecasting model. Uncertainty should depend on the choice and the specification of the model. However, excessive sensitivity of results obtained on the basis of the model to endogenization or exogenization of selected variables or to the change in the form of the equation, is undesirable.

Overestimation of uncertainty. Methods based on stochastic simulations with shocks applied both to endogenous and exogenous variables, may overestimate uncertainty. First, uncertainty is estimated only on the basis of the model, i.e. the role of experts in adjusting forecasts is ignored. Secondly, uncertainty obtained in stochastic simulations increases if some parameters of the model equations are calibrated. Calibration of parameters (based on the knowledge about the economy) should, to the contrary, reduce the actual uncertainty of forecasts.

Independence of stochastic simulation results from past forecasting errors.

Disregarding data-related uncertainty. Data are burdened with uncertainty due, among others, to revisions of national accounts and the lack of certain variables at the starting point of the projection (they are estimated by experts). This uncertainty is not taken into consideration in stochastic simulations.

The new procedure of constructing the fan chart is free of the above-mentioned shortcomings. It consists of the following steps:

Determining the distributions of historical forecast errors. On the basis of past forecast errors from the ECMOD/NECMOD model, the forecast errors variance was estimated for every forecasting horizon. In the case of inflation, account was taken of uncertainty of forecasts starting from the quarter in which the *Inflation Report* had been published. In the case of GDP growth forecasts, due to frequent revisions of national accounts, account was also taken of the uncertainty of past values of the variable (up to 7 quarters preceding the publication of the *Report* inclusive).

Simulation of paths of exogenous variables. On the basis of the NECMOD model's multipliers, set of exogenous variables were selected, whose uncertainty has a prevailing impact on the uncertainty of inflation and GDP forecasts. Experts forecasting exogenous variables, in every forecasting round present the central path (the expected value) and the uncertainty assessment of the forecast of the given variable (whereas the distribution of risks does not have to be symmetric). The simulation procedure of exogenous variables was chosen in such a way that the expected value of simulated paths of variables conforms to central paths given by experts, the autocorrelation of variables observed in the sample is retained and the cross correlation of shocks among particular variables is retained as well.

Exogenous variables are simulated in two versions: with historical uncertainty and with current uncertainty. In the first case the confidence band of simulated exogenous variables are consistent with the average assessment of uncertainty given by experts in the previous forecasting rounds, while in the second - with the assessment of uncertainty in the current forecasting round.

Simulations from the NECMOD model. The NECMOD model is used to carry out stochastic simulations in two versions. In the first version, the uncertainty of exogenous variables is set at the average level from the previous forecasting rounds and the interest rate is endogenous, determined by the Taylor rule estimated on the basis of historical data. In the second, the uncertainty of exogenous variables is set at the level from the current forecasting round, and the interest rate does not change in the projection horizon. The simulations do not take into consideration other sources of forecast uncertainty (uncertainty related to the error term, estimators, etc.). The goal of the simulation is to assess the impact of changes in the uncertainty assessment of exogenous variables and of the assumption of the exogeneity of the monetary policy on the uncertainty of GDP and inflation forecasts.

Determining the current uncertainty concerning GDP and inflation. The fan chart based only on past forecast errors from the ECMOD/NECMOD model is an adequate estimate of uncertainty of the **forecast** with the uncertainty of exogenous variables at the level corresponding to the average uncertainty in the previous forecasting rounds. To this fan chart a correction calculated in the previous point is added, by means of which we obtain the uncertainty assessment of the **projection** with the current level of exogenous variables uncertainty.

The October projection compared to the June projection

CPI inflation till mid-2010 runs above, and in the last two quarters of projection below, the path from the June projection. The GDP growth in the October projection, on the other hand, is lower in 2009-2010 than in the previous projection. The shift in inflation path since the previous projection was due primarily to changes in forecasts concerning the external environment. The change in the assessment of the labour market situation and stronger than forecasted in June appreciation of the zloty exchange rate in the last quarters affected inflation projection in opposite directions without changing significantly the development of core inflation in the first quarters of the projection.

Higher than expected in the previous forecasting round increase in energy and agricultural commodity prices in global markets and the assumed appreciation of the dollar, whose exchange rate against the euro in the June projection was stable, resulted in raising the forecasted growth of food and energy carrier prices in the whole projection horizon.

