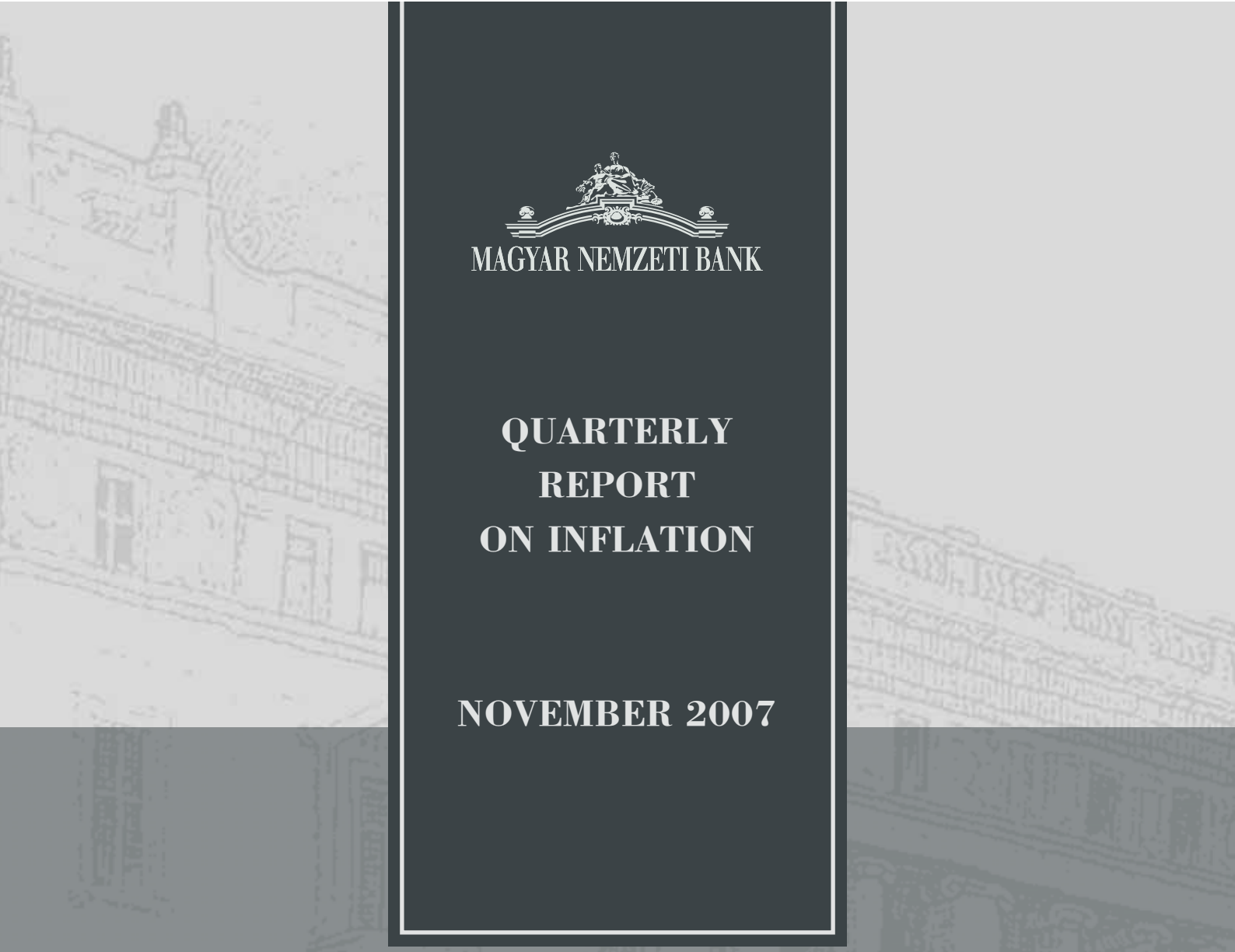

MAGYAR NEMZETI BANK

QUARTERLY REPORT ON INFLATION

NOVEMBER 2007

Quarterly Report on Inflation

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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, Gergely Kiss and Barnabás Virág. The *Report* was approved for publication by Ferenc Karvalits, Deputy Governor.

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The *Report* incorporates valuable input from the Monetary Council's comments and suggestions following its meetings on 5 November and 26 November 2007. 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

The current projection is that inflation will decline more slowly than previously anticipated; CPI inflation is expected to be near the target in 2009

Under the assumption of no change in the average monetary conditions for October (i.e. an exchange rate of EUR/HUF 250.8, and a base interest rate of 7.50%), the November 2007 Report projection envisages inflation gradually declining to nearly 5% in 2008 and to around 3% in 2009, with the rate of economic growth forecast to remain below 2% this year, and then gradually edge upward above 3% by 2009.

The negative cost shocks of the past year are unlikely to generate sustained inflationary pressure, as economic growth remains well below capacity

The Hungarian economy has been hit by a series of cost shocks since the summer of 2006. The consumer price index was initially pushed up by increases in tax and contribution rates as well as hikes in administered prices, linked to fiscal adjustment, and then, from the summer of 2007, by the sharp rise in unprocessed food prices. The central inflation projection is based on the assumption that no persistent inflationary pressure will build up in response to the recent cost shocks. One principal reason for this is that the economy is likely to grow below capacity over the entire forecast period. In such an environment, the corporate sector will have only a limited ability to pass cost increases on to consumers. This, in turn, suggests that firms will only partially be able to offset lower profit margins, by restraining wage growth and cutting back employment slightly.

Inflation, however, is likely to decline more slowly than assumed at the time of the August Report. There are three reasons for this. First, commodity futures prices and forecasts by international institutions indicate that the rise in unprocessed food prices will persist for a longer period. Second, wage adjustment is likely to be more prolonged than previously assumed. In addition, stronger increases in producer energy prices point to slower disinflation relative to the August projection.

The profile for economic growth is weaker than in the August Report

Data for recent months has dampened the outlook for economic growth. Although the contractionary effect on domestic demand of the fiscal adjustment is likely to diminish over time, up to now no signs of a marked turnaround in economic activity have been observed in the latest data. A potential worsening in external business conditions may act as a drag on the pace of domestic recovery over the longer term.

There are upside risks to inflation; and risks to growth are weighted to the downside

There are significant factors of uncertainty in the current inflation projection. For example, if the adverse price shocks of the past year feed through to expectations to a degree, it may point to inflation above the central projection. In addition, the corporate sector might offset the past declines in profit margins more aggressively by raising prices. This scenario is particularly likely if the expansion of economic capacity in the past few years has been slower than assumed in the central projection, because the current slowdown in growth will then cause the output gap to be narrower than expected.

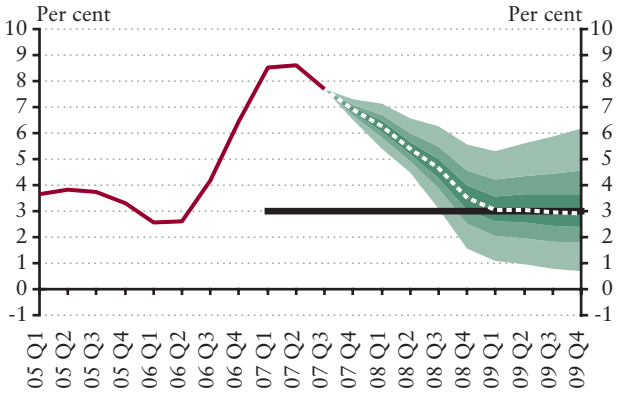
By contrast, if economic activity in Europe slows more strongly than expected due to second-round effects of the crisis on the US sub-prime mortgage market, and if world commodity prices turn sharply lower, this may lead to inflation below the central projection. Under this scenario, the rate of Hungarian economic growth may be much slower than assumed in the central projection.

In sum, there are upside risks to inflation and downside risks to growth, relative to the current central projection.

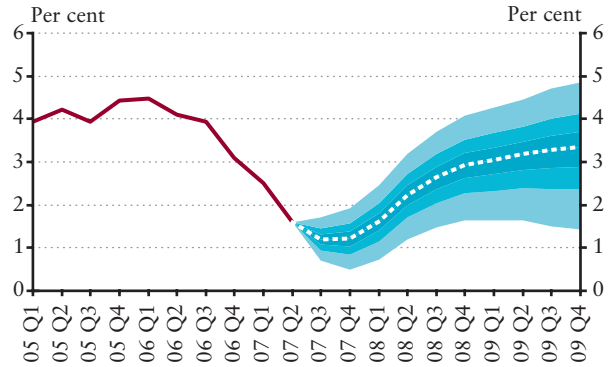
The deficit reduction target agreed as part of the Convergence Programme may be met in 2007-2008; but in 2009 further government actions might be necessary

The general government deficit on an accrual basis may be lower in both 2007 and 2008 than the level indicated in Hungary's Convergence Programme of 2006. However based on the main scenario and the asymmetric distribution of risks with a bias towards a higher deficit, further government actions may be necessary in order to safely meet the target for 2009.

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 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	4.6	3.1
Consumer price index	3.6	3.9	7.9	5.0	3.0
Economic growth*					
External demand (GDP-based)	2.1	3.9	3.4	2.9	2.9
Fiscal impact on demand[2]	-0.9	2.6	-3.6	-0.8	-0.1
Household consumption	3.7	1.9	-2.1	0.4	1.6
Gross fixed capital formation	5.3	-2.1	1.7	4.2	5.5
*Domestic absorption****	*1.4*	0.4	0.0	1.2	3.0
Exports	11.5	17.9	15.1	11.6	10.3
Imports[3, ***]	6.9	12.4	13.1	10.3	10.2
GDP	4.1 (4.3)**	3.9 (4.0)**	1.6	2.4	3.2
Current account deficit[3, *]**					
As a percentage of GDP	6.8	6.5	5.5	5.3	5.2
EUR billions	6.0	5.8	5.7	5.9	6.1
External financing requirement[3, *]**					
As a percentage of GDP	6.0	5.7	4.3	3.3	2.8
Labour market					
Whole-economy gross average earnings[4]	8.8	8.2	8.4	6.5	5.4
Whole-economy employment[5]	0.0	0.7	0.4	-0.1	-0.2
Private sector gross average earnings[6]	6.9	9.4	9.7	7.7	6.8
Private sector employment[5]	0.3	0.9	1.1	0.0	-0.3
Unit labour costs in the private sector[5, 7]	2.8	4.7	7.0	4.4	3.0
Household real income	3.6****	-1.5****	-3.0	2.1	2.4

[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-flow basis. [5] According to the CSO labour force statistics, however, due to the change of the method the data is not directly comparable with the previous published one. [6] Data including the effect of whitening, consistent with headline CSO data. [7] Private sector unit labor cost calculated with wage indicator excluding the effect of whitening and changed seasonality of bonuses.

** Our analyses and forecasts are based on the quarterly data of the GDP flash report published by the CSO on 7 September. In the summary table we have indicated changes in volume during the period in question relying on the same publication. Let us point out, however, that the figures contained in the CSO publication entitled 'Gross Domestic Product 2006 (second estimation)' since published deviates from the numbers shown in this table as regards certain partial aggregates. For the latter, however, we do not have quarterly data to use for our prognosis.*

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

**** Our projection for 2007 includes the impact of the Hungarian Army's Gripen purchase, which raises the current account deficit and increases community consumption and imports.*

***** MNB estimate.*

1. Inflation and its determining factors

1.1. Real economic activity

Historically low economic growth, uncertain turning point

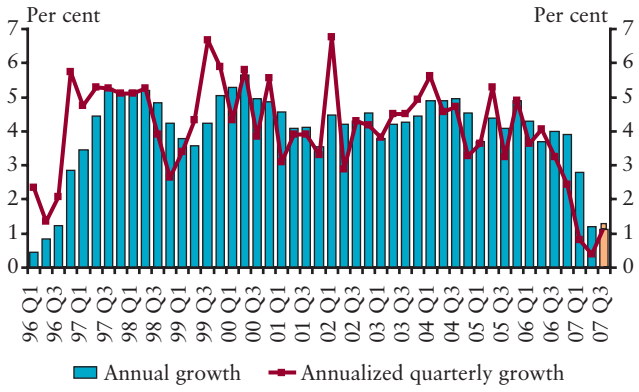
In 2007 H1, the Hungarian economy was characterised by a strong deceleration in growth dynamics. In the second quarter, growth (adjusted seasonally and for calendar effect) amounted to 1.6 per cent, resulting in a total 2.1 per cent expansion for the first six months of the year, compared to the same period of the previous year.[1] According to the preliminary Q3 data,[2] economic growth has also continued to decelerate. However, the slowdown which started at the beginning of last year seems to come to a halt, as the quarter-on-quarter growth rate has risen for the first time in the last one and a half years. This slight turning point is in line with the recent developments of the main determinants (consumption, investment) of domestic demand.

Despite the favourable international environment, the growth trend has been slowing steadily since 2005, and in the second quarter of the year, it declined to a level which has not been experienced since the fiscal adjustments in 1995.

Chart 1-1

Annual and annualised quarterly GDP growth rates

(Seasonally adjusted data)



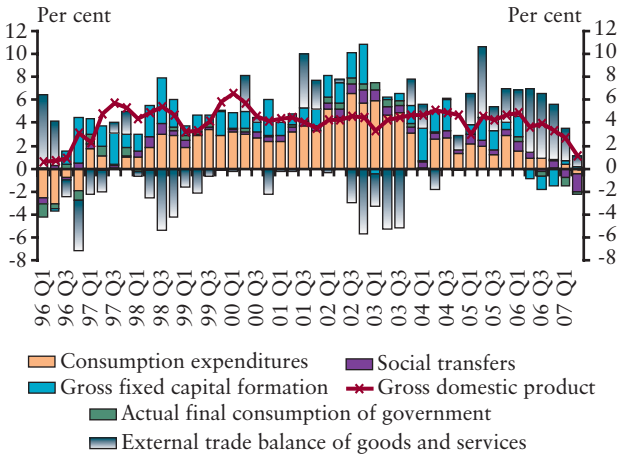
Note: The 2007 Q3 data is based on the preliminary data of the CSO.

The composition of growth is still characterised by different external and internal developments in economic activity. The vigorous external economic activity favourably influences Hungary's growth opportunities via the rapid increase in exports, while the main reason for the decelerating economic growth is still waning domestic demand. This latter is the consequence of the direct effects of government measures, reflected in the fall in government consumption, social transfers and government investment, and of the indirect effects thereof, which moderate economic growth. Household consumption and investment demand have declined as a part of the indirect impacts of fiscal adjustments, which have reduced households' disposable income, and this year's deterioration in domestic sales prospects, together with the increase in companies' tax and contribution burdens, has also undermined investment by sectors typically producing and providing services for the domestic market.

