MAGYAR NEMZETI BANK

QUARTERLY REPORT ON INFLATION

Update

FEBRUARY 2008

Quarterly Report on Inflation
– update –

February 2008

Published by the Magyar Nemzeti Bank

Publisher in charge: Judit Iglódi-Csató, Head of Communications

H–1850 Budapest, 8–9 Szabadság tér

www.mnb.hu

ISSN 1418-8716 (online)

Act LVIII of 2001 on the Magyar Nemzeti Bank, which entered into effect on 13 July 2001, defines the primary objective of Hungary's central bank as the achievement and maintenance of price stability. Low inflation allows the economy to function more effectively, contributes to better economic growth over time and helps to moderate cyclical fluctuations in output and employment.

In the inflation targeting system, from August 2005 the Bank seeks to attain price stability by ensuring an inflation rate near the 3 per cent medium term objective. The Monetary Council, the supreme decision-making body of the Magyar Nemzeti Bank, performs a comprehensive review of the expected development of inflation every three months, in order to establish the monetary conditions consistent with achieving the inflation target. The Council's decision is the result of careful consideration of a wide range of factors, including an assessment of prospective economic developments, the inflation outlook, money and capital market trends and risks to stability.

In order to provide the public with clear insight into the operation of monetary policy and to enhance transparency, the Bank publishes the information available at the time of making its monetary policy decisions. The Report presents the inflation forecasts prepared by the Economic Analysis and Research and Financial, as well as the macroeconomic developments underlying these forecast. The Report is published biannually, with partial updates to the forecasts also prepared twice a year. The forecasts of the Economic Analysis and Research and Financial Analysis are based on certain assumptions. Hence, in producing its forecasts, the Directorate assumes an unchanged monetary and fiscal policy. In respect of economic variables exogenous to monetary policy, the forecasting rules used in previous issues of the Report are applied.

The analyses in this *Report* were prepared by staff in the MNB's Economic Analysis and Research and Financial Analysis Department under the general direction of Ágnes Csermely, Director. The project was managed by Mihály András Kovács, Deputy Head of Economic Analysis, with the help of Zoltán Gyenes, and Barnabás Virág. The *Report* was approved for publication by Ferenc Karvalits, Deputy Governor.

Primary contributors to this *Report* also include: Péter Bauer, Szilárd Benk, Győző Eppich, Péter Gál, Zoltán Gyenes, Áron Horváth, Éva Kaponya, András Komáromi, Mihály András Kovács, Zsolt Lovas, Zsuzsa Munkácsi, Benedek Nobilis, György Pulai, Róbert Szemere, Tímea Várnai, Barnabás Virág. Other contributors to the analyses and forecasts in this *Report* include various staff members of the Economics Analysis and Research and the Financial Analysis and the Financial Stability Department.

The *Report* incorporates valuable input from the Monetary Council's comments and suggestions following its meetings on 11 February and 25 February 2008. The projections and policy considerations, however, reflect the views of staff in the Economics Analysis and Research and the Financial Analysis Department and do not necessarily reflect those of the Monetary Council or the MNB.

Contents

Overview

In the February update, the central projection is for inflation to be above target throughout the entire forecast period

The February central projection, which is based on the assumption that the January monetary conditions, i.e. an exchange rate of EUR/HUF 256 and a base rate of 7.5%, remain constant, is for inflation to be around 6% in 2008 and slightly above 3.5% in 2009. Economic growth is expected to be 2% this year, before gradually edging up to approximately 3% in 2009.

Overall, the risks around the central projection to inflation are broadly balanced, while those to growth are on the downside. A potentially stronger-than-expected slowdown in the global business cycle, causing international commodity prices to fall, poses a downside risk to both inflation and growth. In addition, inflation may be lower than the central projection if the disinflationary effects of the slowdown in domestic economic activity are greater than expected. However, if expectations become stuck above the inflation target, this could pose an upside risk to inflation.

There appears to be increasingly more marked adjustment in the labour market in order to restore corporate profitability

Earlier *Reports* stressed the importance of wage adjustment in the context of meeting the inflation targets. According to more recent data, firms are increasingly adjusting through their wage and price decisions, in order to avert further deterioration in profit margins. The increase in skilled workers' minimum wage in early 2008 will hinder this moderation in the rate of wage growth, but the need to adjust will be underlined by weaker-than-expected business conditions. Consequently, despite of a fall in the number of employees, real wages are expected to grow slightly in 2008.

Growth prospects are worse looking forward…

Expectations of businesses and households suggest that economic agents anticipate an increasingly sluggish recovery in domestic economic activity. The deteriorating outlook for growth in developed economies is casting a shadow over the prospects of the Hungarian export sector; and, on the other hand, improvement in domestic activity remains uncertain, due to the absence of a turnaround in retail sales and investment.

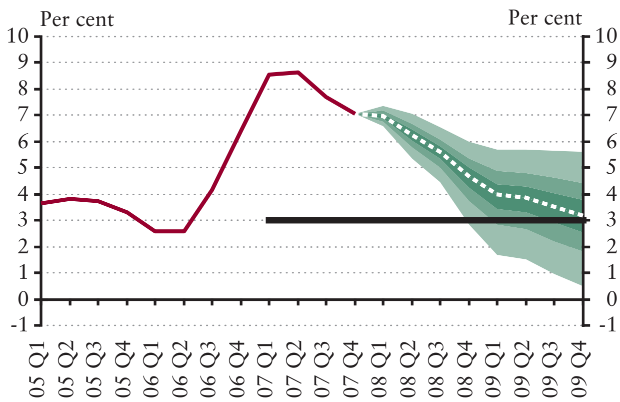
The subdued pace of real wage growth, coupled with a fall in employment, is likely to drag on household consumption growth. The outlook for investment has deteriorated recently, due to weakening external and domestic business conditions, as well as rises in credit spreads. In addition, the slower-than-expected growth of Hungary's external markets is a negative factor with regard to the outlook for the country's export sector. Overall, the economy is likely to pick-up at a very slow pace.

The fiscal adjustment measures have led to a significant improvement in Hungary's external position, in addition to contributing to the slowdown in economic growth. The external financing requirement may be lower than previously expected, as growth in domestic absorption is likely to be more muted than earlier over the entire forecast period. But, looking forward, the further improvement in external imbalance, in combination with subdued investment spending and economic growth, may pose a risk to longer-term sustainability.

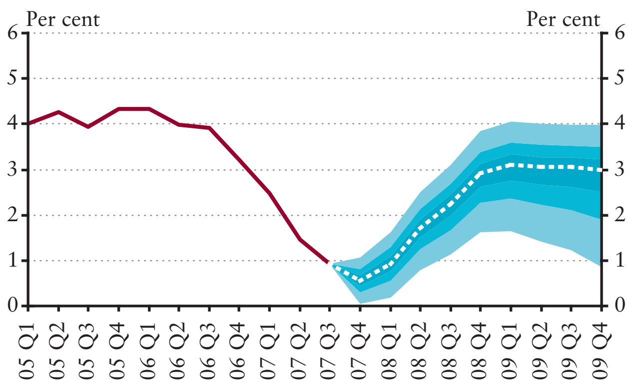
...and rising energy prices are likely force firms to raise prices more than expected over the entire forecast period

Despite a general loosening in labour market conditions and lower aggregate demand, inflation prospects have also deteriorated since November. One explanation for this is that, after a series of adverse cost shocks since the summer of 2006 (increases in tax and contribution rates as well as hikes in administered prices, linked to the fiscal adjustment measures, and then, from the summer of 2007, the sharp rise in unprocessed food prices), firms are currently facing more upward pressure on costs. The sharp rises in energy costs have both international and domestic origins. Imported inflation has risen due to the historically high price of crude oil, while the stronger-than-expected upward pressure from electricity prices due to changes in regulations is a shock of domestic origin. Prices are likely to rise more strongly than previously thought, due to (i) the high rate of increase in energy costs; and (ii) the accumulation of adverse cost shocks over the past two years.

Inflation fan chart



GDP projection



Summary table of the central projection

(The forecasts are conditional: the main scenario represents the most probable scenario which applies only if all the assumptions presented in chapter 3 materialise; unless otherwise specified, percentage changes on previous year.)

	2005	2006	**2007**	**2008**	**2009**
	Actual		**Projection**		
Inflation (annual average)					
Core inflation[1]	2.2	2.4	**6.0**	**5.2**	**3.6**
Consumer price index	3.6	3.9	**8.0**	**5.9**	**3.6**
External demand (GDP-based)	2.1	3.9	**3.5**	**2.5**	**2.5**
Fiscal impact on demand[2]	-0.9	2.6	↓	↔	↓
Household consumption	3.6	2.1	**-2.3**	**0.0**	**1.3**
Gross fixed capital formation	5.3	-2.8	**-0.5**	**3.5**	**5.1**
Domestic absorption	1.3	1.1	**-0.6**	**0.8**	**2.7**
Exports	11.5	18.9	**14.5**	**10.5**	**9.6**
Imports[3]	6.8	14.5	**12.1**	**9.4**	**9.5**
GDP	4.1 (4.3)*	3.9 (4.0)*	**1.3**	**2.0**	**3.0**
Current account deficit					
As a percentage of GDP	6.8	6.5	↓	↓	↓
EUR billions	6.0	5.8	↓	↓	↓
External financing requirement					
As a percentage of GDP	6.0	5.7	↓	↓	↓
Labour market					
Whole-economy gross average earnings[4,8]	8.8	8.2	**8.0 (7.3)**	**6.8 (6.4)**	**5.2**
Whole-economy employment[5]	0.0	0.7	**0.2**	**-0.6**	**-0.4**
Private sector gross average earnings[6]	6.9	9.4	**9.1 (8.0)**	**7.8 (7.1)**	**6.8**
Private sector employment[5,8]	0.3	0.9	**1.0**	**-0.6**	**-0.6**
Unit labour costs in the private sector[5,7]	2.8	4.4	**8.0**	**3.4**	**2.7**
Household real income	3.3	-1.5**	**-3.2**	**1.3**	**1.7**

[1] For technical reasons, this indicator may temporarily differ from the index published by the CSO; over the longer term, however, it follows a similar trend. [2] Calculated from the augmented (SNA) balance; a negative value means a narrowing of aggregate demand. [3] As a result of uncertainty in the measurement of foreign trade statistics, from 2004 the actual import figure and current account deficit/external financing requirement may be higher than suggested by official figures or our projections based on such figures. [4] Calculated on a cash basis. [5] According to the CSO LFS data. [6] Data including the effect of whitening, consistent with headline CSO data. [7] Private sector unit labour cost calculated with wage indicator excluding the effect of whitening and the changed seasonality of bonuses. [8] For 2008 wages, the numbers in brackets refer to wages excluding the effect of whitening and the changed seasonality of bonuses, which are directly comparable with those in the November Report.