Stronger than expected a quarter ago slowdown of global growth, higher commodity prices in global markets, reduced growth of current expenditure of the public sector and lower than assumed in June utilisation of funds from the new financial perspective, as well as the tightening of banks' credit policy resulted in the decline of economic growth in the projection. The deterioration of outlook for growth and the accompanying worse situation in the labour market, contributed to the reduction of the demand pressure and lowered the path of core inflation since mid 2009 in comparison with the previous projection.

Main areas of uncertainty

Projection risks related to the deterioration of the perspectives of global growth

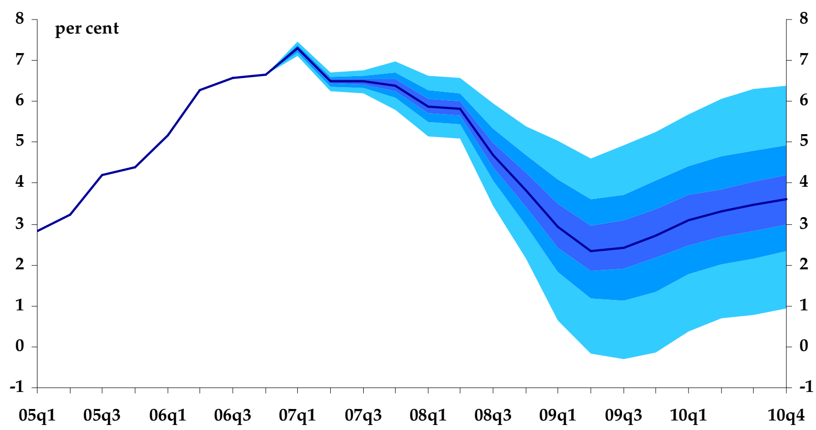
After the cut-off date for the data used in the October projection, the outlook for global growth deteriorated due to the intensification of crisis in international financial markets. In connection with the above changes, an attempt was made to quantify risks to inflation and GDP growth in Poland, resulting from a lower rate of global growth and a possible more pronounced decline in commodity prices in the coming years. To this end, a forecast of inflation and GDP in Poland was constructed (under the assumption of constant NBP interest rates), taking into consideration data and forecasts available till 16 October 2008.

The forecasts of global growth from mid-October 2008 were significantly lower than forecasts formulated at the end of September 2008. In mid-October a much more pronounced drop in global growth was expected in 2009, as well as its slower rebuilding in 2010. With lower than expected global growth, it was expected that the global inflationary pressure will ease somewhat as well. Due to deteriorating outlook for growth and expected easing of inflationary pressure, and considering the coordinated cuts of interest rates by main central banks on 8 October, it was also assumed that in the coming quarters the monetary policy in the developed economies will be more accommodating than assumed in the projection.

The consideration of data available in the first weeks of October lowered the forecast path of oil, gas and coal prices. The aggregated global index of energy commodity prices was lower by about 15% under the assumptions from mid-October than the one estimated at the end of September. On the other hand, the prices of agricultural commodities were adjusted downwards to a much lesser degree.

Under the assumptions from mid-October, economic growth in Poland will be slightly lower than in the October projection. It may result mainly from lower export growth (and lower contribution of net exports to growth) in the short and medium projection horizon. In the longer projection horizon the domestic demand growth may also decrease somewhat, particularly the growth of residential investment. The drop in investment outlays of households will be related mainly to the decrease of their disposable income due to the deterioration of the situation in the labour market and lower transfers of income from work abroad.

⊡ **Figure 4.3:** Central projection and fan chart of GDP accounting for risk assessment to GDP.



Source: NBP.