Chart 1-2

Contribution of the main expenditure side items to the annual growth of GDP

(Seasonally adjusted data)



Note: The contributions of changes in inventories are not shown. This item and the effect of using chain indices may cause the total GDP to differ from the sum of the contributions.

The various sectoral effects of government measures can be observed on the production side as well. The effects of the decline of the public sector are significant both in production and in value added. The output of the public services has declined in consequence of the adjustment measures. Meanwhile, the expansion of the private sector has fallen below 3 per cent. The largest declines in the private sector were experienced in construction and agricultural activities. However, the weak performance of construction is also mainly the result of a reduction in public investment, i.e. the decrease in infrastructural constructions, though construction

[1] According to raw data, compared to the same period of the previous year, the expansion of the economy amounted to 1.2 per cent and 1.9 per cent in the second quarter and in the first part of the year, respectively.

[2] According to the preliminary GDP growth data published by the CSO, the economy has expanded by 1.2 per cent, adjusted seasonally and for calendar effect, while the raw data has risen by 1.0 per cent. The margin of error of the statistical estimate's reliability is ± 0.2 percentage point.

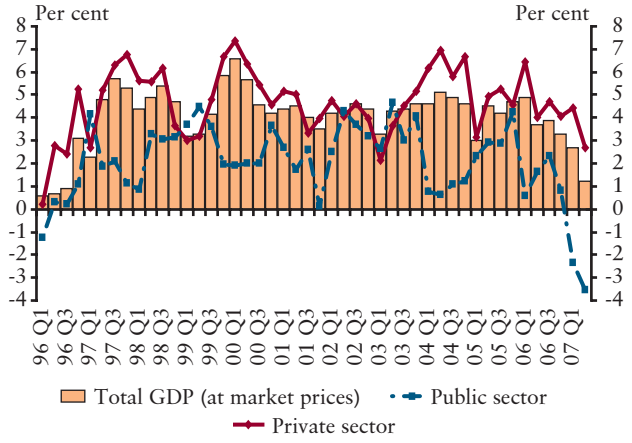
of buildings have also considerably declined.[3] Agricultural production fell considerably due to the unfavourable weather conditions. In spite of the small weight of these sectors, both reduced the dynamics of economic growth significantly. In addition, the value added of market services was characterised by a slight decline in growth, which is in line with the domestic demand reducing effect of real incomes falling as a result of the fiscal adjustments. These unfavourable tendencies could only be partly offset by manufacturing, which is dynamically growing as a consequence of the favourable external economic environment.

Hungarian economic growth lags significantly behind its competitors in the region, and has also been lower than growth in the Euro Area since end-2006. Hungary's average 2 percentage point growth surplus vis-à-vis the expansion of the Euro Area observed in the past turned into a more than 1 percentage point growth deficit in the second quarter. The main underlying explanation for this performance, which is unfavourable in international comparison, is the different dynamics of domestic economic activity. While domestic use in Hungary fell, mainly as a result of the fiscal adjustments, domestic use in other countries showed an above-GDP increase or its magnitude was similar to that.

Chart 1-3

Value added in the private and public sectors

(Annual growth calculated from seasonally adjusted data)

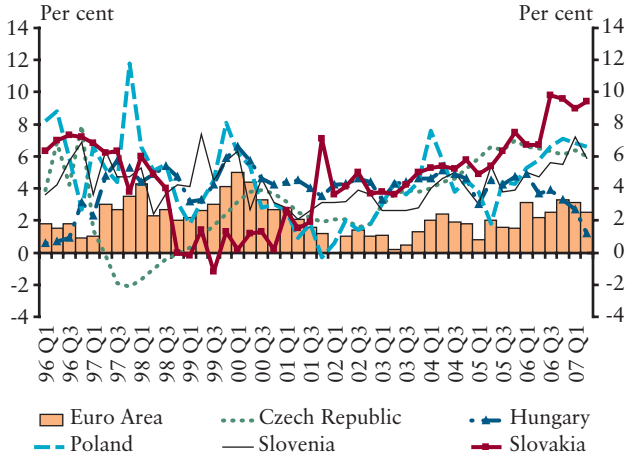


Note: The public sector was approximated with the public services (public administration, education, health and social work and other community, social and personal service activities).

Chart 1-4

Economic growth in Central and Eastern Europe and in Euro Area countries

(Annual growth)



Note: The public sector was approximated with the public services (public administration, education, health and social work and other community, social and personal service activities).

Box 1-1: Downturn in the construction sector

Value added in construction has been declining for one and a half years, and thus – despite its relatively low weight of 4-5 per cent as a proportion of GDP – it has reduced the growth rate of GDP by an average of one quarter of a percentage point since the beginning of 2006. Therefore, it is worth examining what the underlying reasons for the very poor performance of the construction sector are, and to what extent the downturn in this sector can be seen as prolonged.

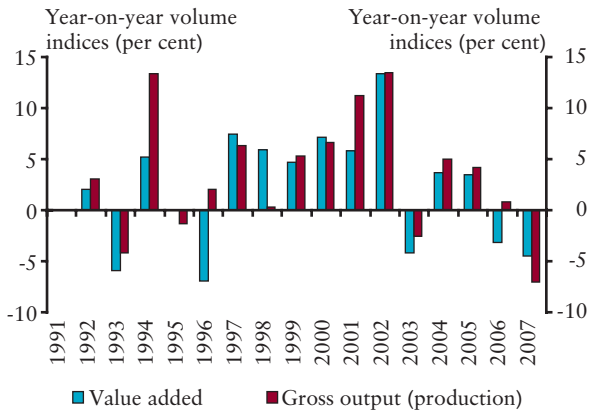
A combination of several demand and supply factors had an unfavourable impact on construction; the main underlying reasons are the fiscal adjustment and the considerable government expenditure preceding it. The curtailment of government investment had the most direct negative effect, resulting mainly in the postponement of infrastructure constructions (roads, bridges, etc.), which constitute half of total construction output: in the first 8 months of 2007 their volume dropped by 12.4 per cent compared to the same period of the previous year. Since early 2006, developments in demand have been mentioned by the sector's companies to an increasing extent as a factor limiting output, while shortages of building materials and means of production are considered to be much less important problems than before.[4] Another, less significant negative demand effect originated from the drop-off in households' earlier buoyant desire to buy real estate, heated by the housing subsidies from the government. This is well reflected by the decline in the number of new flats handed over since the beginning

[3] See the Box 1-1 for the details.

[4] Sources: monthly survey of the GKI Economic Research Co. and the European Commission.

Chart 1-5

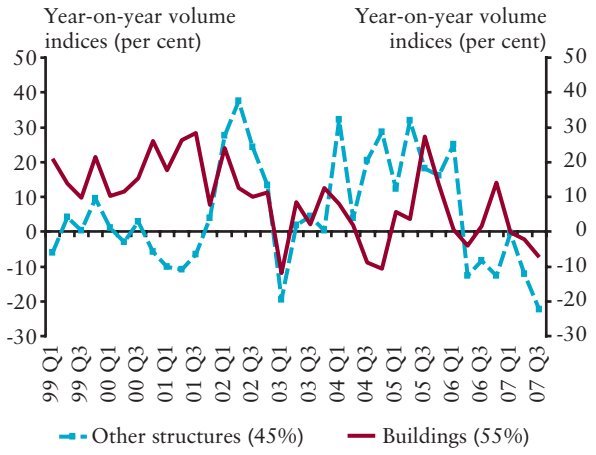
Developments in construction output and value added



Note: In 2007, for value added the volume changes in the first two quarters are shown. The output in 2007 is approximated by the volume changes of the production in the first 8 months compared to the same periods of the previous year.

Chart 1-6

Developments in the components of construction output



Note: In brackets, the share of components within output are indicated. For 2007 Q3, the estimate was prepared on the basis of the first two months of the quarter.

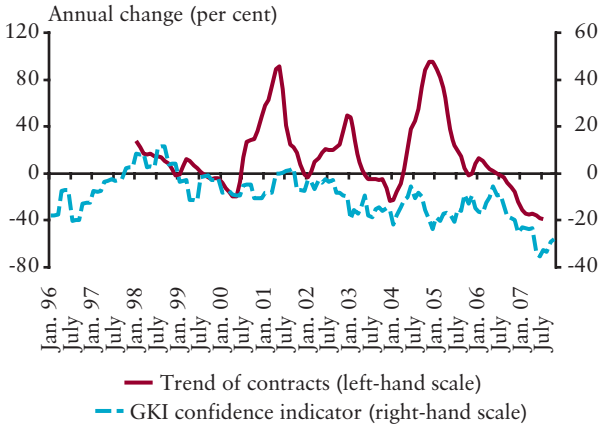
of 2005. In addition, fiscal measures, namely the tightening of the formerly generous housing subsidy system in 2004, also may have had an indirect contribution.

On the supply side, in terms of construction companies' means and costs of operation, the measures by authorities aiming at 'whitening' the economy, i.e. tackling the informal economy, may have influenced construction in an especially unpleasant manner. This was preceded by the development of an unfavourable structure in this sector from the outset: according to anecdotal information and wage statistics data,[5] illegal employment of employees was rather widespread, and therefore, the stricter supervisions may have resulted in stronger 'whitening' than in other sectors, resulting in an increase in costs.[6] On the other hand, the oversupply character of the market resulted in low profits and payment difficulties even before the recent fall. The unfavourable effects are reflected in the sector's high bankruptcy rate as well as the historically low level of its confidence index.

Looking ahead, some of the negative demand effects are expected to diminish due to an expected upturn in infrastructure investments, co-financed by the EU. However, taking into account the supply-related problems as well, on the whole, only a slow and prolonged rise is likely to follow. One of the reasons why a rapid correction cannot be expected is that the sector's confidence index has just slightly increased from its historically low level, and the value of construction contracts, which proves to be a relatively good predictor within the year, still continues to decline strongly.

Chart 1-7

Contracts and confidence index in construction



[5] See Győző Eppich–Szabolcs Lőrincz: Three methods to estimate the distortions of wage statistics caused by 'whitening', MNB Occasional Papers 66, October 2007.

[6] The sector's employment data are contradictory: the institutional statistics of the CSO, which are based on company surveys and refer only to companies with more than 5 employees, show a strong decline, while the Labour Force Survey (LFS), which is based on questioning households, indicates a slight increase. However, the reduction in the number of employed is more in line with the very disadvantageous business conditions of the sector.

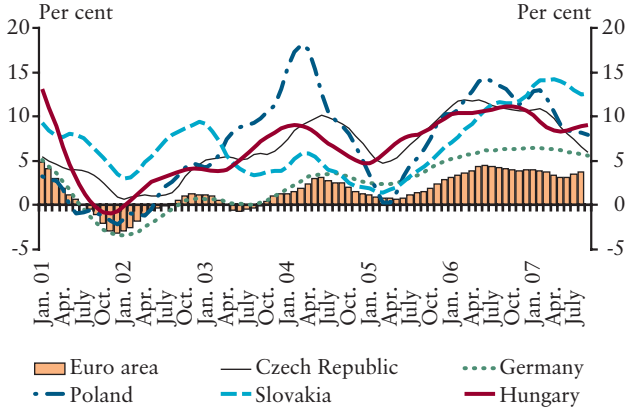
Export sales growth is gaining momentum again

The deceleration in the trend of industrial output observed late last year and early in this year did not continue from the second quarter, as industrial production regained strength in mid-2007. The main underlying reason is that the trend of export sales increased markedly, stimulating domestic manufacturing output. These developments are in line with the recovery of Euro Area industrial business activity during recent months, which also resulted in unchanged high growth rates of industrial production in the countries of the region.

Chart 1-8

The trend of industrial production in Hungary, CEE countries and the Euro Area

(Growth rates compared to the same period of the previous year)



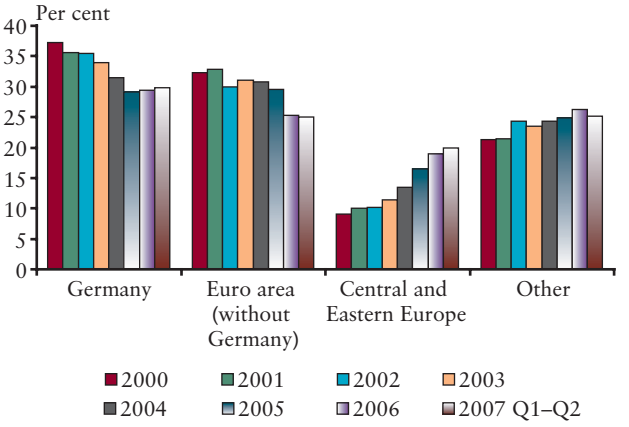
Note: The source of international data is Eurostat.

In addition to the Euro Area economic activity, which turned more favourable, structural changes observed in Hungarian exports in recent years have also had a positive impact on the increase in export sales. As a result, the share of Central and Eastern European countries (CEE countries), which have stronger growth, and non-European – typically developing – countries increased gradually, to the detriment of sales to the Euro Area.

The rising dynamics of export sales can be observed in the developments in foreign trade turnover as well. Following a slowdown at the beginning of the year, exports of goods have been increasing dynamically in recent months again.[7] Although this expansion is mainly the result of the favourable external economic conditions, the export of the corn stocks used for interventions also contributed to the improvements in export sales. Annual growth rates have been by 1% higher due to corn-interventions since last November. Even though the effect of the intervention on the annualized month-on-month growth rates has been diminishing since April 2007, it still influences the year-on-year indices. The effect of the interventions is even stronger in the development of the trade balance of goods. Since end-2006, half of its improvement has been caused by the development of the trade balance of corn.

Chart 1-9

Structure of Hungarian export of goods between 2000 and 2007 Q1-Q2

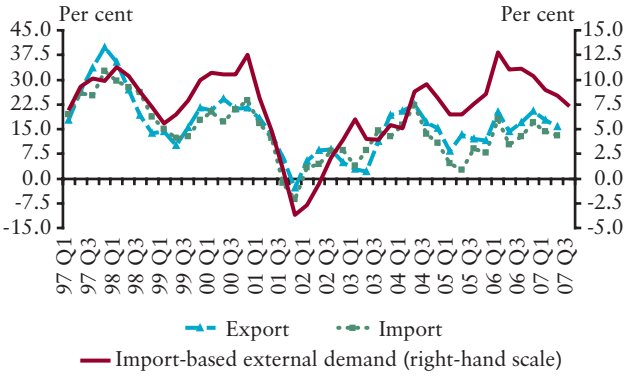


Note: The ratios describing the structure of export of goods were calculated from cumulative export of goods data published by CSO.

Chart 1-10

Export and import of goods and import-based external demand

(Annual growth calculated from trends)



Note: MNB estimate. Weighted imports of Hungary's main export partners.