** Data adjusted for working-day variations are shown in brackets.,** MNB estimate.*

↑ *We are of the opinion that this particular forecast is expected to be higher than what is contained in the November 2007 Report.*

↓ *We are of the opinion that this particular forecast is expected to be lower than what is contained in the November 2007 Report.*

↔ *We are of the opinion that this particular forecast is expected to be about the same as what is contained in the November 2007 Report.*

1. Latest developments at the macroeconomic level

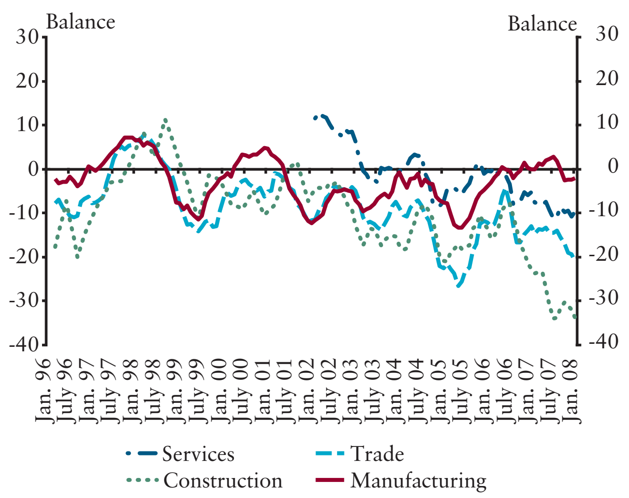
1.1. QUESTIONTABLE SIGNS OF A TURNAROUND IN ECONOMIC GROWTH

GDP data for Q3 2007 have reinforced our earlier expectations that the deceleration in economic growth may have bottomed out in the second quarter. However, while we previously expected a marked domestic recovery in the second half of last year as the primary effects of the fiscal measures wore off, the data on economic activity and expectation surveys since November indicate that the negative effects of adjustment may persist longer than expected. The estimate for Q4 GDP growth also support this view. Preliminary data indicate 0.7% year-on-year growth in the final quarter (data adjusted for working day and calendar effects), after 1% in previous period, and the quarterly growth rates stagnated below 1%.

Chart 1-1

Change in business confidence indicators

(Three-month rolling averages)



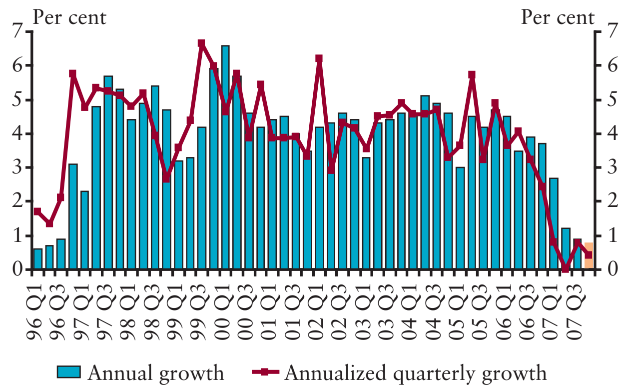
Source: EUROSTAT.

Economic growth has been driven primarily by the export-oriented manufacturing sector. As import growth has remained moderate due to falling domestic demand, external trade made a historically strong contribution to growth through net exports. In respect of domestic factors, household consumption dropped further in the second half of the year, as a result of continuously worsening household income prospects (recent pick-up in inflation, declining employment). In addition, changes in construction production indicate that no significant turning point can be expected in investment despite the considerable amount of EU funds received. At the same time, slack government demand and a decline in agricultural production generated a negative growth contribution.

Chart 1-2

Economic growth in Hungary*

(Quarterly data, quarterly growth based on seasonally adjusted data)



* *Latest data is a preliminary estimation of CSO.*

1.2. UNCERTAINTY ABOUT THE SLOWDOWN IN EUROPEAN ECONOMIC ACTIVITY

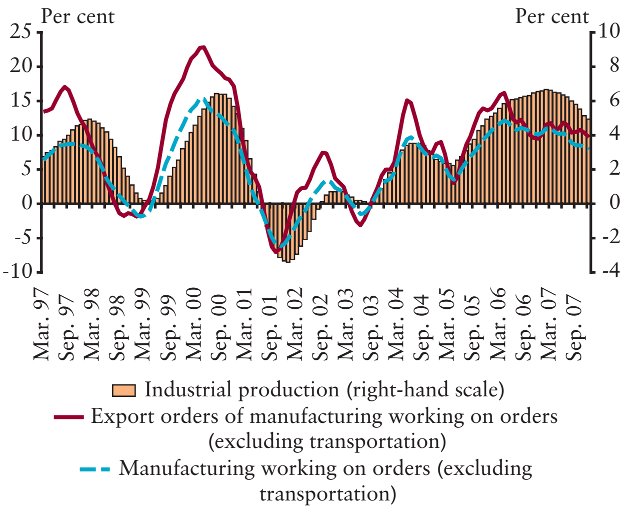
The past quarter saw an increasing deterioration in the prospects for global activity. The financial turbulence originating from the sub-prime mortgage market in the USA may cause a considerable setback for the US economy which, in turn, may have a negative effect on the European economic outlook. Nevertheless, the latest statistical data on European economic growth do not indicate a significant deceleration. While euro area and German industrial activity slowed in Q4 2007, the growth rate remained at historically high levels.

At the same time, the growth of industrial production in Hungary has been slowing since the middle of last year. The reason for this drop in growth is a gradual slowdown in export sales, which could not be counterbalanced even by the rise in domestic sales which started from the second half of the year. This increase in domestic sales was not caused by a recovery but by a one-off factor: higher sales in the energy industry (electricity, gas, steam and water supply).

Chart 1-3

German industrial production and new export orders

(Annual change calculated from trend)

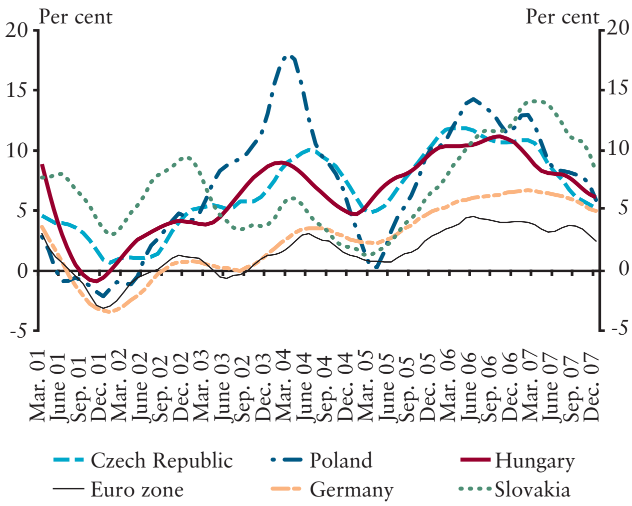


Source: EUROSTAT.

Chart 1-4

Industrial production in the region and the euro area

(Annual change calculated from trend)



Source: EUROSTAT.

Decelerating production ahead of the euro area industrial slowdown seems to be a general tendency in the region. This apparent contradiction can be explained by the fact that, as we indicated in our previous *Reports*, the region's industrial exports consist mainly of intermediary goods and therefore are linked to an early phase of the European vertical chain of production. Hence, it may be possible that deceleration in the region precedes a decline of industrial production in Western Europe to a certain extent. However, in the case of Hungary, subdued investment growth may be limiting foreign sales from the capacity side as well.

After an upturn in the middle of the year, growth in exports of goods and services slowed down. Due to weak domestic demand, however, a more significant drop was recorded in imports. As a result, net exports continued to be the only positive factor behind economic growth. As Hungarian exports are increasingly linked to Central and Eastern European countries where economic growth is faster-paced, and because there is no indication yet of a significant deceleration of economic activity in Europe, we do not expect a major downturn in export dynamics over the short run.

1.3. A FURTHER FALL IN WHOLE-ECONOMY INVESTMENT

Although 2007 saw a slight turnaround following a substantial decline in the previous year, the latest investment data appear to be less favourable than expected.[1] Furthermore, orders and construction industry production data indicate that no quick upturn can be expected in investment. The reason for the considerable decline in construction industry production is a drop in government investment and infrastructure construction, mainly due to the fiscal austerity package, and, to a lesser extent, to unfavourable tendencies in the real estate market.

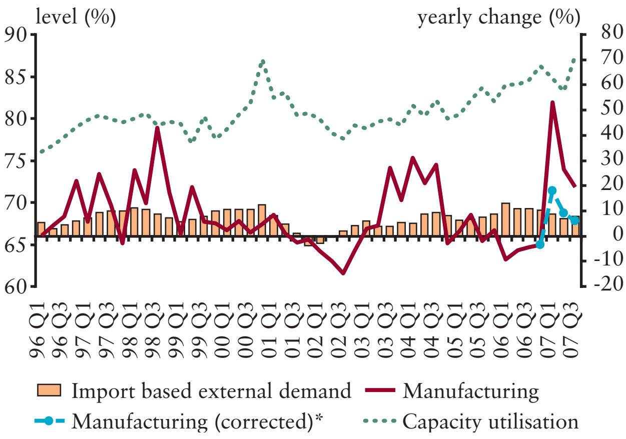
The distribution of investment by sectors continues to be extremely heterogeneous: investment grew in export-oriented manufacturing, while investment activity declined in other sectors. Moreover, contrary to the pick-up in the business cycle, the increase in manufacturing, primarly machinery investment is mainly attributable to a large investment in one sector, the rubber industry, which means that the investment growth is not widespread throughout the sector. Apart from this sub-sector, our estimates suggest that

[1] Instead of gross fixed capital formation data according to GDP statistics, our analyses rely on detailed sectoral investment data. In our view only the latter can provides information about the extremely heterogeneous sectoral investment tendencies.

Chart 1-5

Investment and capacity utilisation in manufacturing

(Annual change)



* *Investment data adjusted for a one-off effect in the rubber industry.*

manufacturing investment growth will be weaker than in earlier periods of upturn in Europe. Thus, growth in manufacturing – especially in the export-oriented sectors – can only be accomplished if capacity utilisation reaches a historic peak.

Companies providing products and services mostly for the domestic market clearly exhibited weak investment activity, the primary reason for which was a decline in domestic demand due to the fiscal adjustment and expectations which continue to be unfavourable.

Housing investment, which represents one-quarter of all economic investment, continued on the downward path which started at the beginning of 2005 without any significant adjustment. The upturn experienced in the first half of 2007 is expected to be temporary. Developments in real household income, household expectations, which have not any shown significant improvement, and a slowdown in credit-growth also seem to support this expectation.

The downturn in investment – as a result of budgetary consolidation – was strongest in the government sector. Funds from EU funds have not yet produced an upturn, but this year's statistics may indicate how they are used and accounted for.