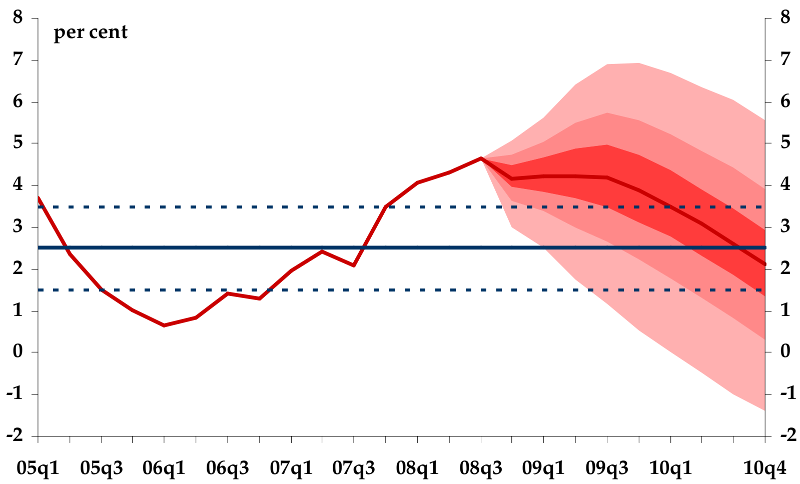
Stronger than presented in the projection economic slowdown in the main European economies may also contribute to the weakening of emigration incentives and intensify return migrations to Poland. A more favourable migration balance than expected at the end of September may, in turn, result in the growth of the number of economically active persons in the labour market. The increase in labour supply and a more pronounced than in the October projection slowdown of economic growth may lead to further weakening of wage pressure. The weakening of cost pressure on the part of the labour market will, however, proceed with a certain delay with respect to the deterioration of the domestic economic climate.

On account of the lowering of forecasts for prices of energy commodities in global markets in mid-October, the inflation of energy prices in the domestic market may be lower than in the October projection (on the average by about 2.0 percentage points in 2009-2010). The impact of forecast revision of prices of agricultural commodities on expectations concerning the food price inflation in the domestic market is proportionally lower.

The adoption of assumptions of 16 October, due to lags in the transmission of shocks in the real economy to inflation, does not lead to a significant change of expectations concerning the core inflation in the coming quarters. It is only from the end-2009 that core inflation may run at a level lower than in the October projection.

The outlook for inflation developments in the coming quarters may, however, be significantly affected by the revision of forecasts of the global prices of energy and agricultural commodities. Considering the data available from 26 September till 16 October 2008, the CPI inflation may run by about 0.5 percentage point below the central path of October projection, i.e. above the inflation target in 2009 with the probability of 86% in comparison with 94% in the current projection, and in 2010 with the probability of 57% against 64%.

⊡ **Figure 4.4:** Central projection, inflation fan chart accounting for risk assessment to inflation and MPC's inflation target.



Source: NBP.

Prices of agricultural and energy commodities

The October projection assumes the dampening of growth of global prices of agricultural and energy commodities and their stabilisation or moderate fall in 2009 and 2010. Such a scenario should be supported by the forecasted slowdown in global economic growth and supply adjustments in response to the persisting high demand and commodity prices. A source of uncertainty concerning the future growth of commodity prices is the scale of slowdown in the emerging economies, which are primarily responsible for the growth of demand, both for energy and agricultural commodities in recent years, as well as the policy of supply control on the part of OPEC countries and the continued lack of global consensus regulating the development of the biofuel market.

The transmission of price changes in the commodity markets into domestic prices will also depend to a large extent on the exchange rate of EUR/USD. The October projection assumes that the US dollar will appreciate against the euro. The possible reversal of the appreciation trend of the dollar could result in decreasing the cost pressure, leading to higher economic growth in Poland coupled with lower inflation.

The competitiveness of the Polish economy

Considering the uncertainty concerning the development of the global economic situation, it is particularly difficult to assess Poland's future investment and trade competitiveness. The deterioration of outlook for economic growth in the developing economies may lead to a shift in capital transfers towards emerging markets, currently less affected by the crisis, or conversely, to a withdrawal of capital from economies of higher investment risk. Poland may retain the position of an attractive country for foreign investors, or to the contrary, the coming quarters may see the intensification of capital outflows from the country. The weakened confidence of foreign investors may lead to the depreciation of the exchange rate, rise in inflation risk, as well as economic slowdown due to a lower inflow of direct investment.

Global slowdown may also result in the change of the structure of global trade. The price and quality competitiveness of goods may play higher role than before. The efficiency of Polish enterprises in reducing costs and the flexibility of their adjustments to changes in the structure of demand will determine the competitiveness of Polish goods (and the evolution of the terms-of-trade). This, in turn, will determine the scale of transmission of global slowdown to economic growth in Poland.

Joining the euro area and the ERM II

The decision concerning the date of joining the ERM II and the adoption of the common currency, as well as the procedure of decision-making, may significantly affect the pace of convergence of interest rates and the stability of the exchange rate. The volatility of interest rates and the exchange rate related to the course of the monetary integration process may, in turn, affect the real economy and inflationary processes.