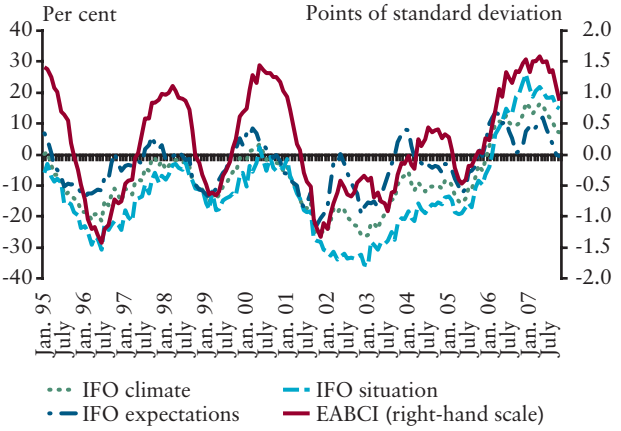
At the same time, in terms of the growth prospects of sectors producing for export, less favourable developments are looming in the medium term. One of the relevant signs is that in Germany, which is Hungary's most important trading partner, the confidence indicators (IFO indices) describing

[7] Although the September 2007 preliminary, current price data shows a moderating trend-dynamics, the direction of the export is somewhat uncertain due to the so far missing volume and price data.

both the current business situation and the expectations, have shown a steadily declining trend since early 2007. The US sub-prime mortgage market turbulence may have played a role in these developments in the IFO indices. Although its effect was felt only to a lesser extent in Europe, German credit institutions were probably more affected than others. The impact of the potentially unfavourable German and Euro Area business activity may be mitigated, however, if CEE and other countries, which play a more and more important role in Hungary's foreign trade, continue to enjoy strong economic growth.

Chart 1-11

IFO and EABCI* confidence indicators



** Business Climate Indicator for Euro Area countries, published by the European Commission.*

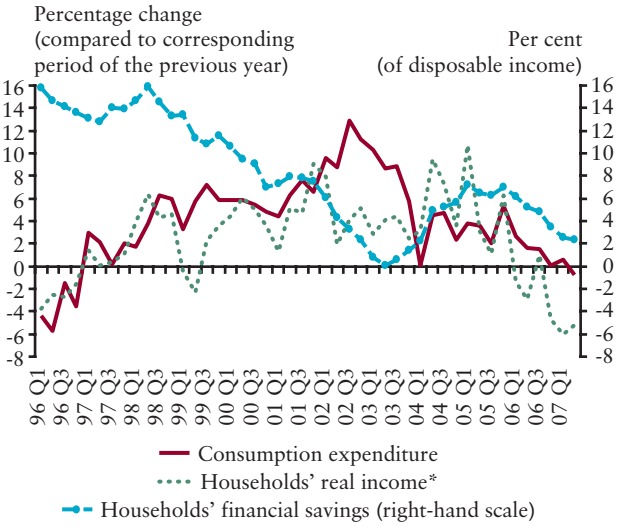
Declining consumption, uncertain turning point in retail sales and in investments

Developments in households' consumption/saving behaviour in 2007 H1 were in line with our expectations regarding smoothing of consumption. According to our indicators which capture household purchases, household consumption expenditures declined to a lesser extent than real incomes. Households continued to avoid the fall in consumption following the decline in real incomes by dynamic borrowing. The result of this was that the sector's financing capacities fell to 2 per cent of disposable income.

Retail trade business activity continues to be characterised by a decline, although the slowdown in sales came to a halt in the summer months. The underlying reason is that a turning-point in the declining sales trends was seen in sales of consumer durables – and within that, in the vehicle market in particular. Nonetheless, our perception relating to the turning point is accentuated by a number of additional factors. Since the beginning of the year, no significant, lasting improvement was seen in household confidence indices, which reflect households' opinions and prospects regarding

Chart 1-12

Households' real income, consumption expenditure and financial savings

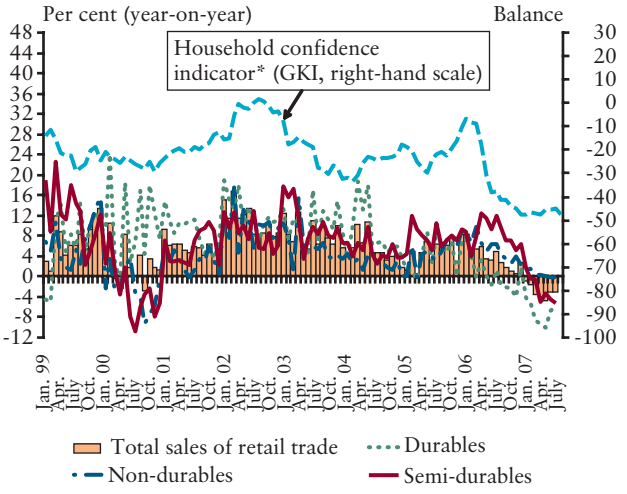


** MNB estimate.*

the business activity, and this may call into question the sustained improvement of longer-term income expectations in the sector and, in parallel with this, that of consumption demand. During the summer months, we perceived a decline in the demand for food-like products as a new trend, which could be a result of the suddenly rising food prices in the past period, together with a general decline in real incomes.

Chart 1-13

Expansion of retail trade turnover according to main product groups and developments in the GKI confidence indices



** Re-weighted by the MNB.*

Government consumption expenditures fell significantly, despite the fact that obtaining the Gripen aircrafts still boosted public consumption this year. Social transfers

reached a substantial fall (around 10 per cent) in the first six months of the year. The underlying reason is declining household demand for public services (e.g. in the areas of public health and education), which is a consequence of the government's reform measures, and which was modified in the direction of a greater decline by a change in the methodology of the statistics as well.

On the whole, following the overall decline in 2006, the volume of whole-economy gross fixed capital formation was characterised by a slight increase in 2007 H1.[8] However, the nearly static growth masks very different developments. First, while the investment activity of the corporate sector strengthened somewhat, household and public sectors' performances are still weak. Second, momentum in corporate investment is also generated by only manufacturing, and within that mainly a very strong sector-specific impact.[9] Not counting this, the investment growth rates seen in manufacturing are weaker than those experienced in previous periods of strong external demand, i.e. the weak propensity to invest seen in 2005 and 2006 has not disappeared completely.

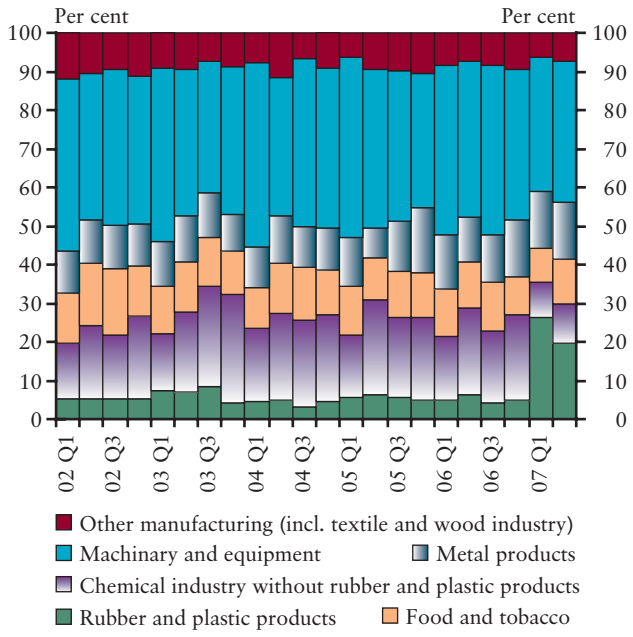
One underlying explanation for this may be that, on the one hand, according to business confidence surveys, the overall prospects of companies are still not favourable and do not indicate a strong willingness to invest. On the other hand, the uncertainty stemming from the economic situation and the regulatory environment is increasingly perceived as a factor hindering production.[10] This is exacerbated by the increases in taxes and contributions related to the adjustment, which burden labour and capital, as well as the uncertainties (e.g. expected changes in taxes) still existing in the business environment. Companies' cautious behaviour and the presence of uncertainty factors may also be reflected in the fact that the strong external demand has been met by a high level of capacity utilisation rather than by a significant expansion of capacities.[11] This has allowed for a dynamic increase in industrial production, despite the moderate willingness to invest.

Within the scope of public and quasi-fiscal activities (public services) the reduction of fiscal expenditures may be a reason for the strong decline in investment. As an indirect effect of the adjustment, through the weakening income expectations, a decline was also seen among companies mainly depending on domestic demand (those producing for and providing services to the domestic market). Investment in real estate related to households was characterised by a positive turn in the first half of the year, but this may merely be due in large part to the base effect, as a correction of the decline registered in the second half of the previous year. At the same time, the sustainability of the uptrend is also questionable, as we have not found any significant improvement in household expectations, and, in the past quarters, a slowdown has been observed in lending for housing as well. Overall, it may be disquieting with regard to the investment outlook that following the decline last year, this year's more favourable developments cannot yet be considered to be widespread.[12]

Chart 1-14

Breakdown of manufacturing investment according to sub-sectors

(Percentage shares)



[8] Gross fixed capital formation and investment are two different statistics; the former is included in the GDP statistics and extends to a wider range, while a detailed breakdown at quarterly level is available only in the latter. However, regarding economic developments, both data give in the same conclusions, the magnitude of their volume changes is usually very similar.

[9] The sector-specific impact is a result of the manufacturing of rubber and plastic products, which is in line with press news about large investment by several companies engaged in rubber production. As Charts 1-14 and 1-15 illustrate, the strong increase in manufacturing investments in 2003 and 2004 was much more general, and no such strong sector-specific impact similar in magnitude to the current one has been experienced since 2002.

[10] Sources: Kopint-Datorg business activity test and the joint survey conducted by GKI and the European Commission among industrial companies.

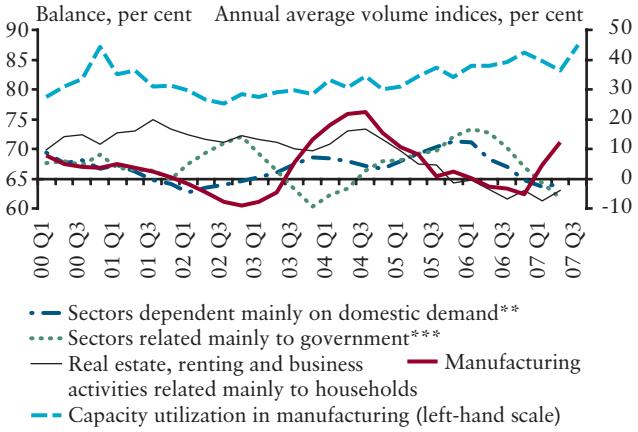
[11] Both the joint survey conducted by GKI and the European Commission and the survey by the Research Institute of Economics and Enterprises indicate a historically high capacity utilisation among manufacturing companies.

[12] A very strong duality can also be observed with regard to the breakdown of investment according to its composition: construction-type investments, relating mainly to the public sector, showed a strong decline (see Box 1-1), while machinery-investments, relating mainly to the manufacturing industry, exhibited buoyant growth.

Chart 1-15

Investments* in different sectors and capacity utilisation in manufacturing

(MNB-estimates)



** In case of investments, annual average volume indices are weighted averages of four consecutive year-on-year volume indices, where weights are base period current price values*

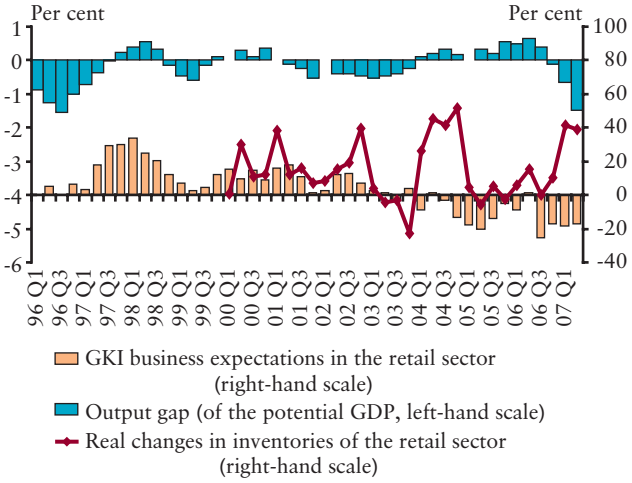
*** Excluding energetics, transportation and other services.*

**** Including energetics, transportation and other services.*

Note: The source of capacity utilisation data is the joint survey by the GKI and the European Commission.

Chart 1-16

Developments in inventories in trade



Note: The chart depicts the real change in total inventories (purchased or own production) of retail trade sectors (deflated with retail trade price index). Purchased inventories dominate within trade inventories, while the share of inventories from own production is negligible. The output gap is an MNB estimate.

By early 2007, inventories increased significantly in distributional services (retail and wholesale trade), in parallel with the decline in aggregate demand. There may be two underlying explanations for this: on the one hand, the slowdown in demand – the negative output gap – may have been stronger than what was expected by merchants, and lower-than-planned sales consequently resulted in an increase in inventories. On the other hand, this may also indicate that merchants expect a fast rebound from the weak domestic economic activity, and are stocking up inventories in order to meet the expected high demand. However, considering other, unfavourable information relating to the expectations of the retail trade sector, we believe that the inventory data probably more likely reflects the effect of the greater-than-expected downturn in demand.

1.2. Labour market

Third-quarter data have confirmed our earlier assumptions from August regarding wage adjustment, namely it appears that over the short run companies are attempting to restore their profitability by restraining bonus payments. Two available sets of employment statistics draw quite different pictures in respect of the development in employment. It is important to note, however, that in the market services sector, which is most strongly affected by the cost shocks and the weaker domestic demand, we have not seen any adjustment in the number of employed yet.