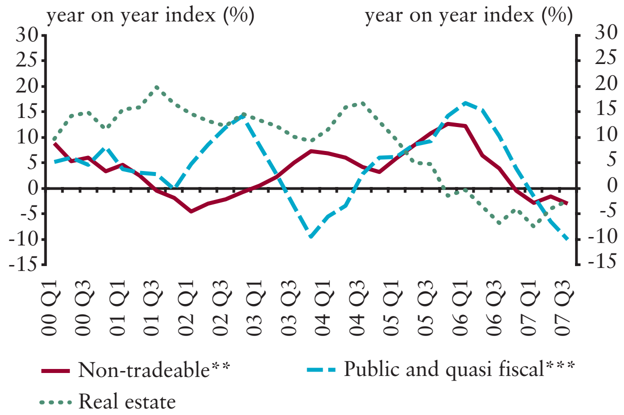
1.4. DECLINING CONSUMPTION DEMAND

In line with the assumptions of the latest *Report,* household consumption expenditures declined less strongly than real income in the second half of 2007. This means that

Chart 1-6

Investment in various sectors of the national economy*

(Four-quarter rolling average)



* *Annual average volume indices are weighted averages of four consecutive year-on-year volume indices, where weights are base period current price values.*

** *Excluding energy, transport and other social, community and personal services.*

*** *Including energy, transport and other social, community and personal services.*

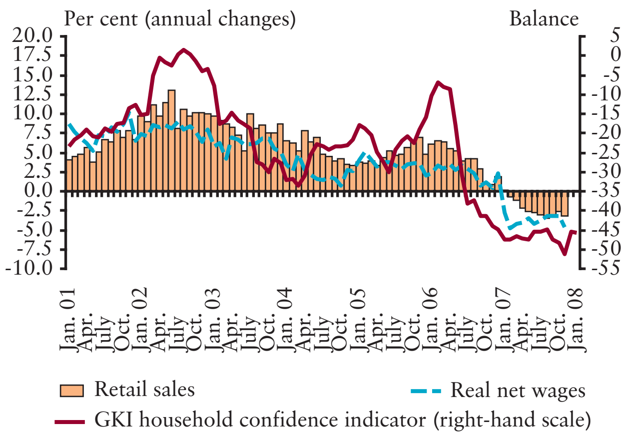
households attempted to counterbalance the effects of the drop in real income partly by taking out loans and by relying on previous savings.

Surprisingly, however, the data indicate that no significant change occurred in the consumer confidence indicator or the annual dynamics of retail sales. Therefore there may be no considerable turning point in household demand, or it may occur later than expected. On the income side, a change in real wages that appears to be more unfavourable than

Chart 1-7

Development of retail sales and the GKI consumer confidence indicator

(Annual change)



previously thought (re-accelerating inflation, a decrease in employment) as well as the unfavourable long-term income outlook render our expectations concerning the strength of the turning point rather uncertain.

1.5. LABOUR MARKET: WAGE ADJUSTMENT AND INITIAL SIGNS OF EMPLOYMENT ADJUSTMENT

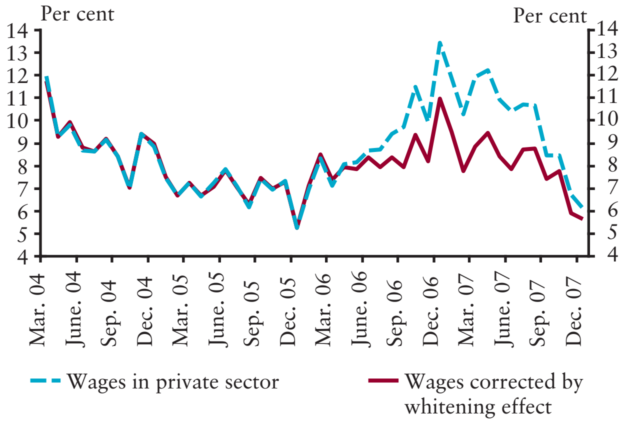
The November *Report* assumed that over the short-term companies – especially in the service sector – will attempt to restore profitability by limiting their bonus payments. As for long-term adjustment, we assumed that profit would be regained mostly by reducing wage payments and, to a lesser extent, by reducing employment. Moreover, we assumed that while companies would be able to arrest the decline in profits, they would not be able to gain a profit on labour comparable to levels before the implementation of the fiscal austerity package.

The data received since the last *Report* corroborated our hypothesis of adjustment through bonuses, because bonus payments have fallen over the past four months. A favourable development from the point of view of inflation is that wage adjustment via the reduction of bonus payments was especially strong in the market service sector. So far, there seems to be no slowdown in regular wage growth, neither in the month-on-month index nor in the year-on-year index. However – in keeping with our earlier assumptions – this may only be possible when wages are set for this year. Overall wage adjustment in gross average earnings was stronger than our previous expectation.

Chart 1-8

Wage development in private sector*

(Annual change)

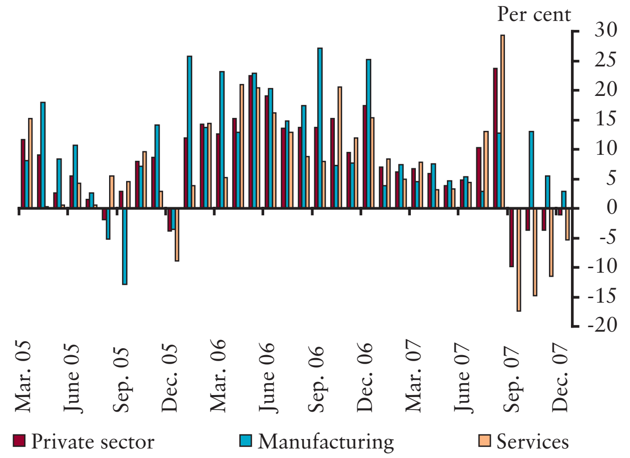


* *Bonuses were redistributed according to their historical seasonality if there were shifts in pay-offs between month.*

Chart 1-9

Change in bonus payments*

(Annual change)



* *Bonuses were redistributed according to their historical seasonality if there were shifts in pay-offs between month.*

Box 1-1: Effect of OÉT (National Interest Reconciliation Council) agreements on wages

The National Interest Reconciliation Council (OÉT) agreed on raising gross wages by 5.0-7.5 percentage points on average in 2008. This box looks at the extent to which this agreement may be consistent with the MNB's wage forecast for 2008. In addition, we will briefly address the representative force of the agreements and will look at the extent to which agreements in the past provided information about actual wage increases.

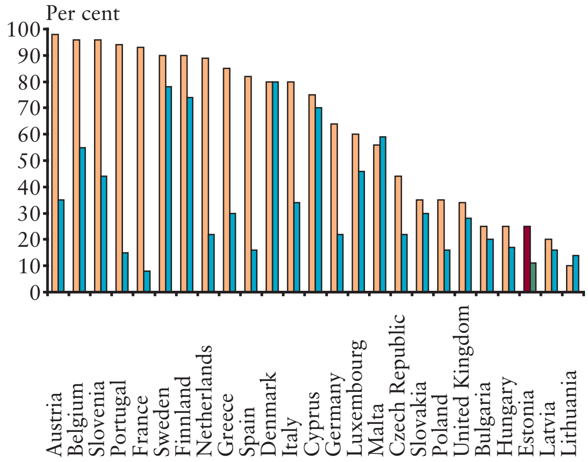
In Hungary, the process of wage negotiations is decentralised in nature. Wage agreements concluded by OÉT are not mandatory and serve primarily as a guideline. The representative force of participating employee interest representation bodies is low by European standards.[2] Therefore, it is not surprising that based on the micro data agreements do not seem to have a strong supportive effect for wages.[3]

[2] The same may apply to employer interest representation bodies as well, although there are no official statistics about their representational force.

[3] The distribution of wage raises does not indicate that a significantly large number of employees would receive wage increases that correspond to the minimum, maximum or median amount of wage increase specified in the OÉT agreement.

Chart 1-10

Collective bargaining coverage and the proportion of employees in unions in Europe

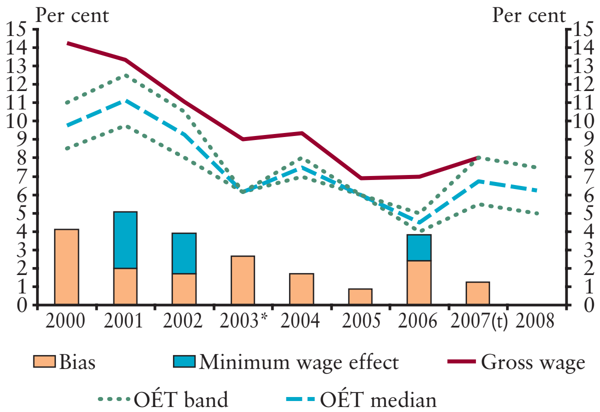


Source: ETUI-REHS.

Nevertheless, it is interesting to note that actual wage increases in the past correlated with the agreements, although this may be so purely because the negotiating interest representation bodies were adequately informed.[4]

Chart 1-11

OÉT wage agreements and gross wages



*Gross wages: time series adjusted with the effect of the minimum wage and of efforts to "whiten" the economy (i.e. to make it transparent); deviations as a percentage of the agreed amount; *: the wage agreement of 2003 pertained to net real wages; here we projected deviations from it to gross real wages; (t): fact estimate.*

In addition to the correlation, it is apparent that gross wage increases in the past were always higher than the median value of the band proposed by the OÉT. After 2000 the difference stood at around 1.0-2.5%, but in some years the difference was clearly higher. This consistently positive difference can be explained in several ways: partly by statistics and partly by how wages are determined.

Statistical distorting factors

– A distortion of this kind may be caused in part by changes in the composition of workplaces. The diminishing weight of low-wage sectors and an increase in the number of white collar workers have raised the wage index by an average of 0.5 per cent each year since 2002. In addition, the composition of workers within sectors may also have changed.

– *Deferred effect:* Because wage increases occur all year round and not only in January, the annual average wage in each year is affected by wages in the previous year as well. In addition to the fact that wage dynamics typically fell up until the middle of the decade, this deferred effect reduced average wages in the base year to a greater extent than in the year concerned, and thus distorted annual indexes upward compared to actual increases.

The effect of how wages are determined

– *Increases in the minimum wage:* Distortion was stronger in years when the minimum wage was raised significantly. Consequently, we assume that the wage increase proposed in the agreement between the parties was understood as a proposal pertaining to wages that were not affected by such measures. By filtering out the estimated value of these shocks (see the chart above), these years also show the usual deviation.

– *Mid-year wage adjustments:* Several companies perform additional wage increases in the course of the year, and we assume that they consider the OÉT agreement as a recommendation for the wage increase rate that is to take place at the beginning of the year. As wage raises became less and less frequent, this effect naturally lost its force.

– *Unexpected shocks:* The deviation can also be explained by unexpected shocks that occur in the course of the year (productivity, inflation, etc.). The available data indicate that this effect is also more apparent in the bonuses, which are easier to change in the course of the year, than in the more inflexible regular wage component.[5] Growth in regular wages correlates to the OÉT proposal to a greater

[4] The members of the OÉT, and corporate leaders, responsible for private wage policy, may have similar view on macroeconomic processes.

[5] Data pertaining to regular wage components have been available only since 2003.