Government's declarations concerning a possibly quick introduction of euro in Poland should be accompanied by a strive for meeting the Maastricht fiscal criteria in the coming years. In accordance with the draft budget for 2009, the projection assumed the reduction of growth in the current expenditure of the general government sector. A failure to fulfill plans of reducing the deficit and debt of the general government sector may undermine the credibility of government declarations and result in adverse changes in investor sentiment and in the depreciation of the zloty exchange rate. A more expansive fiscal policy may also contribute to increasing the growth of domestic demand. The above-mentioned risks may result in a higher inflation path than assumed in the projection.

Market regulation and implementation of European standards

Some sectors of the Polish economy still remain highly regulated. Economic mechanisms in regulated sectors may be weak, especially in the horizon corresponding to the projection horizon. The difficulties in determining the pace and scope of the energy market deregulation in Poland, make the forecast of, among others, domestic prices of energy carriers highly uncertain. The integration of the Polish economy with the structures of the European Union requires gradual harmonisation of Polish regulations to EU standards. The lack of any specific dates set for the implementation of fiscal changes required by the European Union, including the unification of VAT rates on consumer goods, increases the uncertainty of the projection. Similarly, it is difficult to assess the impact that new regulations on carbon dioxide emissions and possible further tightening of environmental protection requirements might have on economic activity. The uncertainty connected with the legal environment is also related to the lack of final solutions in the area of spatial development plans and the difficulty with assessing the effectiveness of administrative actions aimed at increasing the EU fund utilisation. In our assessment, the outcome of those risks is a higher probability of a weaker medium-term outlook for growth and higher inflationary pressure in relation to the scenario presented in the projection.

Developments in labour market

Future labour market developments remain an important source of uncertainty of the projection. This uncertainty is related above all to the intensity and nature of migratory flows, the duration of the period of persisting high wage pressure and to the impact on the labour market of the already introduced or probable changes in fiscal and regulatory policies. In the case of a deteriorating situation in the labour market in the developed countries, a deceleration of migratory outflows and intensification of return migrations may be expected. The uncertainty related to the pursued fiscal and regulatory policies includes changes in the legislation regulating early retirement opportunities, shifts of the minimal wages and the effects of the reduction of disability pension contribution and changes in the PIT. The scale of the above-mentioned phenomena and the scale of their transmission on the effective labour supply (number of the economically active and the NAWRU) is difficult to assess. As opposed to the previous projections, it is expected however that the risk of a more moderate rise of market tensions than indicated by the projection is similar to the risk of their intensification.

Transmission of labour costs on inflation

Another source of the projection risk is the assessment of the capacity of enterprises to pass their growing costs through to prices of their products in the conditions of globalisation. The intensifying integration of the Polish economy with the global economy adds to the competitive pressure, discouraging enterprises from increasing the prices of their products and services. Globalisation processes also support the reduction of non-wage production costs and costs of increasing the production potential. It seems that the scale of risk connected with the assessment of the sustainability of this process and its impact on the relationship between costs and prices could have increased in comparison with the previous projection due to the deterioration in demand outlook.

Discussion of data released after 16 October 2008

Data released after 16 October point to a fall or stabilisation of the spread between reference rates of central banks and short-term market interest rates in the main markets (USA, the euro area and the United Kingdom), which may suggest a certain efficiency of the actions by US and European central banks, as well as of the initiative of G-7 countries aiming at increasing liquidity for the banking sector. In the period under review the zloty depreciated further, which resulted from the impact of global factors (the depreciation of the currencies of emerging countries due to the outflow of portfolio investors from these markets towards dollar assets) as well as regional ones (the impact of the escalating Hungarian crisis).

Summary of risks to inflation projection external to the model

The most important factors contributing to higher inflation than assumed in the present projection include: drop in investors confidence, resulting in the depreciation of the zloty, stronger than assumed appreciation of the US dollar against the euro, which may lead to stronger pass through of high commodity prices to domestic prices and slower easing of tensions in the labour market. The possibility of inflation running below the central path is indicated, on the other hand, by the risk related to a more pronounced than assumed slowdown in the global economy, weakening of the US dollar, reversal of migration tendencies and transmission of still high labour costs to price rise. Considering the reviewed uncertainty factors external to the model,, the risk of inflation running below the central path may be assessed as markedly higher than the risk of it running above the path. In the case of economic growth, the risks are roughly symmetrical.

Table 4.2: The central path of the GDP and inflation projection.