Further loosening of the labour market

According to data for 2007 Q2 and Q3, the decline in activity observed at the beginning of the year came to a halt, and then started to increase slightly. All this occurred in parallel with stagnation in whole-economy employment, and thus the unemployment rate increased, reaching 7.2 per cent according to seasonally adjusted data. Another aspect also suggesting a loosening of the labour market is that the number of vacancies declined while unemployment rose, i.e. the so-called tightness indicator declined.[13]

Chart 1-17

Developments in activity, employment and unemployment

(Thousand persons; seasonally adjusted monthly data)

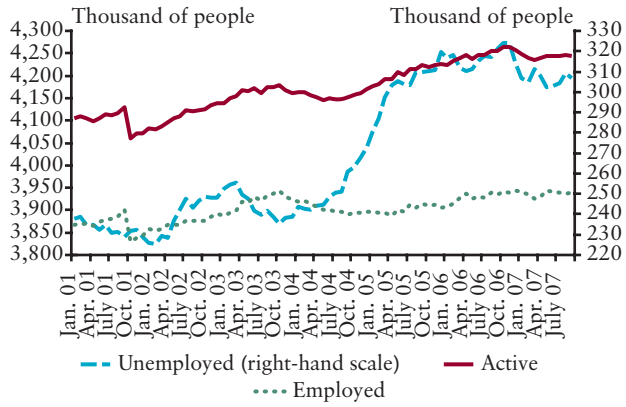
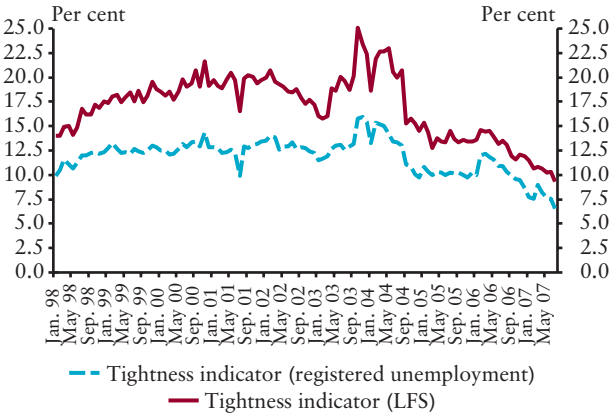


Chart 1-18

Ratio of job vacancy and unemployment

(Seasonally adjusted monthly data)



However, the labour market loosening observable at the aggregate level cannot be considered as generally valid at the sectoral level. As we have already pointed out in earlier analyses, the so-called skill mismatch phenomenon – stemming mainly from a shortage of skilled labour – can sometimes be a dominant factor in manufacturing. This is confirmed by the questionnaire-based economic activity survey conducted among companies by GKI. According to the results, a growing share of companies is noting a shortage of skilled labour as a barrier to increasing production.

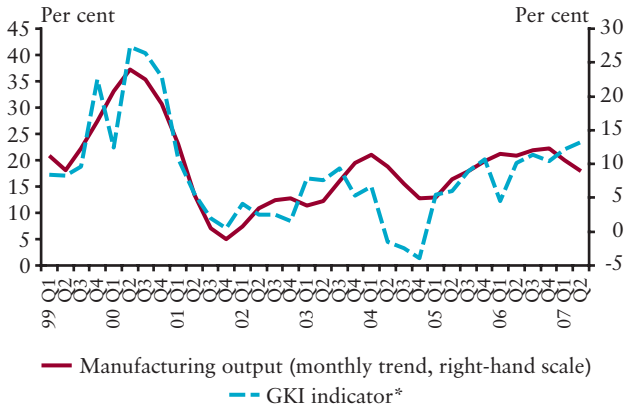
Based on the data series it seems that skill mismatch is not a new phenomenon. This is confirmed by the fact that historically developments in labour shortage have moved in close correlation with the demand for labour generated by the business cycle. There are, however, signs suggesting that this problem may become more serious than seen in the past. This may be indicated by the phenomenon that – although manufacturing production seems to have passed its peak – the problems resulting from the shortage of skilled labour has not declined, and that the number of those employed in manufacturing has not increased significantly.

[13] Similarly to the Bank of England (reference to the paper Cassino, V-Joyce, M.: 'Forecasting inflation using labour market indicators' BOE Working Paper No. 195.) we introduced a new indicator which measures the tightness of the labour market. It can be defined as the quotient of the number of vacancies and the number of unemployed. The indicator is able to take into account the labour supply changes and in addition the changes taking place on the demand side when assessing the tightness of the labour market. The higher the value of the index, the tighter the labour market is. However, it needs to be mentioned that the indicator created this way can be a good measure of labour market tightness only if the changes in unemployment and vacancies are due to cyclical reasons. At the same time it is possible that there are structural reasons behind the change. On the one hand the indicator could change while the tightness of the labour market remains the same. This is the case when the steady state unemployment changes which in itself does not have any impact on the tightness by given amount of vacant positions. On the other hand the unchanged indicator does not mean necessarily that the tightness of the labour market remained the same. This happens if the numerator and the denominator changes with the same rate, and therefore it may be hypothesized that the structures of labour demand and supply differ. It is possible if there is skill mismatch in certain segments of the labour market.

Chart 1-19

Skill mismatch in manufacturing

(Seasonally adjusted quarterly data)



** The share of those companies which indicated the shortage of skilled labour as a factor limiting production.*

Contradictory data regarding private sector employment

While employment decreased in the private sector according to institutional statistical data, the labour force survey has shown further increase in this sector. Because we consider the latter one more consistent with actual economic developments (e.g. national account statistics), we have concentrated on this rather than institutional statistics in our analyses.

Chart 1-20

Number of employed in the private sector based on institutional and LFS statistics

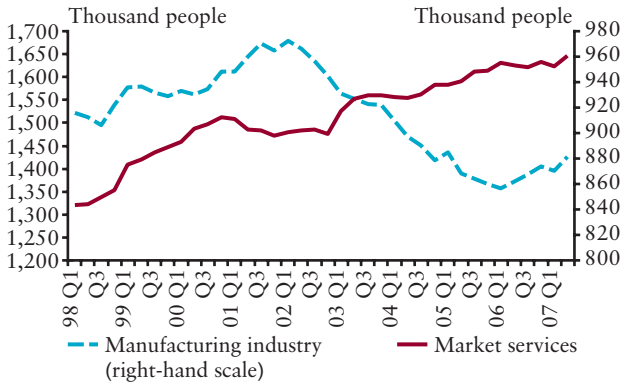
(Seasonally adjusted quarterly data)

In respect of the breakdown by sectors, in accordance with the development of economic activity, a steady increase in the number of employees has been observed in manufacturing since the beginning of the year, which is mainly typical in the sectors functioning as the engines of industrial business activity. Although the earlier growth has turned into stagnation, so far we cannot see any signs of a definite adjustment in the number of employees in market services, despite the deterioration in profits due to falling domestic demand and the high wage dynamics compared to productivity. It seems that the sector is trying to correct the situation by moderating wage growth.

Chart 1-21

Employment in manufacturing and market services (LFS statistics)

(Seasonally adjusted quarterly data)



Examining this latter sector in more detail reveals that the number of employed declined amongst small enterprises employing less than 5 people, which are affected by cost shocks the most.

Chart 1-22

Number of self-employed in market services

In addition, adjustments in the number of employees may also still take place at larger enterprises in the future, simply with a longer delay compared to our earlier expectations. The underlying explanation is that, presumably, in the short run the costs of dismissal are considerably higher than the wage adjustment realised through the payment of bonuses. However, in the event of a permanent widening of the output gap, the deterioration in profit can only be compensated either through the regular component of pay rises or through an adjustment in the number of employees.

Nevertheless, it was not the services sector which suffered the worst deterioration in profits, but rather the construction industry, since the government measures aimed at tackling the informal economy have affected this sector most. Additionally, one result of the major curtailment of public investment (mainly construction-type investment) and the fall in households' housing investment was that the unfavourable domestic economic conditions had the greatest effect on this sector on the revenue side as well. Accordingly, the largest work force reductions also took place in this industry, and thus the decline in construction employment explains most of the decline in the number of employed, which can be seen in the institutional workforce statistics.[14]

Companies adjust through bonuses

On the whole, the wage data since the May *Report* have been in line with our expectations. The annual wage indices of the private sector[15] have steadily fluctuated within the 8-9 per cent band in recent months, while month-on-month wage growth declined from a value around 10 per cent early in the year to the vicinity of 7.5 per cent by June.

Box 1-2: A discussion of the trend indicator capturing fundamental processes in wages

Over the last one and half years, there were several events which rendered it very difficult to assess the current wage developments relevant in terms of economics. On the one hand, bonus payments in the corporate sector deviated from previous years' seasonality, and on the other hand, the government's measures aimed at reducing tax evasion also influenced the developments in wages disclosed by the CSO. We have discussed the correction of the bias caused by the efforts to tackle the informal economy on several occasions.[16] This box text presents a detailed explanation of the methodology of filtering out the distorting effect appearing due to the changed seasonality of bonus payments and, in connection with this, the methodology of calculating underlying wage developments.

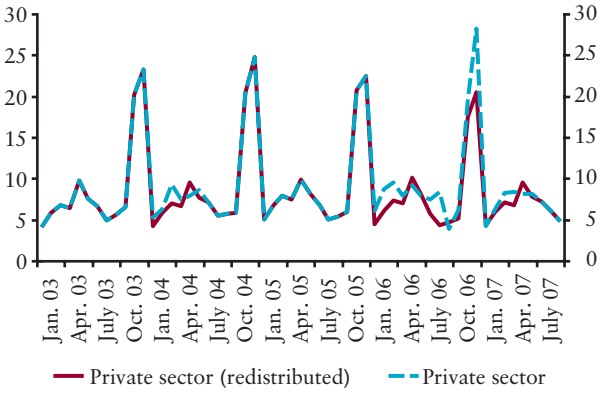
First, companies brought forward a part of the payment of the second-quarter bonuses in 2006 Q1 for the first time. Then in August 2006 – presumably for tax optimisation reasons – bonuses were brought forward again from September and to a smaller extent from October. Finally, a similar phenomenon was observed between November and December 2006 and 2007 H1. In order to gain a clear picture of underlying wage developments relevant in terms of economics, it is indispensable to eliminate these distorting effects.

The changed seasonality of bonus payments basically affected consecutive months. According to the results of statistical and time series techniques, the changed seasonality is a discrete, transitory phenomenon rather than a long-term realignment. Therefore, we treated the changed seasonality of bonus payments by redistributing the total bonus payment of the period affected by the changed seasonality across individual months in accordance with their historical distribution. This is in conformity with the assumption that, in the periods under review, developments in bonus payments were in line with those in the previous years.

Chart 1-23

Changed and redistributed seasonality of bonuses

(Ratio of bonuses to regular wages)



There are, however, several indicators calculated in different ways to capture underlying developments in wages, and no unambiguous hierarchy can be set up in terms of assessing the developments. Consequently, in our assessment of the situation, a band made up of these alternative indicators can illustrate the underlying developments in wages the best.

The indicators applied can be arranged in groups along two dimensions. On the one hand, in terms of how the bonus payments are taken into account. In the first case, bonuses are not taken into account at all (regular wages), while in the second case we assume that bonus payments were whitened to the same extent as regular wages, and finally, in the last method we assumed that whitening took place only for regular wages. We believe that this latter assumption seems more plausible, as the government measures which resulted in whitening

[14] The remarkable decrease in employment can not be seen in the labour force statistics yet. Box 1-1 deals in detail with the real economy developments observed in the construction sector.

[15] Wage data excluding the 'whitening' effect and the distorting effect of the changed seasonality of bonus payments.

[16] See e.g. Eppich–Lőrincz: Three methods to estimate the distortedness of wage statistics caused by 'whitening', MNB Occasional Papers 66.

affected those wage categories more in which the share of bonus payments is not significant. This hypothesis is also supported by the statistical properties which can be derived from seasonal adjustment.

The second dimension of the breakdown differentiates according to which sectors of the national economy we consider relevant in terms of inflationary pressure: the private sector as a whole, or only the aggregate generated from manufacturing and market services. We attach special importance to the latter one because the remaining, low-weight sectors are less affected by the general economic activity; they are much more influenced by sector-specific shocks.

The annualized quarterly indices of the trend band calculated from the six wage indicators produced have been fluctuating within the 7.0-8.0 per cent range recently. In terms of the quarter-on-quarter dynamics of the trends, a gradual decline has been observed since the end of 2006.

Chart 1-24

Trend band calculated from the wage indicators capturing underlying developments in the private sector

(Annualised quarterly changes)

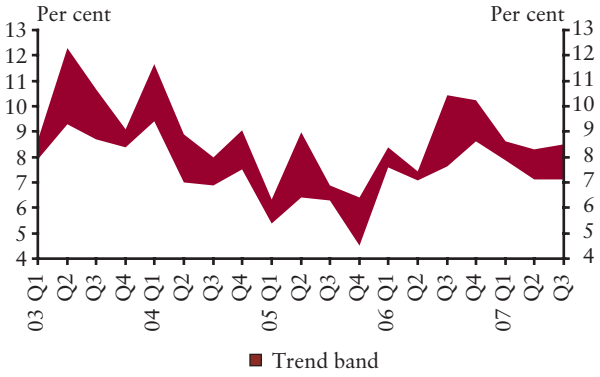


Chart 1-25

Developments in regular wages and bonuses in the private sector

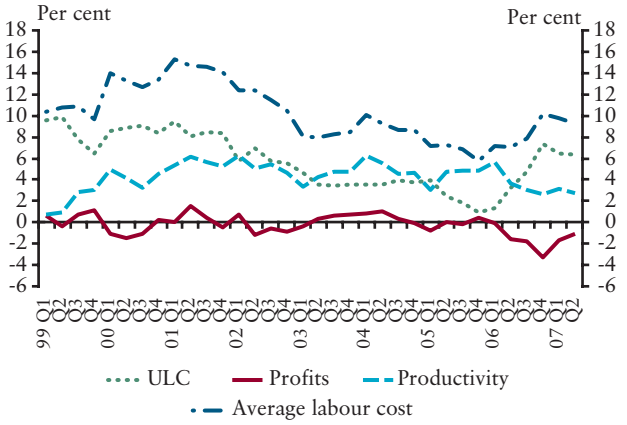
(January-September average, annual change)

** Data excluding the effect of whitening.*

Chart 1-26

Labour cost and productivity in the private sector*

(Seasonally adjusted quarterly data; annual changes)



** Excluding the effect of whitening and changed seasonality of bonuses.*

It still seems that over the short run companies are trying to adjust wages mainly by restraining bonus payments. This is indicated by the fact that annual dynamics of bonuses lag behind similar data on regular wages.

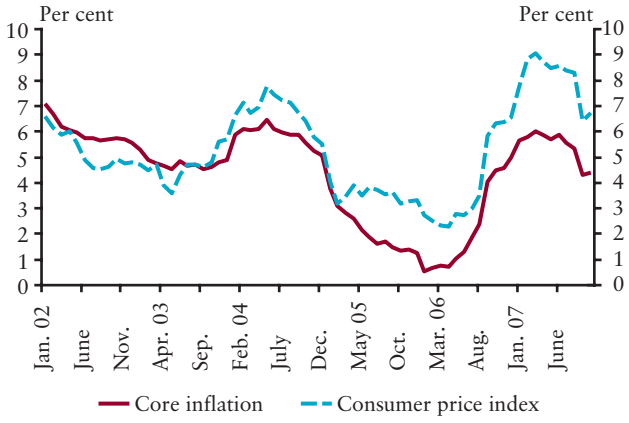
By 2007 Q2, considering the private sector as a whole, the extent of the deterioration in profits declined in the corporate sector as a whole. The adjustment was basically led by the behaviour of the services sector, as there has been no sign of a decline in profit in manufacturing, because real wages have been in conformity with the improvement in productivity.