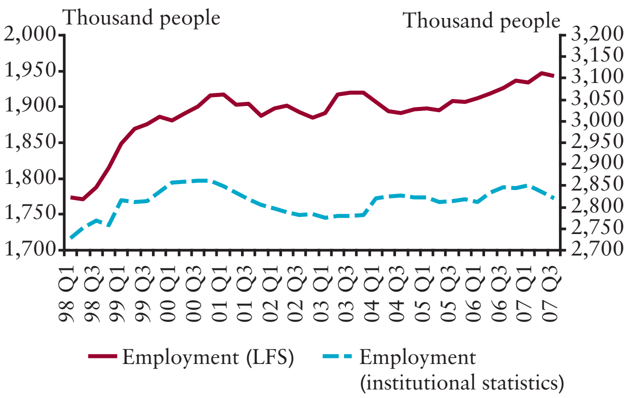
extent than the total wage index. The difference due to a change in bonuses correlates with labour-related profit dynamics.

In the case of the wage agreement for 2008, two factors may result in significant deviation from past experience. On the one hand, the raise in the guaranteed minimum wage in January 2008 might increase the gap: we estimate its additional wage-increasing effect in the range of approximately 0.5-1.9%, with a high degree of uncertainty.[6] On the other hand, the gap may be further reduced, as companies may be less likely to deviate upwards from the agreement amidst unfavourable economic conditions. Nevertheless, based on the aforementioned reasoning, we assume that actual wage increases will approximate the upper limit of the OÉT agreement rather than fall in the middle band which, overall, confirms our wage forecast for 2008.

Employment in the private sector decreased amongst companies employing more than 5 persons, while the LFS survey, which includes small enterprises as well, indicates stagnation. Sectoral data indicate that the differences in tendencies can be explained by changes in the number of employees in one sector, namely the construction industry. In manufacturing – in line with slower production – the number of employees fell somewhat in the second half of the year. The market service sector, which experienced a higher rate of profit loss, also showed the first signs of employment adjustment in Q3 2007. The increasing employment trend of the past years has been clearly broken in this segment and employment numbers have started to stagnate. On the other hand, the number of working hours reached a historic low point, possibly also indicating that a drop in the number of employees will occur at an earlier date than suggested in our forecast.

Chart 1-12

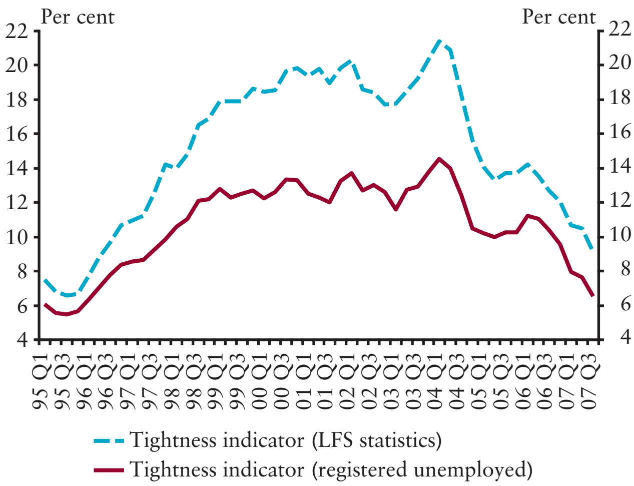
Employment in the private sector



Government employment has been declining continuously in the last few months, and as a result labour usage stood at a historically low level. Overall, flow data at the level of the national economy also corroborate our previous expectations regarding the loosening of the labour market. A decrease in active workers at the beginning of the year gave way to stagnation. Consequently, a drop in the number of employees in the second half of the year resulted in an increase in unemployment. Due two the formerly mentioned factors, the 'tightness measure' decreased further.

Chart 1-13

Development of tightness indicators



1.6. ACCELERATION INSTEAD OF DECELERATION IN YEAR-END INFLATION DATA

In Q4 2007, inflation and core inflation moderated somewhat according to previous quarter data. Inflation and core inflation declined from 7.7% to 7.1%, and from 5.1% to 4.7%, respectively. Even so, both indicators remained at a higher level than indicated in our short-term projection.[7] In addition, according to monthly data both indicators show a re-acceleration of inflationary processes after October. The clear reason for this is an increase in the price of processed foods. The global food-price shock caused inflationary pressure not only in Hungary, but in the region and in the euro area during the last four months of 2007.

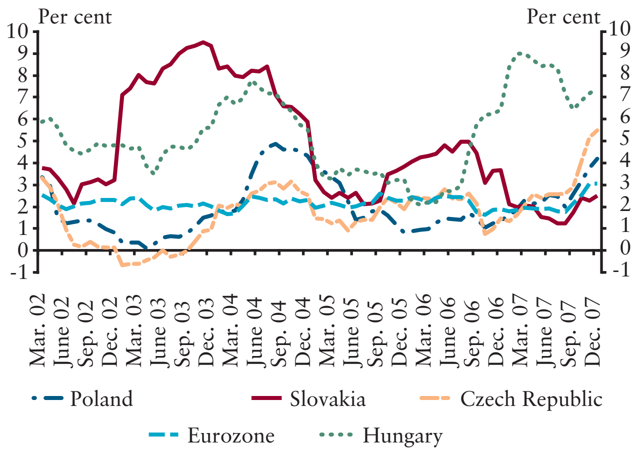
[6] We assume that the average wages of employees who are affected by an increase of the guaranteed minimum wage would have increased at a rate corresponding to the median value of the OÉT agreement, had it not been for this measure. High uncertainty is caused by the difference between macro and micro level estimates.

[7] In line with our expectations the January data show moderate deceleration in inflation, but the price changes of processed food exceeded our short-term projection.

Chart 1-14

Consumer price index in region

(Annual change)



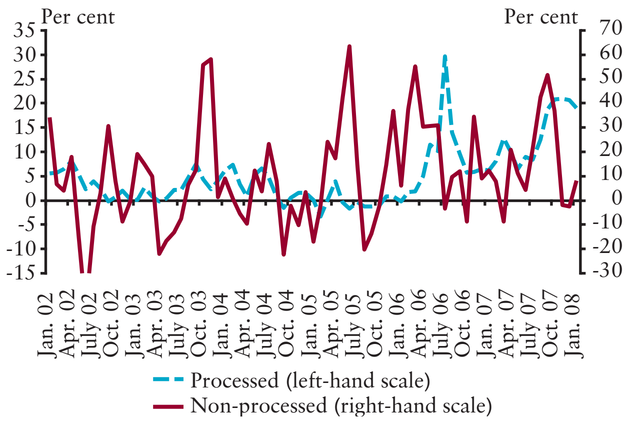
Source: EUROSTAT.

The end of the year saw positive changes in the price of foods, and this development was the major cause of inflation in the past six months. The price level of unprocessed foods no longer increased starting from November. This may be an indication that the first large wave of the agricultural price shock had an impact on inflation. However, with regard to processed foods, which represent a greater weight in the index, prices increased at a higher rate than expected each month, and so far no significant change can be expected in the time series. Nonetheless, according to our expectations change will begin to appear as well as in this group in early 2008, and it is possible that excess global demand for agricultural items may result in a change in the historical correlation between processed and unprocessed food prices.

Chart 1-15

Inflation trend and the price of processed foods*

(Seasonally adjusted, annualised monthly change)



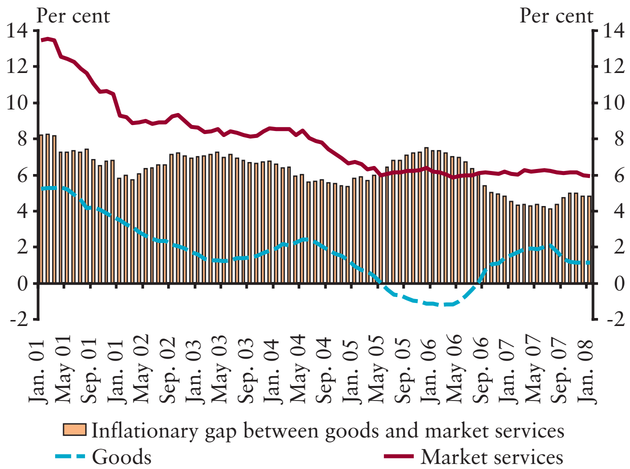
** Excluding effects of VAT changes.*

The inflation of goods and market services was in line with our expectations. In 2007, the annualised quarterly price increase of market services, adjusted for VAT and visit fee effects, stood at 6 per cent while in the case of manufactured products this indicator showed a moderate decline[8].

Chart 1-16

Inflation of market services* and manufactured products**

(Annual change)



** Excluding effects of VAT changes and the introduction of visit fee.*

*** Excluding effects of VAT changes.*

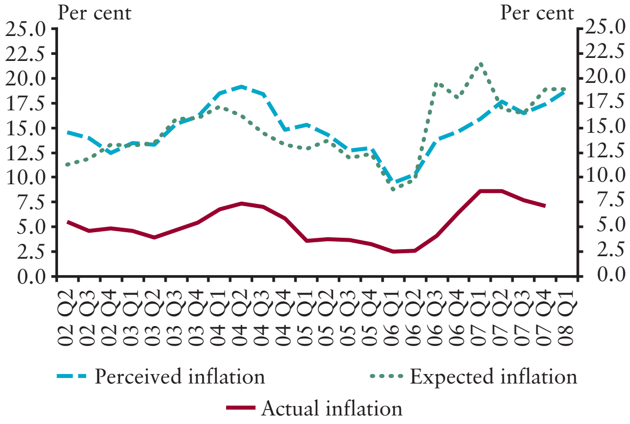
[8] The January month on month inflation rate of market services was surprisingly low. We'll need additional data to decide whether it is a temporary or permanent tendency.

The 12-month forward-looking inflation expectations of households remained stable in Q1 2008, after a significant increase in Q4 2007. Perceived inflation in the last 12 months rose further. Both indicators are at historically high levels. However, there is a positive development in that inflation expectations no longer exceed perceived inflation.

Chart 1-17

Perceived and expected inflation of households

(Annual change)

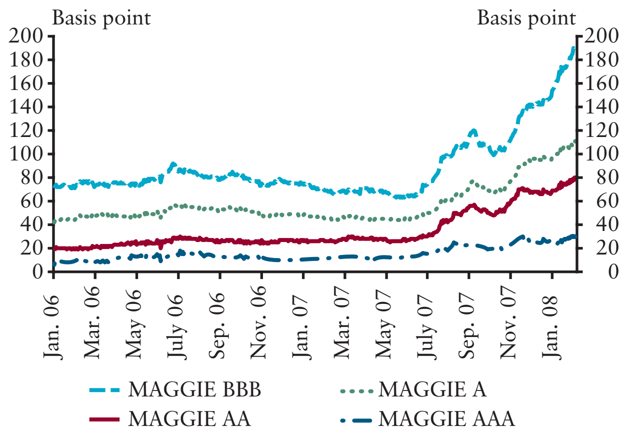


2. Financial markets

Market sentiment in recent months, and consequently the price of domestic assets, was determined by the market expectations related to the losses in the US sub-prime mortgage lending market, the slowdown in the US economy and the reaction of the central banks. Since the November *Report*, overall business confidence and investors' risk tolerance have decreased further. The continued increase in risk premiums led to considerable devaluation, especially for higher risk assets with lower credit ratings.

Chart 2-1

Maggie credit spreads*



* *Indicators of euro-denominated debt premiums broken down by credit rating.*

Source: J. P. Morgan.