	2007	2008	2009	2010
CPI (per cent y/y)	2,5	4,3	4,7	3,2
Food prices (per cent y/y)	4.8	6.3	3.0	-0.4
Energy prices (per cent y/y))	3.8	8.8	10.5	9.3
Core inflation excl. food and energy prices (per cent y/y)	1.0	2.4	4.0	3.2
GDP (per cent y/y	6.7	5.1	2.8	3.6
Domestic demand (per cent y/y	8.6	5.5	2.4	3.0
Private consumption (per cent y/y))	5.0	4.8	4.6	3.7
Public consumption (per cent y/y)	3.7	0.2	1.0	1.4
Gross fixed capital formation (per cent y/y))	17.6	13.1	4.3	2.8
Contribution of net exports (percentage points y/y)	-2.0	-0.6	0.3	0.5
Exports (per cent y/y)	9.1	9.3	9.1	11.2
Imports (per cent y/y)	13.6	9.9	7.7	9.4
Average nominal gross wages (per cent y/y	8.6	10.5	6.9	5.6
Number of working persons (per cent y/y)	2.0	0.8	-0.4	-1.0
Unemployment rate (per cent)	9.6	7.8	9.9	12.2
NAWRU (per cent	12.0	10.6	11.4	12.5
Participation ratio (per cent y/y)	53.8	54.3	55.5	56.1
Labour productivity (per cent y/y)	4.5	4.3	3.2	4.7
Unit labour costs (per cent y/y	2.1	4.7	3.4	0.9
Potential output (per cent y/y)	5.7	7.2	4.7	3.8
Output gap (percentage of potential output)	1.0	0.0	-2.0	-2.7
Index of agricultural commodity prices (USD; 2006=1.00	1.08	1.24	1.20	1.17
Index of energy commodity prices (USD; 2006=1.00))	1.16	2.16	2.21	2.19
Foreign price level (per cent y/y)	2.1	2.6	2.2	2.0
Foreign GDP (per cent y/y)	2.6	1.3	1.0	1.8
Current account and capital account balance (percentage of GDP)	-3.6	-3.4	-4.5	-4.0
WIBOR 3M (per cent)	4.72	6.35	6.33	6.20

Source: NBP.
Notes: Data on the number of working persons, labour productivity and unit labour costs are own estimates of the Economic Institute of the NBP based on BAEL data. The index of agricultural commodity prices is constructed on the basis of the IMF's forecasts of the prices of wheat, pork, beef, poultry, fish, sugar, olive oil, oranges and bananas with weights reflecting the consumption structure of Polish households. The index of energy commodity prices includes the prices of crude oil, coal and natural gas taking into account the consumption structure of these commodities in Poland.

Annex

The voting of the Monetary Policy Council members on motions and resolutions adopted in May–August 2008

- **Date:** 21 May 2008

  Subject matter of motion or resolution:
  Resolution on approving the *Report on Monetary Policy Implementation in 2007*

  Voting of the MPC members:

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

- **Date:** 21 May 2008

  Subject matter of motion or resolution:
  Resolution on the evaluation of the activities of the NBP Management Board as regards the implementation of the *Monetary Policy Guidelines for the Year 2007*

  Voting of the MPC members:

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

- **Date:** 27 May 2008

  Subject matter of motion or resolution:
  Resolution on approving the *Report on the Operations of the National Bank of Poland in 2007*

  Voting of the MPC members:

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

- **Date:** 28 May 2008

  Subject matter of motion or resolution:
  Motion to raise NBP interest rates by 0.25 percentage point

  MPC decision:
  Motion did not receive a majority vote.

  Voting of the MPC members:

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

- **Date:** 25 June 2008

  Subject matter of motion or resolution:
  Resolution on the level of the reference rate, lombard rate, deposit rate and rediscount rate of the National Bank of Poland

  MPC decision:
  The MPC increased the level of all interest rates by 0.25 percentage point

Voting of the MPC members:

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

- **Date:** 30 July 2008

  Subject matter of motion or resolution:
  Motion to raise NBP interest rates by 0.25 percentage point

  MPC decision:
  Motion did not receive a majority vote.

  Voting of the MPC members:

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

- **Date:** 27 August 2008

  Subject matter of motion or resolution:
  Motion to raise NBP interest rates by 0.25 percentage point

  MPC decision:
  The motion was not passed (due to tie vote, the Chairman's casting vote was decisive)

  Voting of the MPC members:

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