1.3. Inflation developments

In 2007 Q3, the consumer price index was 7.7 per cent, while core inflation amounted to 5.1 per cent.[17] Compared to the previous quarter, the two indices declined by 0.9 and 0.7 per cent, respectively, due mainly to the omission of the increase in regulated energy prices in August 2006 and the September 2006 VAT rate increase from the base. In October, however, both indices increased, essentially due to the current increase in food prices.

Chart 1-27

Consumer price index and core inflation



Decline in core inflation comes to an end

Current developments are captured by short-based indices. According to the index showing quarterly changes, core inflation did not decline in the past quarter, but stagnated at around 4 per cent. Moreover, based on month-on-month changes, core inflation even increased to over 5 per cent in the last two months.

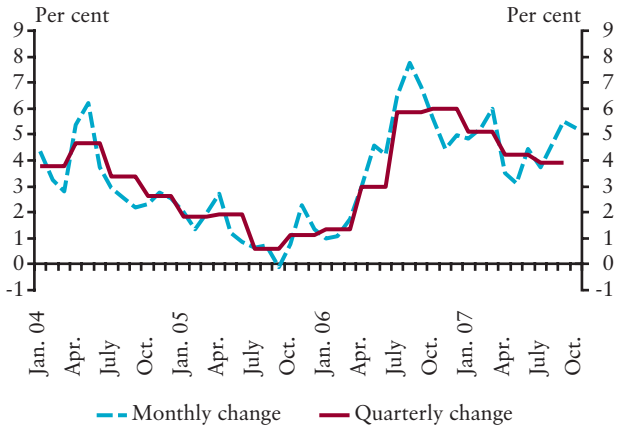
One aspect deserving attention is that the monthly increase in core inflation is basically related to one product group, namely processed foods. In general, core inflation and inflation of processed food prices, which constitutes a part of the former, move together well. The underlying reason is that, in respect of the product groups which affect core inflation, the volatility of processed foods is the highest.

Since mid-2007, it has become clear that food prices in the 2007-2008 season may increase similarly to previous years, or even to a greater extent. Overall, food prices increased by 26 per cent in Hungary in the last two years, including

Chart 1-28

Underlying inflation developments*

(Seasonally adjusted, annualised data)

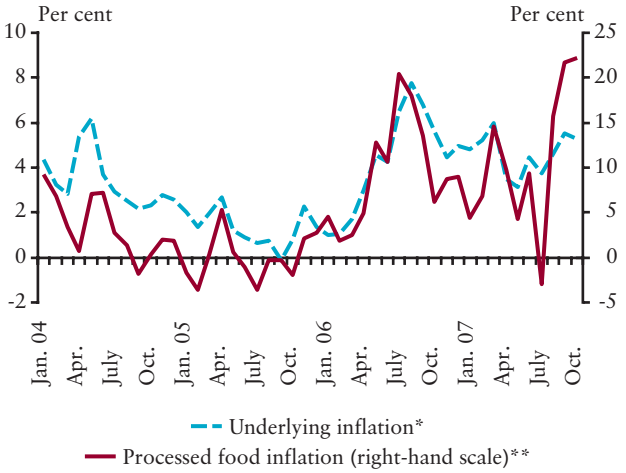


* *Core inflation calculated by the MNB, excluding the changes in indirect taxes and the effect of the medical visit fee.*

Chart 1-29

Inflation trend and processed food inflation

(Seasonally adjusted data; annualised monthly changes)



* *Core inflation calculated by the MNB, excluding changes in indirect taxes and the effect of the medical visit fee.*

** *Indicator excluding the effect of the change in the VAT rate.*

increases of 2 per cent in the last three months each, and this magnitude of monthly increase has not been experienced for 7 years. As the consumer price index declined in the past quarter despite the increase in food prices, nearly one-third of the total inflation is attributable to foods.

[17] The core inflation forecast published regularly in the *Report* can be compared to the core inflation calculated by the MNB, the value of which was 5.9 per cent in 2007 Q2.

Chart 1-30

Food prices

(Seasonally adjusted level; excluding the effect of changes in VAT)

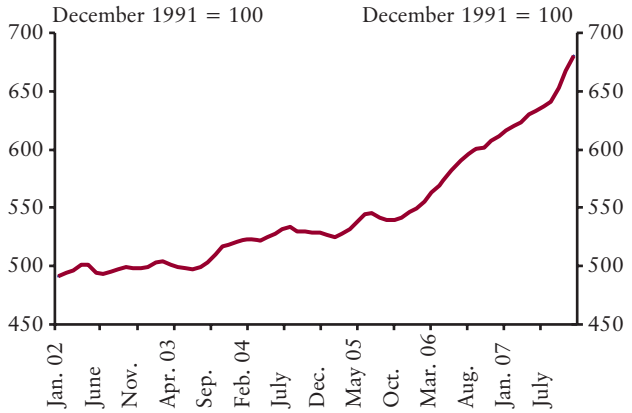
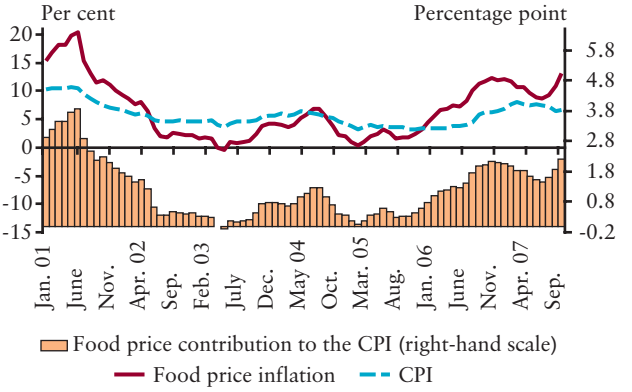


Chart 1-31

Food inflation and its contribution to the consumer price index

(Seasonally adjusted data; excluding the effect of the change in VAT)



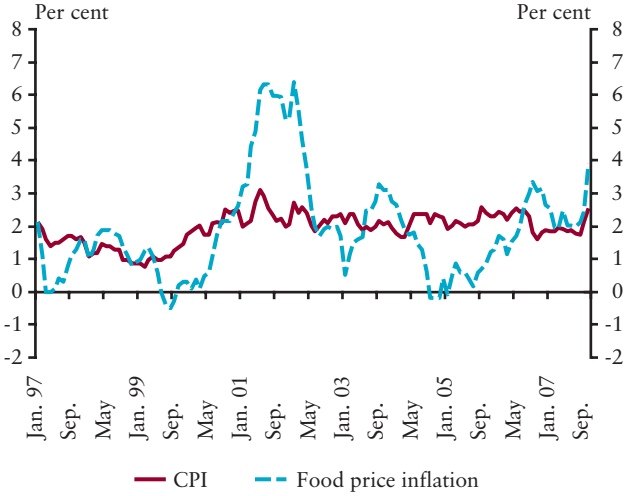
The current increase in food prices is an international phenomenon. As opposed to the period between 2004 and mid-2006, food inflation during the last year exceeded the consumer price index in the euro area as well. Moreover, the monthly change in Euro Area processed food prices in August was higher than at any time in the last decade.

The global increase in agricultural and food prices of past years has triggered higher food price inflation in Hungary than in the euro area or the average of the CEE region[18]. However, the accuracy of this statement cannot be determined in respect of the most recent price shock. First, although food prices overall have been rising robustly in Hungary over recent months, there are several other European countries where the pace of price increases in September-October was even faster than in

Chart 1-32

Food and consumer price inflation in the Euro area

(Annual index)

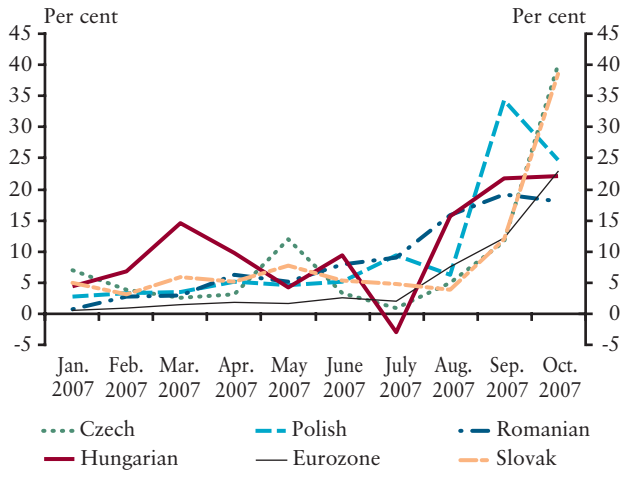


Hungary. This implies that the effects of price shocks on Hungarian inflation were not stronger, but they worked through a little earlier than elsewhere.

Chart 1-33

Processed food inflation in the Euro Area and in the region

(Seasonally adjusted; annualised monthly changes)



The global increases in prices for agricultural and food products are partly due to long-term permanent factors and partly to temporary factors. Long-term supply-side factors include the decline in the land area used for agriculture and the increased probability of extreme harvest results (because of climate change), while long-term demand-side factors are mainly the dynamic growth in consumption in Asia. The

[18] One of the reasons may be that changes in the global demand/supply cause greater price fluctuations in a smaller market as a matter of course. Otherwise, it is also a fact that price increases can only partly be attenuated by imports from abroad, as the level of Hungarian food prices is below the European average.

above effects were temporarily amplified by this year's especially weak global supply.[19]

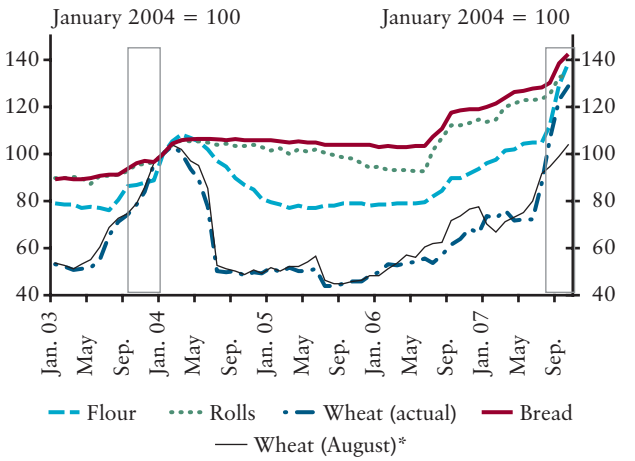
In Hungary, the increase in agricultural producer prices in mid-2007 first appeared in the consumer prices of seasonal products (vegetables, fruits, potatoes). In addition to higher prices of unprocessed products, the increase in prices of more processed products also became significant in the August price increases to a lesser degree and to a significant degree in the September price increases, and it is possible that the pass-through of increased fodder costs may also have played a role in this.[20]

On the whole, increases in prices for agricultural raw materials have exceeded our earlier expectations.[21] This development is responsible for the stronger rise in consumer food prices, and not more rapid pass-through of price increases for raw materials into consumer prices. This is illustrated by the calculation, according to which in case of the 2003-2004 and the current wheat price increase the price of flour started to increase the same way in August and the price of bread in September, and until October, then and now as well, the raw material price increase caused the same extent of price increase in case of the more processed products.

Tradables inflation also plays a role in the fact that the decline in core inflation came to a halt. According to the annualised quarterly indices, tradables inflation continued to grow in Q3, and was persistently higher than in the period between mid-2004 and mid-2006. It is worth examining these two statements separately as well. The increase in inflation is attributable to consumer durables. At the same time, despite an increase in the past quarter, the inflation of consumer durables is not higher than what could generally be observed in the last five years, if we exclude the price increase of cars from the time series. As opposed to this, for a year inflation of non-durable tradables, which did not increase any more in the last quarter, has been higher than in the previous two years. Consequently, the stickiness of tradables inflation at a higher level than observed in previous

Chart 1-34

Producer price of wheat and consumer prices of flour, bread and rolls



** In our August forecast, the producer price of wheat was taken from a different data base compared to the current one, thus the past data of the two time series are also slightly different.*

Table 1-1

Price changes of selected products between June and October (per cent)

	Price increase		Price increase of selected products in proportion to wheat price increase	
	2003	2007	2003	2007
Wheat	42.5	78.5	1.00	1.00
Flour	12.9	32.2	0.30	0.41
Bread	6.1	11.5	0.14	0.15
Rolls	5.7	8.9	0.13	0.11

[19] Unfavourable weather resulted in extremely low crops in the South East European region, which comprises Hungary as well.

[20] In terms of unprocessed foods, especially significant are the price increases of seasonal products as well as egg, poultry and flour, while in case of processed foods the prices of bread, bakery products, pasta, milk and vegetable oil increased most. For the time being, the price increase of pork has not exceeded the seasonal effect, but the increase in fodder prices and, partly stemming from this, the decline in profitability project a declining supply and increasing prices in this product group as well.

[21] However, the increase in domestic food prices may be slowed down already over the short run by European economic policy if it encourages the import of possibly cheaper foreign products more than now. One of the examples for this is the licensing in October of the import of certain gene-modified corn products to the EU, which immediately made corn prices decline in the European – and thus Hungarian – commodity exchanges.

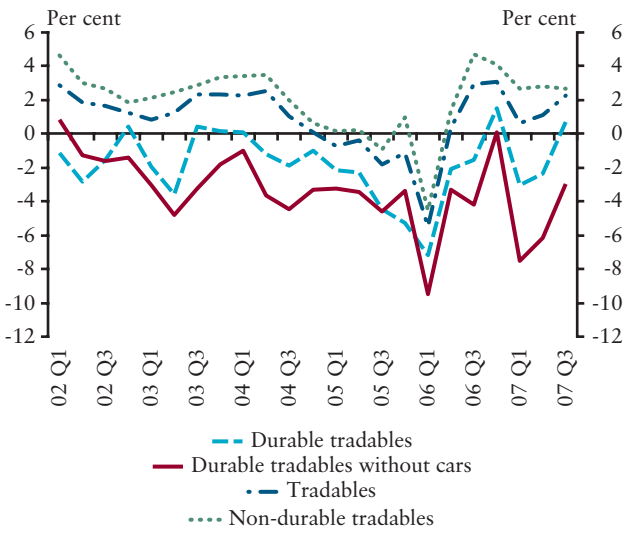
years is attributable to the development of non-durable tradables.

Furthermore, the usual factors (for example, the forint exchange rate or imported inflation) do not completely explain developments in tradables inflation. There may be several explanations. On the one hand, it is possible that a non-defined factor has simply resulted in higher indices for a brief period, but that over the longer run tradables prices will return to the earlier assumed path. But it is also conceivable that the long-term equilibrium price path is at a higher level than we previously assumed, and inflation in the latest period has simply returned to this path, after the surprise disinflation recorded in 2004 and 2005. One possible explanation for this is that global firms set prices in a way so as to leave as little room as possible for commodity arbitrage. As the average Hungarian price level remains below the European average, the above arguments justify a gradual convergence of prices.