News on losses sustained by large investment banks in the US sub-prime mortgage lending business and the related derivative financial products was frequent on the markets in the past few months. The lack of confidence between banks significantly increased the price of interbank lending and, as a result, uncertainty still pervades the interbank dollar and euro market. Central banks attempted to bring down the high money market interest rates by liquidity enhancing transactions, first independently, then, starting from December, in a concerted effort. Although the steps taken by the central banks mitigated the tension in the money markets, they were unable to restore the lower interbank premiums that were typical prior to August. In the meantime, growing demand for safe government securities and increasing expectations of interest rate cuts kept the yields of short-term government securities at low levels.

The first wave of capital withdrawal from risky assets (e.g. shares and higher risk corporate bonds) in August, related to the crisis in the sub-prime mortgage lending market, was

Chart 2-2

ECB policy rate, 3-month euro interbank deposit and treasury bill yields

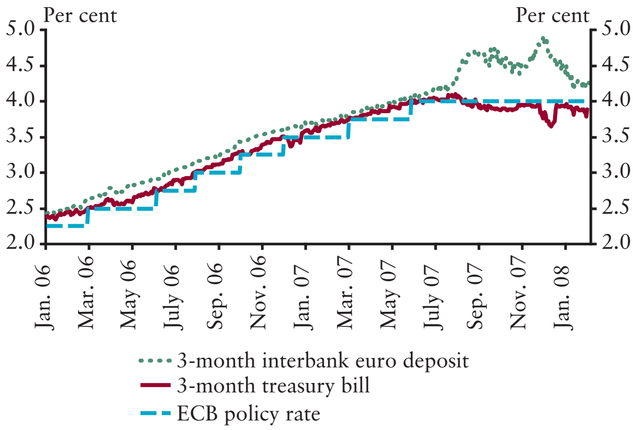
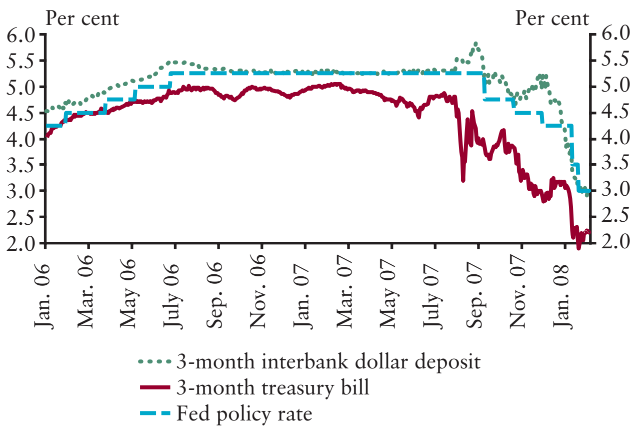


Chart 2-3

Fed policy rate, 3-month dollar interbank deposit and treasury bill yields



followed by two more waves in November and January. Data from the US real estate market indicated a continued weakening of the sector. Although activity surveys in the autumn suggested that the slump would be limited to industries connected to the real estate sector, the extremely weak labour market and business confidence indicators at the end of December exacerbated recession fears. As a decline in consumption in the USA has an impact on the economic output of other countries as well through exports, this contributed to the strong drop in global equity market prices. Recently disclosed bank write-offs for losses indicate that financial institutions underestimated their exposure, and may continue to sustain significant losses in the future. The price losses on financial sector equities also contributed to the fall of stock exchange indices.

Although the Fed declared in the autumn that the upside risks to growth and the downside risks to inflation were symmetrical, it also emphasized the increasing uncertainty, and after November the emphasis shifted to the risks to growth. While core inflation, both in November and December, was higher than the Fed's comfort zone, the US central bank expects core inflation to be moderated by slowing growth, and therefore in the Fed's view it is more necessary to mitigate the impact of tighter lending conditions on the real economy.

Between November and February, the Fed cut its target rate by 150 basis points, half of which took place at two regular meetings, whereas the remaining 75 basis point cut was decided at an unscheduled meeting, following panicky stock market selling in January. On the back of mounting recession fears, another 100 basis points of monetary easing has been priced in until mid-summer. The negative economic outlook is also apparent from the fact that the US government is proposing measures – mostly tax-rebates – which they hope will mitigate the decrease in household consumption. In respect of prospective global market sentiment and investors' willingness to assume risk, a key issue is to what extent the falling real estate prices in the US and tighter lending conditions will affect the real economy, via corporate investment and household consumption.

Since the November *Report,* European stock markets also recorded considerable price decreases despite the fact that the economic prospects in the region are more favourable than in the USA. Due to market turbulence, the possible effects of the US slowdown and tighter lending conditions, confidence indicators in Europe also fell, albeit not to the extent seen in the US. At the same time, however, due to an increase in energy and food prices, inflation in the euro area reached a multi-year high. Early on, the European Central Bank highlighted the risks of inflation in its communications, although it also pointed out the uncertainty surrounding the outlook. Markets, however, priced out the interest rate hike that had been expected up to then and started to expect an interest rate cut in the coming months. As a result of the mounting fears of an economic slowdown, increasingly strong emphasis has been placed on risks to growth in the ECB's communication in 2008, leading to further easing expectations.

The central banks of Central and Eastern Europe were forced to adopt strict monetary policy, due to the decrease in global risk appetite and rising inflation on the back of higher-than-expected rise in energy and food prices. While in Hungary this resulted first in the postponement, later in the disappearance of the expected interest rate cuts, central banks in the Czech Republic, Poland and Romania raised interest rates, and markets have priced in further monetary tightening. The base rate has not been changed in Slovakia, as inflation expectations have risen the least in this country.

As a result of the waning risk appetite, the region's foreign exchange rates fell significantly in November and January. After depreciation of the forint in November, the Hungarian currency regained some strength, moving from EUR/HUF 259 to EUR/HUF 251. There was no significant change until the middle of January. In the course of the January sell-off, however, the Hungarian forint weakened to an exchange rate of EUR/HUF 260, and – following a temporary strengthening – it further weakened to EUR/HUF 267 during the market turbulence in February. This represents depreciation of 6.4 per cent compared to the exchange rate at the beginning of November, and a 5.5 per cent devaluation relative to the exchange rate at the beginning of 2008. The forint underperformed the other currencies of the region which did not weaken to such a notable extent.

Chart 2-4

Forint/euro exchange rate

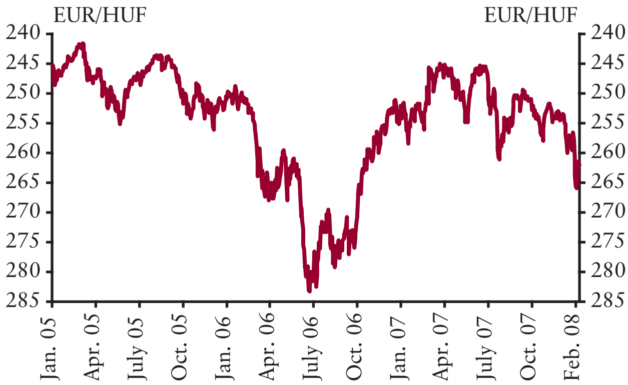
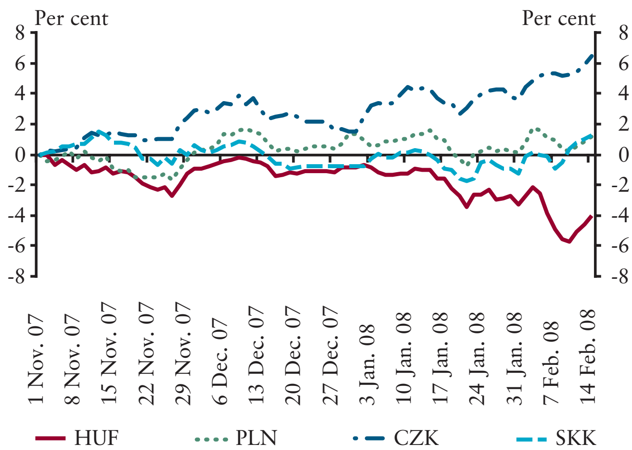


Chart 2-5

Exchange rates of CEE currencies*

(1 November 2007 = 0)

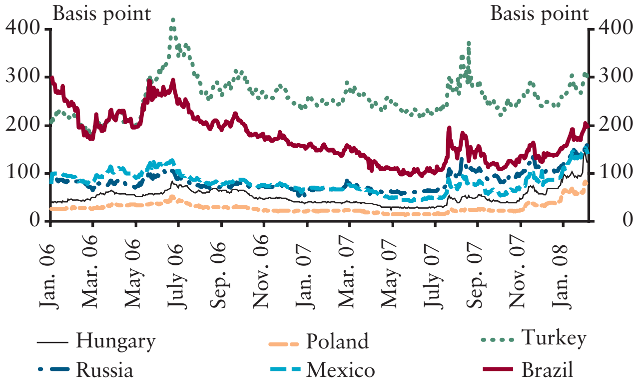


** Positive values indicate appreciation vis-à-vis the euro.*

The deterioration in the region's perceived risk was also reflected in the increasing price of credit default swap (CDS) prices. The prices of these derivative products, which provide coverage for non-payment in relation to the foreign currency denominated bond of a given country, were considerably higher during the November turbulence than the summer peak in the case of Hungary and Poland. However, during the January sell-off they reached twice that value. During the unfavourable global market sentiment at the beginning of February the CDS price of emerging countries increased further.

Chart 2-6

10-year CDS in selected emerging market countries

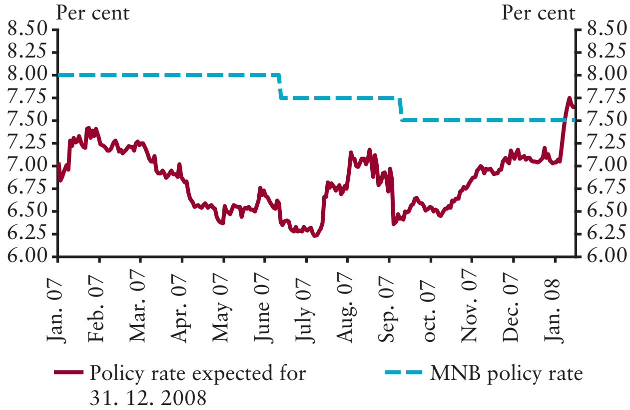


The forward forint interest premium, compared to long-term euro yields, did not reflect the deterioration of the perceived risk of Hungary until the end of December. In January though the long-term interest rate premium exceeded the summer figures. At the same time, the long-term yields of the countries in the region fell, similarly to long euro yields, and their interest premiums did not increase significantly in January either.

Because of the postponement of interest rate cut expectations, short-term forint yields also rose. Due to the apparently persistent deterioration in international conditions and the worse-than-expected inflation and wage data in Hungary, the interest rate cuts which were previously expected to take place at the beginning of 2008 were priced out, in line with the change in analysts' expectations. While at the beginning of November a 100 basis point interest rate cut was priced in government security yields by the end of 2008, at the end of January the market expected only a 25-50 basis point interest rate cut. The forint devaluation in February strengthened market expectations that the MNB would raise its inflation forecast due to the elevated energy price and weaker forint since the last Report, and thus

Chart 2-7

MNB policy rate and policy rate expectations for the end of 2008



markets started to price in a rate hike. The MNB base rate expected by the end of 2008 has increased by 100 basis points since the end of October.