Chart 1-35

Tradables inflation

(Seasonally adjusted annualised quarterly changes)



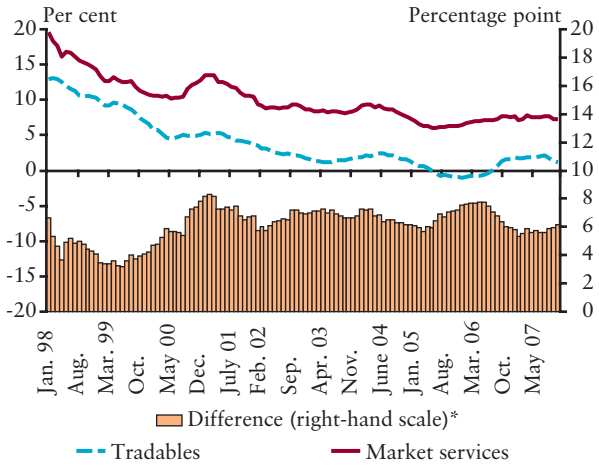
Box 1-3: What can explain the persistently high inflation of services?

Disregarding the effect of the changes in the VAT and the medical visit fee, inflation of services prices has been fluctuating at around 6 per cent for three years. It is somewhat surprising that the inflation of this product group shows very little volatility in the aforementioned period, considering that this sector was exposed to several shocks, both from supply and demand sides. The question arises, whether this inflation rate can be considered high, and if so, what can cause disinflation.

Chart 1-36

Tradables inflation and market services in Hungary and their difference*

(Based on annual changes)



* *Indicators excluding the effect of the change in the VAT rate.*

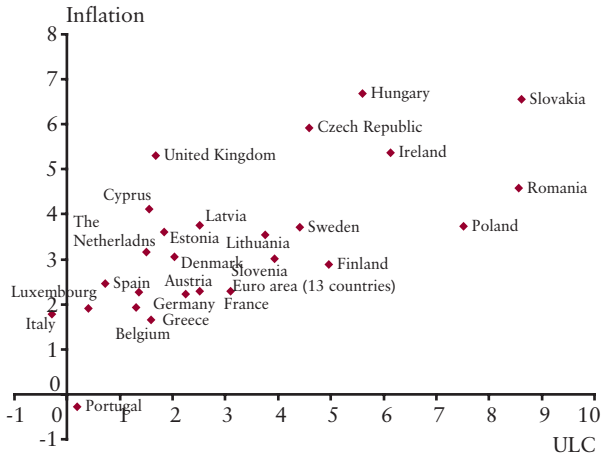
It is worth assessing the inflation rates of services in comparison with the inflation rates of tradables. Assuming free market competition and a stable exchange rate, the inflation of products of the industrial sector may not be different from international inflation, while the rate of increase in industrial wages is equal to that of labour productivity. In a transition economy it can be considered natural that the increase in the price of services is higher than that of tradables. This may be caused, *inter alia,* by the difference between labour productivities of the services and industrial sectors, which is greater than in developed countries. This means that if the equalisation of wages within a country is assumed, the higher unit labour cost increase in the services sector may – due to limited international arbitrage – result in an increasingly high rate of price increases. The difference between the labour productivities of the two sectors may be caused by several factors. On the one hand, it may be a result of the difference in technical development. On the other hand, in transition economies, the capital stock increases faster in the industrial sectors than the average rate of the domestic economy.

In addition, in transition economies demand for services usually increases faster than demand for tradables, which adds to services inflation again. It is worthy of attention that in the first two cases, i.e. in case of supply-side pressure, as a start, it is the higher wages and the higher ratio of labour costs which cause higher inflation, while in the third case, i.e. in case of demand-side pressure, the higher price increase can result in higher wages.

In Hungary, the difference between services and tradables inflations has been stuck around 6-7 per cent since 2000. In this period, the difference

Chart 1-37

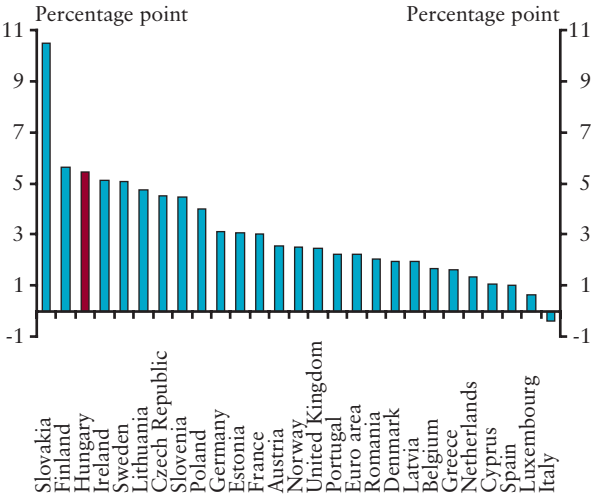
Inflation differential and unit labour cost growth rate differential of selected European countries



Source: AMECO data base and own calculation. The sample period is the average of the years between 2001 and 2006.

Chart 1-38

Manufacturing and services sector labour productivity differences in selected European countries



Sources: AMECO data base, MNB calculations. The sample period is the average of the years between 2001 and 2006.

between the average unit labour costs of the two sectors was also 6 per cent, i.e. in accordance with the theoretical correlations, it explains the inflation differential between the two sectors well.[22] Besides, with regard to certain years it can also be demonstrated that the difference between unit labour costs is attributable not only to the difference in productivity, but also to the higher wage dynamics of the services sector. In international comparison, the above two sectors' inflation and unit labour cost differentials can also be considered extremely significant, which is a result of the high inflation of services and their low productivity growth compared to transition economies.

In summary, a possible answer to the above questions is that although the difference in unit labour costs explains the inflation differential well over the longer term, its magnitude is still unusually great by international standards and not typical when the inflation rate is low over a longer period. Consequently, a decline in services inflation is presumably necessary in order to attain price stability. On the one hand, it can take place from the supply side: either with a decline in the productivity of the industrial sector or an increase in the productivity of the services sector, which presumably entails an increase in the capital/labour ratio. While in the first case it is the decline in the growth rate of wages that results in lower inflation, in the second case a decline in wage growth is not necessary for a moderation of inflation. On the other hand, a decline in services inflation may also be enforced by a drop in demand, which, *ceteris paribus,* may depress wages as well.

Other items had a neutral effect on inflation

In 2007 Q3, vehicle fuel prices remained unchanged compared to the previous quarter, although they declined by 5.7 per cent compared to the same period last year, which in turn is a result of the high base.

On the whole, compared to the previous quarter, regulated prices remained unchanged in 2007 Q3. In terms of the composition of the changes in regulated prices, the 3.8 per cent decline in the price of commuting to work or school and the 0.9 per cent increase in house-rent can be considered as significant quarter-on-quarter price changes. The underlying reason for the change in the first item is that in September, students' fares were reset to the earlier level, which prevailed before May. Consequently, compared to August, there was an 11.4 per cent decline in the price of this item in September 2007.

The fall in inflation expectations has stalled

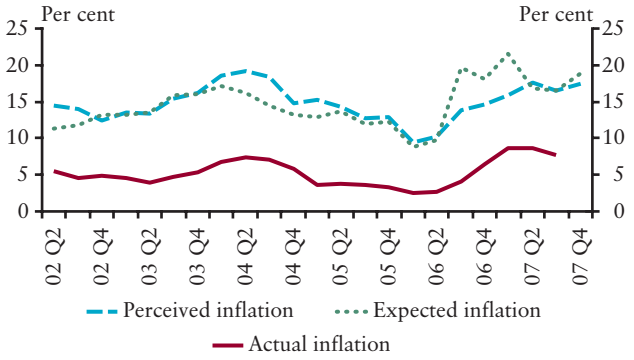
The indicator measuring inflation expectations of households 12 months ahead rose slightly again, after falling in the previous two quarters. In addition, perceived inflation in the

[22] In the last three years the unit labour cost differential increased to more than 7 per cent.

past 12 months also increased a little. Both indicators are high by historical standards, being close to previous peak levels. All this may be explained by rising food price inflation, which probably has a more immediate impact on households' inflation perception than changes in the prices of other product groups.

Chart 1-39

Households' inflation expectations*



** Source: MNB calculations based on a survey conducted by Medián.*

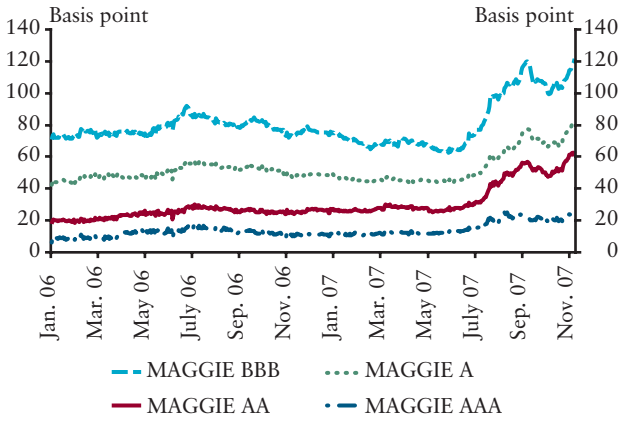
2. Financial markets

The significant financial market uncertainty, which developed as a result of the money market turbulence in July-August, started to decline in September and October. The temporary improvement in the investment environment was mainly the consequence of the Fed's larger-than-expected rate cut in September and, to a lesser extent, the US macroeconomic data, which moved market sentiment in a favourable direction. Prices of most risky instruments recouped their end-summer losses almost completely, and a number of stock price indices reached historical peaks in October.

From the beginning of November subprime mortgages related investment banks' losses and exposures came again to the front. Financial market uncertainty increased considerably due to the officially announced losses. The prices of risky assets depreciated significantly, while credit spreads widened to or above levels seen during the end-summer money market turbulence.

Chart 2-1

Maggie credit spreads

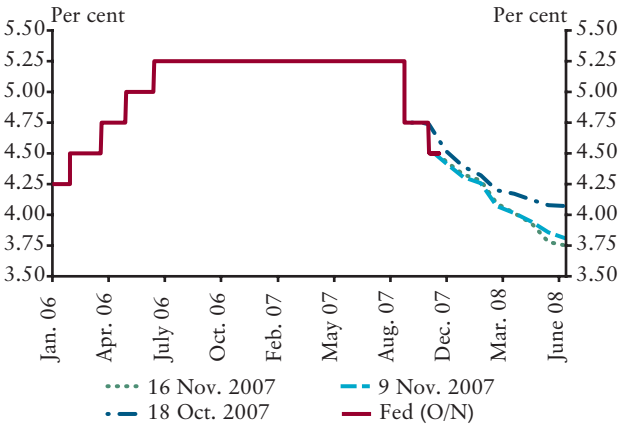


While market participants continue to expect a deceleration of the US economy, most of them believe that there will not be a recession. However, prospects for US and global growth are also less certain in light of the fact that a number of investment banks and international economic institutions have scaled back their growth projections regarding the US economy considerably. In the latest month, expectations of rate cuts by the US Federal Reserve partly counterbalance the gloomy outlook, as markets expect the US central bank to continue cutting the base rate due to the significant uncertainties surrounding the macroeconomic outlook.

Nevertheless, the confidence/liquidity problems stemming from the US sub-prime mortgage market events in the late

Chart 2-2

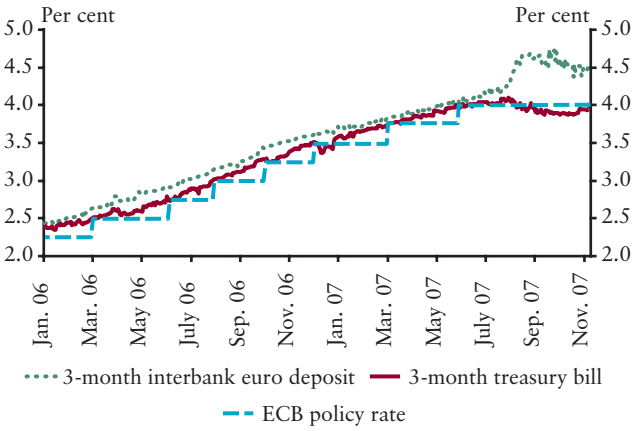
Fed policy rate expectations



summer are still present in the global financial system. In August and September, the large central banks (ECB, Fed) significantly increased the liquidity of interbank markets through extraordinary tenders, but interbank rates did not return to the vicinity of key rates. Overall, the euro and dollar interbank markets continue to be characterised by considerable uncertainty.

Chart 2-3

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

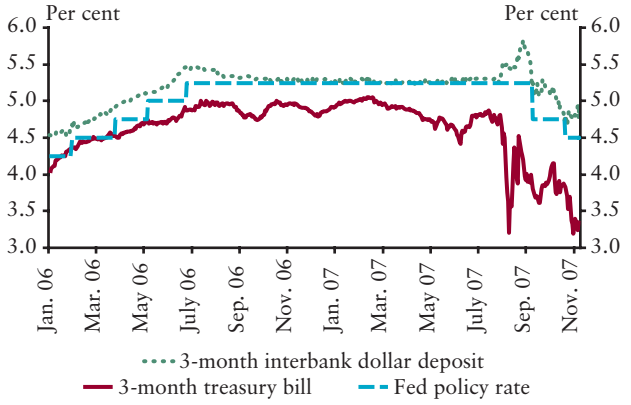


Looking ahead, from the aspect of the developments in the international financial environment, most of the risks point in a negative direction. It is still unclear to what degree the decline in the US real estate market will affect the real economy in the USA. According to international economic institutions analyses, the real estate market problems are expected to become even worse (see details in Box 2-1). Following the significant tightening at the end of the summer, credit market conditions temporarily became

somewhat looser in the second half of September and in October. Nevertheless, premia are still much higher than the levels seen in past years, which may lead to slower economic growth going forward. In addition, as a result of supply and demand factors and geopolitical factors, oil prices have reached historic highs, representing a negative risk for growth and inflation prospects at the same time. Developments in inflation in developed countries have been favourable recently, but looking ahead, along with oil price increases, the global increase in food prices may also fuel inflation expectations, which, in turn, may reduce central banks' manoeuvre for forestalling the adverse effects from the disruptions in financial markets.

Chart 2-4

Fed's interest rate target, 3-month dollar deposit and discount treasury bill yields



Box 2-1: The US mortgage market crisis and possible ramifications for financial stability

At the core of the global confidence crisis emanating from the US mortgage market was the global spread of lending risks (via securitisation) related to buoyant US mortgage lending, which was fostered by the low US interest rate environment, ample liquidity, rising real estate prices and increasingly loose lending standards. As a result of deterioration in the quality of mortgage loans, the markets were forced to reassess the prices of securitised holdings, thus causing considerable losses to investors of various types. As the magnitude of these losses and the scope of institutions suffering them was and is still not completely known, a confidence crisis developed in the money markets, which resulted in an increase in the interest rates and a shortage of liquidity in the short-term interbank money markets.

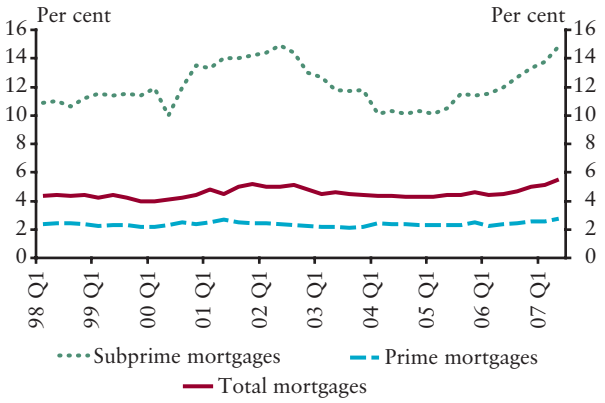
The US mortgage market turbulence has not reached its end yet, and for several reasons it is likely that the underlying market of securitisation, i.e. the quality of mortgage loans, will continue to deteriorate.

According to initial indications, the deterioration in quality of the mortgage loans issued in 2006 has not reached its potential maximum yet as the peak is expected around the 25th-30th month following issuance, and that time has not come yet. A further risk factor is that a significant portion of US mortgage loans feature floating interest rates, and within this category of loans, many have teaser interest rates until the first repricing (reset). The reset peak will be in March and April 2008, which may result in a further increase in defaults in payment as well as losses, due to the increasing instalments because of higher interest rates.

The third risk is that many parties who invested in securitised loans have large liquidity exposure: they finance their long-term assets by issuing short-term securities. Since some of these short-term instruments have not expired since August, a portion of the liquidity stresses and potential losses has not yet surfaced. Based on the aforementioned three factors, the difficulties are expected to last, which may generate further losses for investors through non-transparent channels, adding to the uncertainty.

Chart 2-5

Percentage of households with payment problems in the US mortgage market



Source: Mortgage Bankers Association.

The Hungarian banking sector is not directly exposed to the US mortgage market. Consequently, the troubles experienced in European and the US money markets in August have not influenced the Hungarian market significantly over the short term. The cost of foreign funding of domestic banks was affected by the 35-45 basis point increase in the 1- and 3-month interbank euro interest rates observed since early August, although its effect in terms of narrowing the banking system margin was insignificant.

The owners of the Hungarian banking sector are mainly European and US banks, which operate in markets exposed to the problems. The protracted, prolonged, and perhaps deepening confidence crisis in foreign interbank markets may unfavourably affect financial stability through two channels over the longer term. We should like to emphasise that the Hungarian banking sector and economy do not face any considerable risks through these channels, and there are no signs that these indirect effects materially affect financial stability.

The first channel is the increase in liquidity risks, which may partly have an impact through an increase in the price of foreign funds and/or through the rollover risk increasing due to the interbank markets, which are suffering from a protracted period of insufficient liquidity.

In recent years, Hungarian banks have become increasingly compelled to use foreign funds, as domestic savings have not been able to finance the increase in lending to households. Most of the foreign funds are received by Hungarian subsidiaries from their own parent banks, but other foreign funds have also become increasingly involved. In the banking system, around 70 per cent of the foreign currency funds and the extended foreign currency loans are repriced within 3 months, and 80-90 per cent within 6 months. Therefore, the costs of funds, which are becoming more expensive due to the increase in risk premia, pass through the Hungarian banking sector relatively rapidly, and the banking system is able to pass these costs on to their clients relatively quickly. In the event that banks do so, due to the increasing instalments, the quality of the portfolio may change for the worse, and if strong competition forces banks not to include the increasing costs of funds in the interest rates on loans or only partly, that may result in a narrowing of banks' margin and thus a deterioration in profitability. The increase in the cost of funds affects domestic non-financial corporations independently of the banking system as well, because nearly half of their outstanding loans are originated directly from abroad, and the increase in costs through this channel may impair the efficiency and reduce the growth prospects of the sector.

Another consequence of the increase in liquidity risks may be the increase in funding risk. A potential further increase in the confidence crisis between parent banks may result in a prolonged liquidity bottleneck on foreign interbank markets, making it more difficult to rollover foreign funds. Rollover risks may be mitigated by the fact that a significant part of foreign funds of the banking system originates from the foreign owners, who will presumably prefer their Hungarian subsidiaries when redistributing the smaller amount of available funds, since they are extremely profitable.

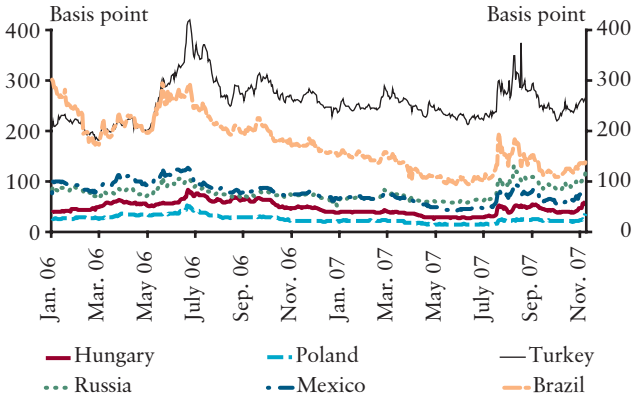
The second channel may be the development of the 'credit crunch' situation evolving in the US and European markets. Based on empirical evidence, this means that if banks face considerable losses, they reduce their willingness to take risks, apply much tighter lending conditions, and provide loans with higher risk premia. Consequently, the chance of a slowdown in economic growth increases. The 'credit crunch' which might develop in the US and European markets may affect domestic markets in two ways. On the one hand, faltering growth in external markets may deteriorate the performance of the Hungarian economy, and on the other hand, this effect may be amplified by the fact that higher risk aversion amongst parent banks and tighter lending conditions may reduce domestic affiliates' lending activity as well, resulting in the development of a domestic 'credit crunch'. These two effects together may have a negative impact on the growth prospects of the Hungarian economy.

Compared to earlier periods, the deterioration in the global financial environment has affected emerging markets to a lesser extent. Although the decline in the demand for risky instruments at the end of the summer had an unfavourable impact on these markets as well, the negative effect was moderate and temporary. In October, for example, a number of emerging market stock market indices and currency exchange rates reached historic highs. There are several factors underlying the relative stability of emerging markets. First, the deterioration in the international investment environment was triggered by a shock emanating from developed markets (US sub-prime mortgage market), and second, compared to earlier turbulent periods, emerging economies are now characterised by a more favourable fundamental situation. Looking ahead, according to market opinions, if financial problems start from the developed markets in the near future as well, the aforementioned economies may be more resistant to negative shocks than before.

Following the declines in August, by the beginning of October, domestic instrument prices returned to the levels preceding the sell-off. Similarly to other emerging markets, the increase in investors' risk appetite resulted in appreciation of Hungarian investments as well. The developments in various risk indices suggested that investors increasingly differentiated between risky instruments according to what extent they were directly exposed to the problems of the US sub-prime mortgage market. Following the significant jump at the end of the summer, premia on the risk-free yields of prime US and European corporate loans declined only slightly in October. As opposed to this, credit default swap (CDS) spreads of certain emerging market countries declined to the vicinity of the July level by October. During the November financial market turbulence similar investors' behaviour could be observed. Corporate credit spreads in developed markets increased above levels seen in end-summer, while the increase in CDS spreads of emerging markets was lesser.

Chart 2-6

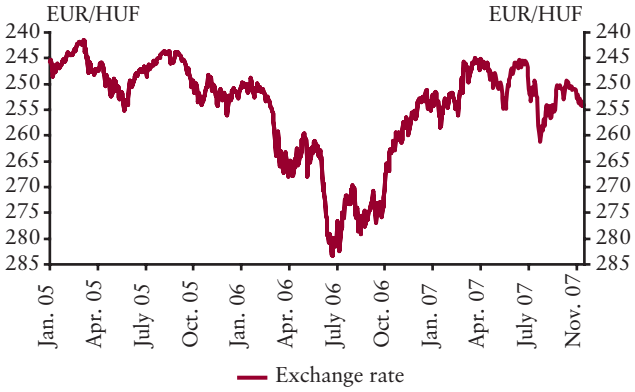
10-year CDS in selected emerging market countries



However, from the second part of October, domestic asset prices stopped appreciating, while the appreciation of the region and emerging markets continued. The exchange rate of the forint fluctuated within a narrow trading band against the euro in mid-October, while in November it depreciated slightly due to the financial market uncertainty. In the past one and half months, the forint exchange rate depreciated against the Czech koruna, the Slovak koruna and the Polish zloty.

Chart 2-7

Forint/euro exchange rates



The central bank's interest rate decisions did not bring any surprise for the markets; after the publication of the August Report the central bank base rate declined by 25 basis points to 7.5 per cent. Short-term interest rate cut expectations have remained relatively stable in the past months, although in the last 3 months the central bank base rate was cut by 25 basis points, as opposed to the 50 basis points expected for a 3-month period when the August Report was published. According to market participants' expectations, the interest rate cut cycle will continue in the coming period as well, and over a 3-month time horizon they still expect a 25-50 basis point monetary loosening. At the same time, interest rate cut expectations until the end of 2008 strengthened considerably in mid-September, which may be attributable to the Fed's mid-September interest rate cut, which exceeded market expectations. In these days the increase in investors' willingness to take risks resulted in a decline in yields with a maturity over 1 year. In contrast, rate expectations in November moderated, possibly due to the above consensus October inflation data and international investor's worthening sentiment. Currently, the yield curve indicates a 6.75 per cent central bank base rate for end-2008, which means a total 75 basis point interest rate cut for the coming more than one year.

Chart 2-8

MNB policy rate and policy rate expectations for the end of 2007 and 2008

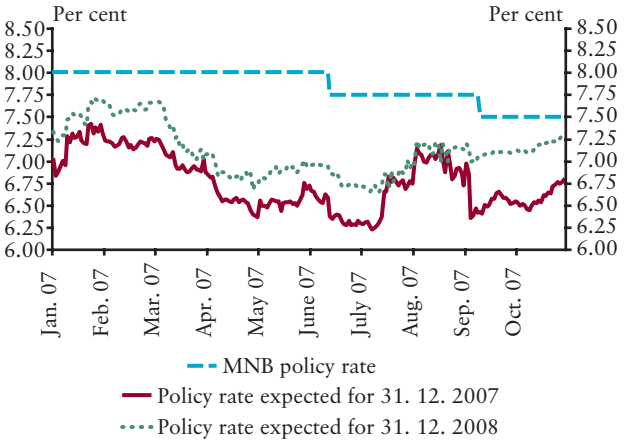
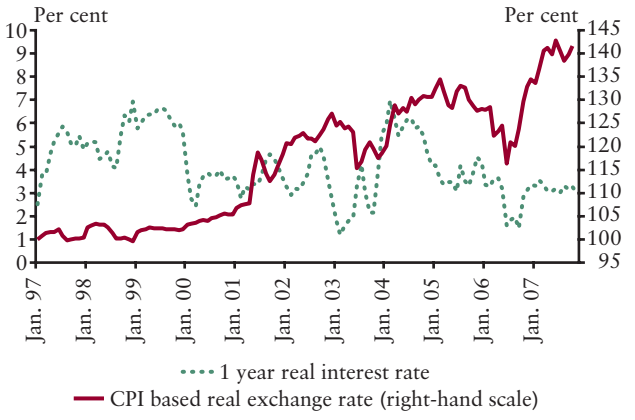


Chart 2-9

Monetary conditions



Overall, in terms of the nominal exchange rate the stance of monetary policy has not changed significantly since the August *Report*. The real exchange rate appreciated, mainly as a result of the re-strengthening of the forint exchange rate to levels around EUR/HUF 250 and to a lesser extent due to the inflation differential. Market participants expect the forint exchange rate to stabilise at EUR/HUF 250, both over the short and medium term.

Since August, the level of the 1-year real interest rate has been fluctuating around 3 per cent, which is typical of recent years. Following the announcement of last year's fiscal adjustment, the forward-looking 1-year real interest rate declined to around 1 per cent by the middle of the year, as a result of an increase in inflation expectations. Starting from the second half of last year, however, the moderation of inflation expectations exceeded the decline in yields, and thus the real interest rate increased again to nearly 3 per cent. Although the decline in inflation expectations came to a halt after August, which, together with a slight decline in the 1-year yields, resulted in a minimum decline in the forward-looking real interest rate, the approximately 3 per cent level continues to be close to the average real interest rate typical of recent years.

3. Outlook for inflation and the real economy

3.1. The baseline scenario

The long-term economic interactions underlying the forecasts in the previous Reports have not changed substantially in the past quarters, but the short-term outlook has become less favourable.[23]

As the one-off inflation and growth impact of the government measures in 2006 are wearing off, the economy is slowly and gradually approaching the long-term equilibrium path. In this context, sustainability indicators are improving, inflation will continue to drop and economic growth is expected to gain momentum in the years ahead after hitting a low point this year.

Looking ahead, the negative output gap is a major contributor to the reduction in the rate of inflation. This impact will partly materialize through demand dropping below potential levels, and also pointing toward more disciplined wage dynamics in the labour market.

Last year, the Hungarian economy was hit by a series of cost shocks with the capacity to destabilise the long-term outlook for inflation. According to our assessment, higher inflation expectations could represent the most important risk factor around the baseline scenario, due especially to the high inflation history of the Hungarian economy. In recent months this particular type of risk grew even further, as another major wave of price shocks hit, in the form of steep rises in prices of agricultural products, which will lead to additional inflationary impacts in the months to come.

In light of the above, we expect improvement from the starting point of low growth and high inflation, but it will probably take longer than previously expected, particularly as far as inflation is concerned. Consequently, average inflation next year will exceed the inflation target significantly, but is then expected to settle in around the inflation target in 2009. At the same time, the risks pointing toward higher inflation are now even more significant over the entire forecast horizon.

Negative output gap until the end of 2009

As for the path of the real economy projected until 2009, in recent months our views have shifted towards somewhat lower growth. The impact of the fiscal adjustment measures adopted by the government last year, which resulted in a contraction of demand, is expected to become less important in terms of economic developments, but the recovery following this year's slump will not be too spectacular. The growth rate of the economy may be around 2.4 per cent next year, and even in 2009 is expected to only marginally rise past the 3 per cent level.