In the past quarter, the forint foreign exchange market position of foreigners continued to fall significantly. This mostly meant a decrease in their exchange rate exposure and/or the assumption of forward positions against the forint and was not accompanied by a decrease in their asset portfolio. While the equity portfolio of foreigners fell slightly, their government bond portfolio grew – surpassing the growth of the volume auctioned by ÁKK – by approximately HUF 300 billion and reached a historic high. However, at the beginning of the forint weakening in February this tendency changed, and since then foreign investors' government bond portfolio has decreased by HUF 100 billion.

Chart 2-8

Monetary conditions

Monetary conditions have not changed significantly since the last *Report*. Although inflation was higher in Hungary than in the euro area, due to the weakening of the forint the real exchange rate has not changed substantially. The real interest rate continued to hover around the 3 per cent value typical of earlier periods. Although analysts' inflation expectations have risen since early autumn, this rise was counterbalanced by increasing short-term yields resulting from the disappearance of the formerly expected and priced interest rate cut.

3. Inflation and real economic prospects

During the review of the November Report, we adjusted our inflation expectations upward, while we saw real economy prospects tend towards a bit slower growth than in November. Assuming that monetary conditions will persist at their average January level, the consumer price index may exceed the target over the entire horizon of the forecast, until the end of 2009, due to considerable energy cost shocks.[9] In addition to increasing producers' energy costs, companies' prospects are increasingly uncertain because they face external demand which is growing at a slower rate and domestic demand which is regaining strength more slowly than expected in November. Moreover, the impact of fiscal adjustment measures on economic growth seems to be more long term. This may lead to a re-evaluation of their expected income path and may result in a stronger need to adjust. This adjustment might be stronger in every channel. On the basis of current processes, wage and employment adjustment in the labour market may be stronger and quicker than expected. Despite weak demand over the entire forecast horizon, a substantial increase in energy costs and an accumulation of past shocks on profits, companies should increase prices more than previously expected.

As a result of decreasing real wages, which are due to higher unemployment and increasing inflation, the turning point in household consumption may occur later, and over the mid-term we expect slower growth than before. At the same time, the worsening external and domestic real economy outlook, in conjunction with tightening credit conditions, may limit investment growth. Due to all these factors, we expect slower growth over the forecast horizon.

One of our basic assumptions, the increase in the price of oil, causes a significant change in our inflation prospects. The exchange rate of the forint and the dollar weakened somewhat compared to the euro, and our assumption regarding the base rate remained the same as in November.

3.1. DETERIORATING REAL ECONOMY PROSPECTS

Based on the surveys, companies' prospects are more uncertain than they were in November. On the one hand, expectations regarding the reduction of external demand strengthened, since the previous *Report* was published. Analysts are pessimistic mainly about the growth of the US economy. Based on preliminary data, US economic growth was already considerably slower in the fourth quarter of last year. In addition, analysts expect that the US economy will stagnate in the first half of this year, and that its growth will be permanently slower over a longer term in the future. The slowdown in activity in the euro area and German economy, which have a direct impact on the Hungarian economy due to the structure of the Hungarian export market, is not yet significant, but the related risks have also increased. In the

Table 3-1

Changes in our basic assumptions

	HUF/EUR	USD/EUR	BRENT (USD/barrel) futures	BRENT (USD/barrel) futures
		November 2007		
2007	250.8	1.363	71.0	13,018.0
2008	250.8	1.422	80.2	14,135.4
2009	250.8	1.422	77.0	13,566.1
		February 2008		
2007	251.3	1.370	72.5	13,249.9
2008	256.0	1.470	90.9	15,819.0
2009	256.0	1.470	88.3	15,368.0
		Difference: Feb./Nov. (%)		
2007	0.2	0.5	2.2	1.8
2008	2.0	3.3	13.3	11.9
2009	2.0	3.3	14.7	13.3

[9] Information available up to noon of the 20th of February was used in preparing the projections.

short term, however, we do not expect a drastic slowdown, as the decrease of confidence indicators (EABCI and IFO indicators) pertaining to the industrial activity in the euro area and Germany has stopped in the latest months. Nevertheless, over the entire forecast horizon, the prospects for production and export have deteriorated as well, due to worsening external outlook.

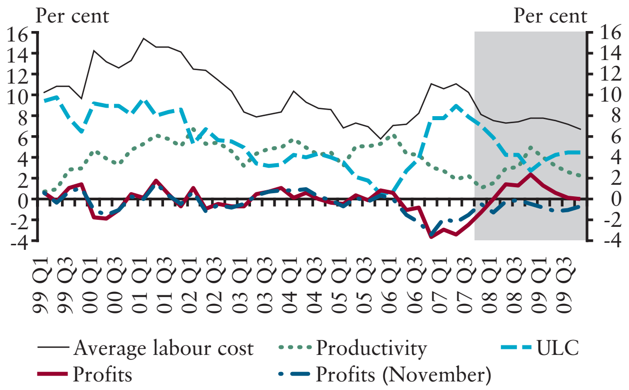
The increasingly uncertain prospects of companies are also due to the fact that they face domestic demand which is regaining strength more slowly, i.e. over the long run the budgetary adjustment may have resulted in more unfavourable growth prospects than was originally expected. This can be primarily explained by two factors: low household demand in the long term and the lack of a significant change in investment.

Both lower household expenditures on the demand side and a significant increase in electricity and gas producer prices which are expected in 2008 on the cost side contribute to a deterioration of corporate prospects. Overall, we believe that companies are under stronger pressure to adjust than in November, which will happen through all available means (price, wage and employment adjustment). On the basis of the current information such as the substantial premium decline in the second half of 2007, the decreasing number of hours worked in manufacturing and the service sector and the decreasing number of employees and vacancies in the private sector, we believe that wage and employment adjustment in the labour market may be stronger and quicker than earlier. Nonetheless, quick nominal wage adjustment is hindered by the rate of increase in the minimum wage of skilled workers and higher consumer price index.

Chart 3-1

Components of unit labour costs in the private sector

(Quarterly data, annual changes)

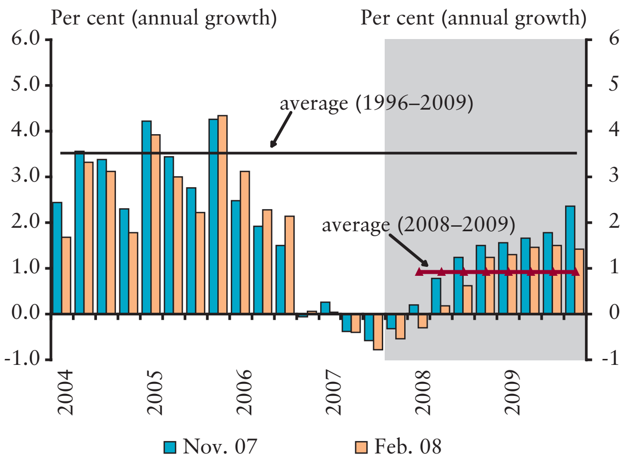


We do not see a significant change in the consumption demand of households nor in retail sales, a monthly indicator that follows changes in household consumption demand. Therefore, we assume that the change in consumption will be slower than the November forecast. This is because households may experience stronger wage and employment adjustment and considerable consumer price increases for the entire term of the forecast, as a result of which their real wages may be lower than expected. As a result, the mid-term consumption of households may grow at a slower rate than the historical average and the rate forecast in November.

Chart 3-2

Changes in our consumption forecast

(Consumption expenditure of households)



Overall, we can draw the following conclusions on the development of economic growth prospects. Lower mid-term export dynamics, caused by the gloomier export outlook, do not have a significant impact on the contribution of net export to GDP growth, because imports are expected to increase more slowly, as a result of lower domestic use.

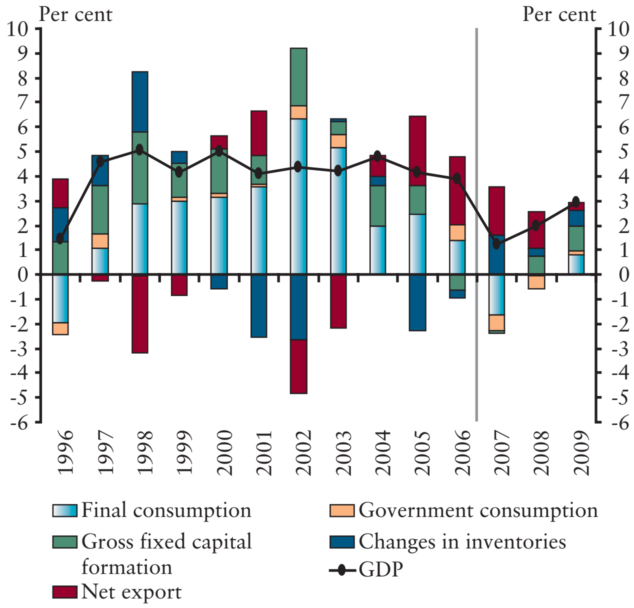
Lower expectations in the private sector (deteriorating demand and cost conditions for companies and households' lower real wage prospects) and the increase in credit spread on the international markets will result in a lower-than-expected investment growth rates over the medium term. At the same time, this may be just partially compensated for by developments financed with EU funds, which were supposedly postponed in 2007 and are expected to appear at a faster rate in the future, and additional investment in the rubber industry, as reported by the media.

In addition to investments, the slower-than-expected recovery in household consumption expenditure means that

Chart 3-3

Contribution of components to GDP growth

(Based on annual changes)



the gross domestic output may increase at a lower rate than thought in November.

3.2. FURTHER IMPROVEMENT IN OUR FORECAST FOR EXTERNAL BALANCE

In 2007, Hungary's external imbalance decreased at a rate that exceeded our expectations. A significant drop in the external financing requirement may be attributable primarily to a steep decline in the budget deficit and to the resulting slack domestic demand. We believe that some of these processes will be long term, and therefore in 2008 and 2009 risks also indicate a budgetary deficit that is lower than indicated in our previous forecast, and in the respect of household consumption we also expect a slower change. As a result of these factors, the external financing requirement may be lower than forecast for the entire term of the projection. At the same time, however, the fact that the continued improvement of the external balance may occur in conjunction with modest investment growth, and consequently without a significant change in the financing needs of companies, may pose a risk in terms of long-term sustainability.

3.3. HIGHER INFLATION PROJECTION DUE MAINLY TO THE INCREASE IN ENERGY COSTS

Due to the new path of the real economy, the incoming labour market and price information and a change in our basic assumptions, consumer prices have increased overall and are expected to remain above the mid-term target for the entire time horizon of the projection. Based on our forecast, inflation in 2008 will reach 5.9% and 3.6% in 2009. The change is primarily caused by cost side factors. Most of the significant change is due to a considerable increase in producer energy prices and regulated prices, but an increase in agricultural prices since November, primarily as a result of temporary effects, also has a considerable impact. Wage adjustment and weaker consumer demand are factors decreasing inflationary pressures.

Since the last Report, new information pertaining to energy prices has appeared in two forms in the inflation projection: on the one hand, in the increase in producer energy prices which do not fall under the consumer price index, and on the other hand in the increase in household energy prices which are a component of the consumer price index.

The reason for the increase in producer energy prices is two-fold: due to a change in the regulation of the electricity

Table 3-2

Baseline path of the inflation forecast

	2007. Q1	2007. Q2	2007. Q3	2007. Q4	2008. Q1	2008. Q2	2008. Q3	2008. Q4	2009. Q1	2009. Q2	2009. Q3	2009. Q4
Unprocessed food	16.0	9.3	12.3	17.0	13.9	9.1	1.6	-4.4	-2.9	0.5	3.1	4.3
Vehicle fuel and market energy	2.3	0.6	-2.1	7.4	14.1	8.3	5.7	2.3	-1.3	-1.3	-0.9	-1.0
Regulated prices	15.3	17.6	15.6	10.1	6.7	6.4	8.1	9.2	7.9	7.1	5.2	3.9
Core inflation*	6.4	6.7	5.9	5.2	5.7	5.7	5.1	4.3	3.9	3.7	3.5	3.3
Consumer price index	8.5	8.6	7.7	7.1	7.0	6.3	5.6	4.7	4.0	3.8	3.5	3.2
Core inflation (annual average)	6.0				5.2				3.6			
Consumer price index (annual average)	8.0				5.9				3.6			

** The indicator forecasted by us may differ from the index published by the CSO temporarily, but in the long run they follow the same tendency.*

Table 3-3

Breakdown of inflation projection change compared to November*

(Key items)

	2008	2009
Facts	++	0
Vehicle fuel	++	+
Agriculture	+	+
Imports	+	+
Producer gas + remote heat	0	+
Producer electricity	+	+
Regulated household energy	+	++
ULC	–	–
Consumption expenditure	–	0

**+, ++: upward, and strongly upward; –, – –: downward, and strongly downward; 0: no significant effect.*

market the price of producer electricity increased, and because of higher oil prices, electricity and gas prices might increase as well. In 2008, energy prices will increase at a higher rate than predicted which, due to the pass-through to consumer prices, will cause the consumer price index to be higher than we expected for the entire time horizon of the forecast.

Within regulated prices that constitute a part of the consumer price index, an increase in household energy prices (gas, electricity) – at a rate that was lower than that of producer energy prices but at a rate that is higher than expected earlier – caused a considerable increase in inflation.

On the basis of new agricultural price information received since the previous *Report* – higher-than-expected actual inflation and agricultural prices on the commodity exchange – we expect agricultural prices to rise more than expected. We believe that the reason for the additional increase since November is temporary, and therefore we have increased our inflation forecast for 2008 to a greater extent than for 2009.

One of our basic assumptions, considerably higher oil price assumption increased – not just the energy prices, but also – vehicle fuel prices, meanwhile due to a weaker exchange rate assumption, imported inflation is higher. Factors that may reduce the expected level of inflation to some extent are related to cyclical processes. Stronger wage and employment adjustment and the lower real economy path related to the more moderate consumption path of households will have a disinflationary effect over the entire time horizon of the forecast.

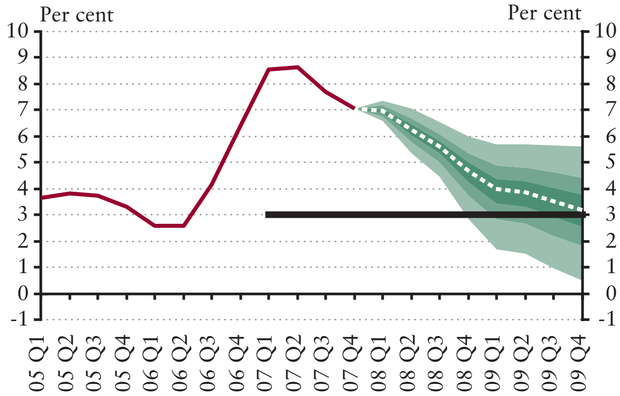
3.4. INFLATIONARY AND GROWTH RISKS

In reviewing the November Report, we confirmed the alternative scenarios that, at the time, we thought were important: higher inflationary expectations over the long term, weaker external demand, a stronger disinflationary effect of the output gap.

In 2008, the basic path of our inflation forecast will be surrounded by symmetrical, somewhat downside risks on the whole, while the upward and downward risks in 2009 will be of similar magnitude.

Chart 3-4

Inflation fan chart*



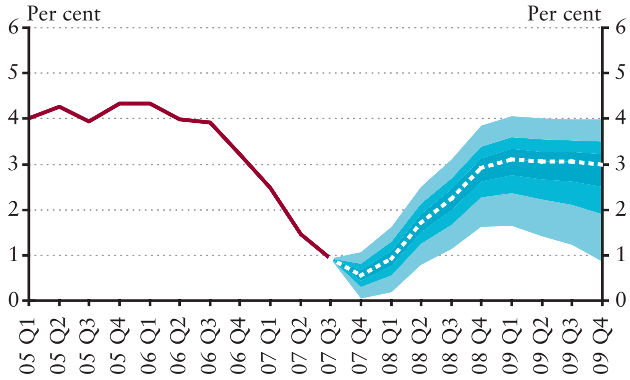
** The fan chart represents the uncertainty surrounding the basic forecast. Overall, the coloured area cover 90 per cent probability. The central, darkest area containing the basic forecast for the consumer price index (as the mode of distribution) illustrated by the white dashed line covers 30 per cent of the probability. The continuous, horizontal line from 2007 shows value of the announced inflation target.*

As a result of a permanently high consumer price inflation, the possibility of a permanent increase of inflationary expectations is an upward risk during the entire time horizon of our forecast. However, this risk is compensated by the possibility of a more moderate external demand – which will create a lower international inflationary environment – and by the possibly significant disinflationary effect of the output gap.

In the case of economic growth, the uncertainty surrounding our basic forecast for the entire time horizon of the forecast is characterised by significant downward risks. The reason for this is mostly demand factors (lower external demand), because of significant concerns surrounding mid-term economic growth in Europe and the USA.

Chart 3-5

GDP fan chart*



* *The fan chart represents the uncertainty surrounding the basic forecast. Overall, the coloured area cover 90 per cent probability. The central, darkest area containing the basic forecast for GDP (as the mode of distribution) illustrated by the white dashed line covers 30 per cent of the probability.*

Table 3-4

Changes in our forecasts compared to November 2007

	2006	2007		2008		2009	
	Actual	Forecast/Fact estimate					
		November	**Current**	November	**Current**	November	**Current**
Inflation (annual average)							
Core inflation[1]	2.4	6.0	6.0	4.6	**5.2**	3.1	**3.6**
Consumer price index	3.9	7.9	**8.0**	5.0	**5.9**	3.0	**3.6**
Economic growth*							
External demand (GDP-based)	3.9	3.4	**3.5**	2.9	**2.5**	2.9	**2.5**
Effect of fiscal demand[2]	2.6	-3.6	↓	-0.8	↔	-0.1	↓
Household consumption	2.1	-2.1	**–2.3**	0.4	**0.0**	1.6	**1.3**
Memo: Household consumption expenditure	1.9	-0.3	**x**	0.9	**x**	1.8	**x**
Fixed capital formation	-2.8	1.7	**-0.5**	4.2	**3.5**	5.5	**5.1**
Domestic use	*1.1*	*0.0*	***-0.6***	*1.2*	***0.8***	*3.0*	***2.7***
Export	18.9	15.1	**14.5**	11.6	**10.5**	10.3	**9.6**
Import[3]	14.5	13.1	**12.1**	10.3	**9.4**	10.2	**9.5**
GDP	3.9	1.6	**1.3**	2.4	**2.0**	3.2	**3.0**
Current account balance deficit							
As a percentage of the GDP	6.5	5.5	↓	5.3	↓	5.2	↓
In billion EUR	5.8	5.7	↓	5.9	↓	6.1	↓
External financing need[3]							
As a percentage of the GDP	5.7	4.3	↓	3.3	↓	2.8	↓
Labour market							
National economy gross average wages[4,8]	8.2	8.4 (7.7)	**8.0 (7.3)**	6.5 (6.1)	**6.8 (6.4)**	5.4	**5.2**
National economy employment[5]	0.7	0.4	**0.2**	-0.1	**-0.6**	-0.2	**-0.4**
Gross average wages in the private sector[6,8]	9.4	9.7 (8.3)	**9.1 (8.0)**	8.2 (7.7)	**7.8 (7.1)**	6.8	**6.8**
Employment in the private sector[5]	0.9	1.1	**1.0**	0.0	**-0.6**	-0.3	**-0.6**
Unit labour cost in the private sector[5,7]	4.4	7.0	**8.0**	4.4	**3.4**	3.0	**2.7**
Consumer real income	-1.5*	-3.0	**-3.2**	2.1	**1.3**	2.4	**1.7**

[1] For technical reasons the indicator in our forecast may be temporarily different from the index published by the Central Statistical Office; however, the two follow the same tendency in the long term. [2] Calculated on the basis of the so-called supplemented (SNA) type of indicator; negative values mean the reduction of aggregate demand. [3] Due to the uncertainty of measuring, which is related to the foreign trade statistics, starting from 2004 the actually realised import number and the current account balance deficit/external financing demand may be higher than the official numbers and than our forecasts, which are based on such numbers. [4] On a cash basis. [5] According to the labour force survey conducted by the Central Statistical Office. [6] According to the original Central Statistical Office data which also contain the effect of 'whitening' the economy. The data adjusted for the effect of 'whitening' are shown in brackets. [7] The specific labour cost of the private sector was calculated on the basis of a 'whitened' wage indicator which was adjusted for the changed seasonality of bonuses. [8] For 2008 wages, the numbers in brackets refer to wages excluding the effect of whitening and the changed seasonality of bonuses, which are directly comparable with those in the November Report.

** MNB-estimate.*

↑ *In our view the expected path of the given variable indicates a higher forecast than indicated in the November Report.*

↓ *In our view the expected path of the given variable indicates a lower forecast than indicated in the November Report.*

↔ *In our view the expected path of the given variable indicates a forecast that is similar to the November Report.*

4. Evaluation of our inflation forecast for 2007

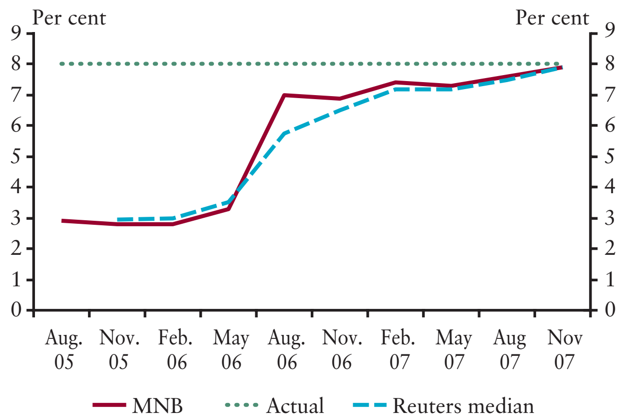
Since 2003, at the beginning of each year we have reviewed the extent to which our earlier inflation forecasts for the previous year reflected the actual outcomes. Continuing in this tradition, this chapter compares our 2007 forecast to the data actually recorded, in order to explore the factors that may have caused the discrepancy and to look at the lessons to be learned so as to improve our ability to make forecasts.

We issued forecasts for 2007 inflation on a total of 10 occasions since August 2005.[10] At the beginning of this period – between August 2005 and May 2006 – we forecasted inflation at around 3 per cent which was consistent with the inflation target. In the middle and at the end of the period – between August 2006 and November 2007 – we published forecasts at around and in excess of 7 per cent which was considerably higher than the inflation target. Overall, however, our forecasts were always lower than actual inflation. At the same time, it is true that the difference was much larger in the first third of the period (5 percentage points on average) than later (0.6 percentage points on average). Although it is natural that as time passes – simultaneously with the accumulation of information for the given year – forecasts for the given year improve. Nevertheless, the aforementioned discrepancy is unusually large. The reason is that the two periods were determined by very different processes.

At the beginning of the period, up until May 2006, disinflationary processes were prevalent. Part of the reason was that commodity market competition intensified after accession to the EU, imported inflation fell, and inflationary expectations were more moderate. In addition, the tax cut programme, which was announced in 2005, rendered a further disinflationary impulse more likely. At the same time – without being able to express it numerically in our forecasts – it was obvious that the planned budgetary/macroeconomic path was unsustainable. Starting from the middle of 2006, processes pointing towards a higher rate of inflation became more pronounced. The most important component was the announcement and implementation of a budgetary adjustment program which played a major role directly, as well as indirectly by increasing corporate costs and inflationary expectations.[11] In addition, the weakening exchange rate of the forint and increasing oil prices also contributed to a higher rate of inflation. The labour market also adjusted to the aforementioned events, which resulted in a higher rate of unit labour cost increase. And finally, starting from the middle of 2007, the shock-like increase of agricultural and food prices worldwide also significantly contributed to inflation.

Chart 4-1

Forecasts of average inflation in 2007 by MNB and analysts participating in the Reuters survey



The average absolute error in the MNB forecasts for the entire period was somewhat smaller (2.1 percentage points) than the error of the median of analysts who participated in the Reuters survey (2.3 percentage points).[12] However, the overall picture is the same: initially, both the market analysts and MNB forecasted inflation around the target and later much higher than the target. The only period when the difference between the two teams of analysts was significant is August 2006. By this time the budgetary adjustment measures had been announced, but based on the numbers, market analysts only gradually incorporated the effect of the measures into their forecasts. It is also typical that the greatest standard deviation of the forecasts of market analysts occurred at the same time, in the summer of 2006, which means that the assessment of the inflationary impact of the measures was uncertain.

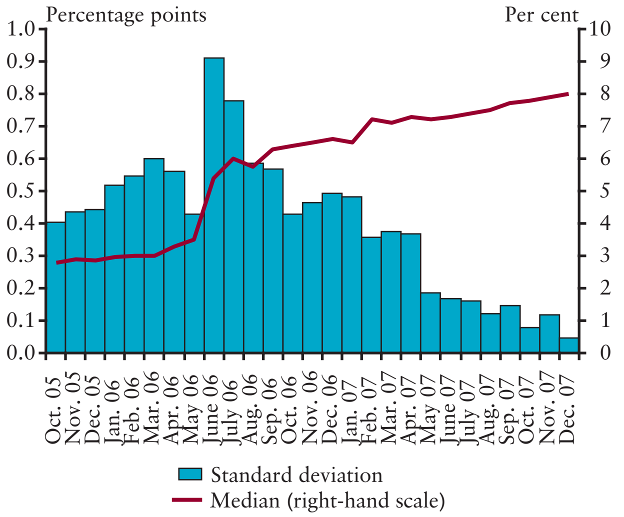
[10] We examine the effectiveness of our inflation forecast for 2007 on the basis of the annual average change. At the same time the question may arise as to why we do not analyse the change that took place in December or in the fourth quarter or the annual index of all four quarters in 2007. The reason is that since August 2005 only forecasts of the annual average were available in all reports. In addition, the 3 per cent constant inflation target can be best compared to the annual average indicator.

[11] Although the series of measures raised inflation overall, a disinflationary effect is also apparent due to a decline in household consumption demand.

[12] For the purposes of this calculation we considered only the period between November 2005 and November 2007, because in August 2005 the Reuters survey did not contain a question regarding average inflation in 2007.

Chart 4-2

Forecasts of average inflation in 2007 by analysts participating in the Reuters survey



Nevertheless, there is not much to learn simply from the discrepancy between the MNB's earlier forecasts and the actual results. The reason is that the error in the forecast may have been caused by several factors that could not be taken into account when the projection was produced. Such factors are the government measures that were announced later (e.g. a significant increase of regulated prices compared to the trend, the effect of changes in VAT rates), and a change in our basic assumptions (in respect of the price of oil and foreign exchange rates). If we adjust our earlier forecasts with the inflationary effect of the deviation of the aforementioned factors – which are exogenous for the purposes of the forecast model – from what was assumed, we arrive at a hypothetical forecast that would have been given if the subsequent path of exogenous factors had been known: in other words, we can uncover the actual error in the model (i.e. the error that cannot be explained on the basis of exogenous factors). The hypothetical prognoses, defined above, were around 6 per cent until May 2006, and then stood at 7 per cent or more. The modelling error for the entire period was 1.1 percentage points in respect of the consumer price index and 0.7 percentage points in respect of core inflation. In order to judge the seriousness of this modelling error we must take into account two factors. On the one hand, the modelling error constitutes half of the entire forecast error which means that a change in exogenous factors compared to what was expected – especially in the period between the middle of 2005 and the middle of 2006 – explains a significant portion of the entire forecast error. On the other hand, the modelling error in respect of the average consumer price index for the past year may be comparable to similar errors in the past. Because we calculated a forecast error in respect of the average inflation only for 2005, the current data can only be compared to that number. Overall, the 0.9 percentage point modelling error that was recorded at that time is not significantly different from the current 1.1 percentage point error.[13]

Chart 4-3

MNB forecast and fact pertaining to average consumer inflation in 2007

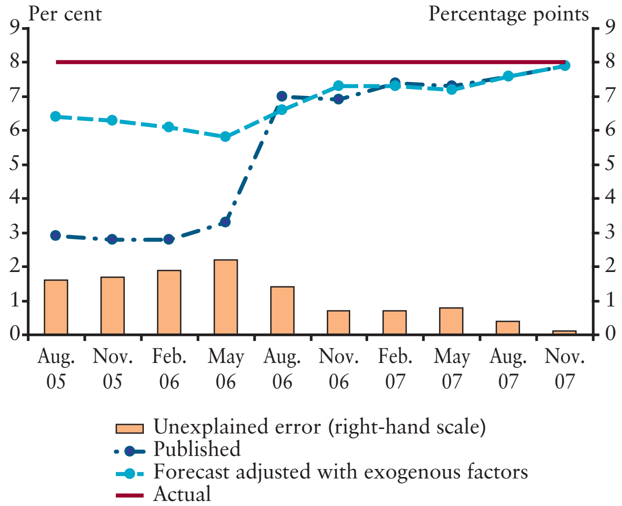
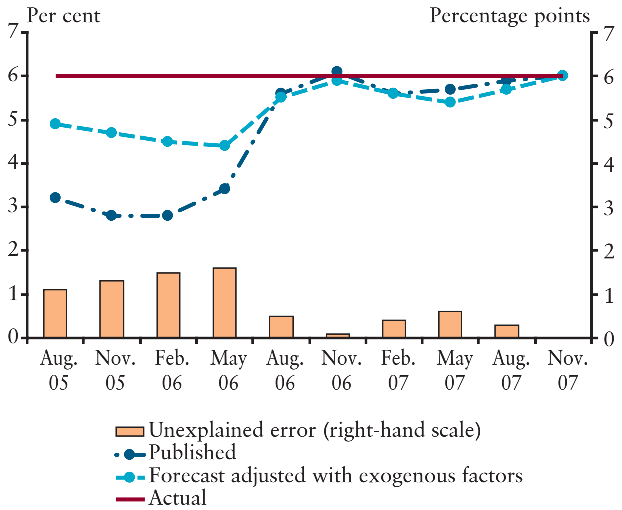


Chart 4-4

MNB forecast and fact pertaining to average core inflation in 2007



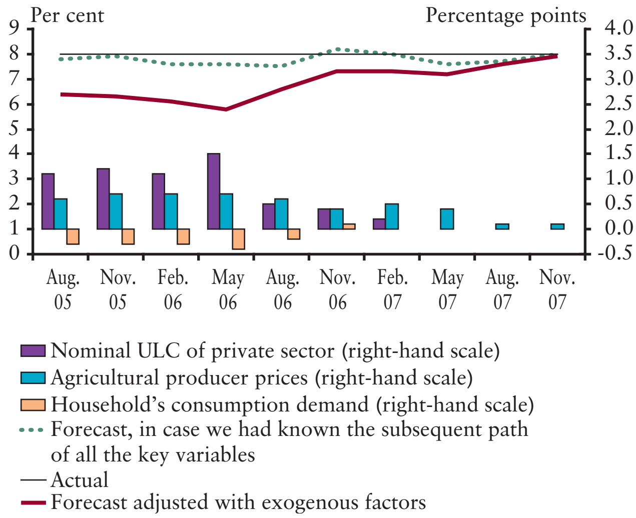
It is also interesting to see how much our forecasts would have improved if we had known the subsequent paths of other factors that played a key role in the inflation forecast

[13] It may, however, be worth noting that the above calculation only makes an assumption about the primary effects of certain exogenous factors. For example, the possible secondary effect on inflation of the government's adjustment package may become apparent in the modelling error.

and cannot be considered exogenous and for which, therefore, we have to make forecasts to the best of our knowledge. There are three such key variables which are endogenous for the purposes of the forecast process: the consumption demand of households, the nominal unit labour costs of the private sector and agricultural producer prices. The consumption demand of households was typically less than we had previously forecasted; however, unit labour costs and agricultural producer prices increased at a higher rate than we had anticipated. The forecast error regarding the consumption demand of households and unit labour costs significantly decreased starting from the second half of 2006, after the budgetary adjustment measures became known. On the other hand, the forecast error of agricultural producer prices persisted until the middle of 2007 when the price of agricultural commodities rose in a shock-like manner both globally and regionally, and therefore this factor contributed significantly to our modelling error. In summary, if we had known in advance the subsequent paths of key endogenous and exogenous variables, our forecasts would have approximated the fact very well. It seems, therefore, that our current modelling methods are able to identify the driving forces behind domestic inflationary processes. At the same time this analysis illustrates that, for example, adjustment processes in the labour market and changes in agricultural producer prices need further understanding and thus pose a significant challenge for the future.

Chart 4-5

Simulated effects of key endogenous indicators on the forecast



Quarterly Report on Inflation
– update –
February 2008

Print: D-Plus
H–1037 Budapest, Csillaghegyi út 19–21.