During periods of declining domestic demand, exports are the major source of economic growth. In the wake of strong external demand, exports are likely to maintain strong growth rates over our forecast horizon (over 10 per cent), but growth is then projected to gradually loose pace until 2009 relative to the 15 per cent rate forecasted for this year. In our forecast, we have already incorporated the less dynamic outlook for global growth due to the financial turbulence of the summer of 2007. Based on the latest international forecasts, we believe that the negative waves originating from the US mortgage markets will have a lesser impact on European growth, which plays a key role for Hungarian exports, and thus will not have a major impact on the export prospects of the Hungarian economy. Nevertheless, in the analysis of risks surrounding the baseline scenario we considered the impact of the sharp global slowdown to be highly relevant.

Due to the growth in real household incomes projected for the period after 2008, we expect to see gradual growth in consumption over the next two years. Our forecast – as before – is characterised by consumption smoothing. As the rate of consumption is expected to decline less than incomes this year, in the same way, it is envisaged to rise below the rate of increase in incomes until 2009. In analysing the behaviour of households, it should be kept in mind that consumption smoothing applies only to consumption expenditures; in the case of transfers in kind comprising almost one quarter of all consumption, such as healthcare benefits, public education and price subsidies, the government's reform measures have a major influence on dynamics. Next year transfers in kind are expected to decline by 2 per cent, far less than this year's drop of 8 per cent, and slight growth is expected for 2009.

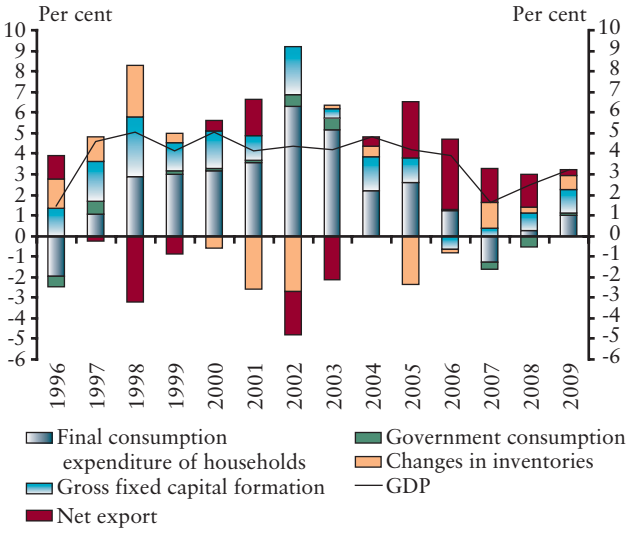
The outlook for investment prospects differs considerably among the various sectors (corporate, household and government). Investment by export-oriented companies is likely to remain relatively strong, but the remarkably high growth rate seen during the first half – resulting mainly from individual effects – is not expected to prevail. Investments in

[23] The projections are based on information available up to the 16th of November, c.o.b.

the manufacturing industry are supported by strong external demand, and also by the high rate of capacity utilisation. On the other hand, the future outlook on external economic activities shows a less favourable picture, thus export-oriented companies are also expected to expand investments at a slower rate than previously expected. The higher corporate interest rate spreads, due to increased uncertainty on financial market, may lead to an increase in user cost of firms, which also points towards less buoyant investment. Furthermore, the general factors of uncertainty surrounding the business environment continue to have a negative influence on the investment climate throughout the entire corporate sector, as shown by business confidence surveys (see Chapter 1.1). Moreover, the service sector is facing particularly weak domestic demand, and since income expectations of households are slow to improve, we do not expect a substantial increase in the household sector before 2009. As regards quasi-fiscal investment activities (public services, infrastructure, etc.), the increasing volume of EU funds support the expansion of investment dynamics, but there is a great degree of uncertainty in terms of size. At the same time, the impact of EU transfers on overall investments across the entire spectrum is reduced by the fact that some of these funds are appropriated for projects that would be completed nonetheless.[24] In the narrow public sector (public administration, local authorities), investment growth is expected to remain low; in other words, the extra EU funds will be used in all likelihood to replace budgetary funds to some extent. Consequently, as far as the whole economy is concerned, we expect to see a moderate, but gradual increase in gross fixed capital formation.

Chart 3-1

GDP growth rate and contributions



As a result of the gradually strengthening growth in domestic demand and the mild slowdown in external growth, the contribution of net exports to growth is expected to decline. In 2009, domestic factors are expected to take over and play a dominant role as far as growth is concerned. Regarding 2009, however, it is important to note that we do not see any indications supporting a growth rate around 4 per cent, the average of last years, in the light of the dynamics of major growth factors, such as investments, labour force reserves and technological development.

Box 3-1: Different estimates of output and consumption gaps

The majority of economic models capture inflationary effects of the demand side through the output gap. With demand falling back and the economy growing below its potential rate (i.e. with the output gap turning negative), a degree of slack – unemployment and underutilised capital – emerges in the economy, which looking forward acts as a brake on price and wage increases as long as factor utilisation reaches normal levels. Lower input costs help the economy to return to equilibrium, i.e. output to rise back to its potential growth rate, facilitating price cuts or a slower pace of price rises. Therefore the rising demand leads to higher output.

However, putting this theoretical relationship into practice gives rise to considerable uncertainties. A major difficulty is in measuring the potential output growth rate. There exist two different ways to deal with the problem. One solution is to use statistical time series techniques. Under this approach, the long-term trend is taken as the potential growth rate, and any deviations from trend will produce a measure of the output gap. It should be noted, however, that estimating the longer-term trend is very sensitive to observations at the end of the sample, i.e. the current low rate of output growth may also reduce the trend. Another method is to derive a production function-based measure of the potential growth rate using economic variables and factors of production. In practice, it is often the case that the most relevant individual component, the consumption gap, is chosen as a starting point, rather than overall GDP, in explaining domestic inflation developments.

Due to the uncertainties surrounding the estimates, staff use a number of approaches in producing their inflation projection. In the simultaneous macroeconomic model (NEM) the starting point has been staff's earlier

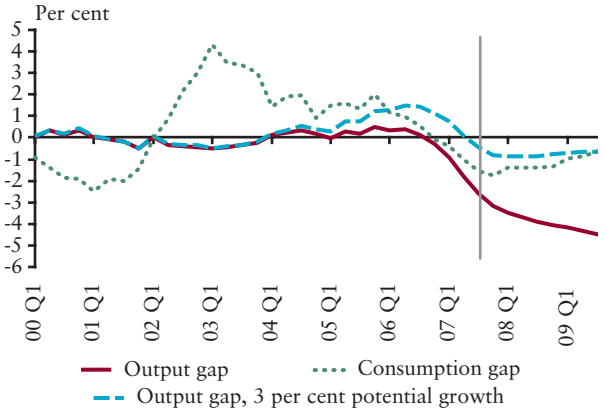
[24] This is supported by some of the international experience related to the appropriation of EU funds provided for investments, as addressed in Chapter 3 of the MNB's *Report on Convergence* (December 2006).

estimate for the potential growth rate of between 3.5-4 per cent, taking into account past growth in factors of production and technological progress. This implies a negative output gap over the entire forecast period. However, the more recent estimates, derived on the basis of the adverse developments of the past few years (e.g. subdued investment spending and a slowdown in technological progress), suggest that the potential growth rate of the Hungarian economy may have slowed to around 3 per cent. If this is the case, the output gap opens up less than in the case of higher growth. In staff's partial forecasting framework, the longer-term trend is estimated using a Hodrick-Prescott filter, but the consumption gap is used instead of the output gap. The forecast prepared using this method is for the consumption gap to close gradually, with little if any disinflationary effect in 2009.

To summarise, in the current macroeconomic environment quantifying the output gap and its disinflationary effects is a key forecast issue. Nevertheless, there is a considerable uncertainty surrounding the estimates. Due to this uncertainty, therefore, it is important that these factors are reflected in the risk assessment.

Chart 3-2

Estimates for the output and consumption gaps



As far as short-term prospects are concerned, the turning point of the cycle is expected to come in the second half of 2007 and, according to our forecast, short-base indices will indicate an upturn from the third and fourth quarters. The preliminary third quarter GDP figures and the latest retail sales figures also indicate an upcoming turning point in economic activity, in particular among durable consumer goods. However, the level of uncertainty that surrounds this turning point is high, due to the massive inventories shown in the relevant statistics which indicate that demand is below the expectations of producers. In our assessment this can have a disinflationary effect if the weak sales expectations materialize.

Prolonged wage adjustments in response to higher inflation in 2008

In recent quarters, our forecasts have placed a great deal of emphasis on the analyses of labour market developments, as we viewed the adjustment of the labour market to the shocks of 2006 to be a key issue. Similar to our previous forecasts, we still believe that substantial wage adjustments are likely to occur during the period 2008-2009, and by the end of the forecast period wage dynamics will be in line with the inflation path, approaching price stability. In the process of formulating our main scenario we did not incorporate co-ordination problems on the labour market, and the risks stemming from expectations are reflected in our risk assessment.

The starting point for our wage projection is that the high wage indices seen in the last year in the private sector are attributed to efforts to combat the informal economy only to a certain extent, as 'true' wage growth, bearing relevance from the perspective of economic developments, is also excessive. All of this, combined with moderate price increases, led to lower rates of profitability in the aggregate corporate sector. The loss in profits affected the various sectors differently; therefore, looking ahead it will lead to different adjustments paths as well.

In the manufacturing industry, relying on the buoyant external economic activities we expect to see rapid growth in productivity in the years to come. In line with the mild external slow down, nominal wage growth will also subside, meaning that unit labour costs will not be higher in our forecast horizon. According to our calculations, the profit ratio of corporations did not dwindle last year in the manufacturing industry, and looking forward we expect to see stable profit earned on labour. As for market services, we expect higher unit labour costs in the light of slower growth in productivity, however, at a gradually slowing pace as in the case of nominal wages starting in the second half of 2007, with wage growth dropping below 7 per cent by 2009. The reason for this is that we expect to see moderate changes in prices of market services in response to sluggish demand, and the onset of adjustments in the profit rates will emerge as a disciplinary force as well. By 2009 the rate of profit in the sector is not expected – in spite of the projected increase – to

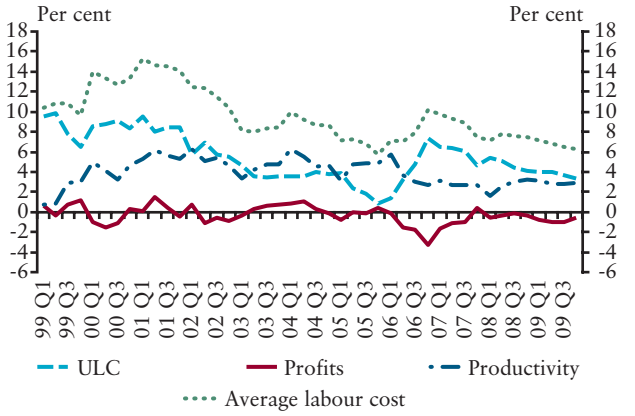
reach the level seen during the years characterized by strong domestic demand.

As for the private sector as a whole, adjustments in the labour market will have to exceed the level prompted by the two most important sectors, namely the manufacturing industry and market services. The reason for this is that in the sectors with smaller weight (construction and agricultural industries), which are also showing signs of greater depression, the rate of profit could drop even further in the light of weak production outlook. Hence, these sectors will be exposed to even greater pressure for price, wage and labour force adjustments.

Chart 3-3

Private sector unit labour cost components

(Quarterly data; annual rate of change)

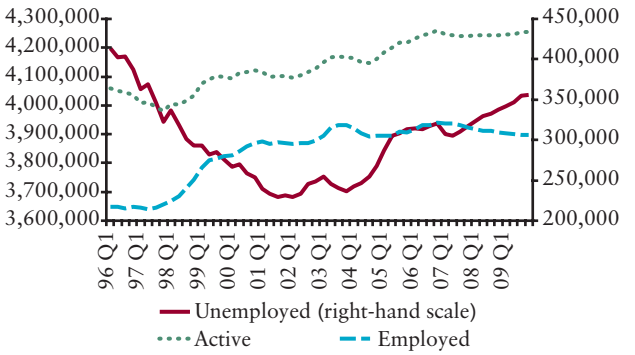


In light of the above, on the whole we continue to expect that in 2009 wage growth will drop below 7 per cent in the private sector, however, due to the higher inflation path projected for next year, the adjustment of wages could take longer than previously assumed,[25] and thus the growth rate of wages may diminish considerably only in 2009.

Chart 3-4

Changes in workforce in the private sector

(LFS statistics; quarterly data, seasonally adjusted)



As far as the other channel of labour market adjustments, the workforce, is concerned, in our opinion the rate of employment in the private sector will diminish slightly. The massive lay-offs in the smaller sectors might constitute the driving force of the downward trend.

Higher inflation in the short run, followed by a decline close to target in 2009

Based on unchanged average monetary conditions of October, and our further assumptions, inflation in 2009 could drop to the level of the medium-term objective. The rate of decline in inflation, however, might be slower than previously expected, which means that next year's inflation may be significantly above the target, at around 5 per cent.

Our view has not changed in respect of the key economic relationships driving inflation. Weak domestic demand and a negative output gap point towards lower inflation over the entire forecast horizon. Due to the labour market adjustments discussed above, we do not foresee any major price pressure, in spite of the fact that nominal wages may increase at a rate higher than previous expected.

Apart from economic relationships, there are numerous individual factors influencing inflation substantially. During the autumn months, the impact of the government's measures affecting prices moved out of the annual price indices, allowing the rate of inflation to drop by 2.5 percentage points. The new shock that has emerged in recent months, namely the sharp global increase in agricultural prices, will however mitigate the decline in inflation in the short run. At our forecast horizon, one of the most important questions from the perspective of the inflation outlook is the effect the recent shock of food prices will have on the overall prices over the longer run. In other words, it is important to determine the part of recent price increases that is likely to persist, and the part that is deemed temporary.

Relative to other components of the consumption basket, the volatility of food prices is extremely high; thus, longer-term forecasts necessarily involve a greater degree of uncertainty. Despite the existing uncertainty, we now believe that the lasting component of the price increase may be greater than envisaged in our previous quarterly forecast. On the one hand, the future prices of crops on the commodities market rose

[25] The survey of Hewitt consultants also support an increase in wage prognosis, showing that companies plan to increase wages at a rate similar to what we have seen in 2007. Furthermore, our updated model simulations on wage development also indicate that the adjustments of wages will be slower than expected earlier.

Table 3-1

Inflation forecast main scenario

	Weight	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	5.6	16.1	9.3	12.3	18.8	13.9	8.6	2.3	-3.5	-0.5	3.8	4.1	3.8
Fuel and market enegry	6.7	2.3	0.6	-2.1	6.5	9.1	2.5	0.5	-2.1	-2.2	-1.2	-1.1	-1.0
Regulated prices	21.5	15.3	17.6	15.6	10.1	7.1	6.7	6.5	6.1	4.4	3.7	3.7	3.9
Core inflation	66.2	6.4	6.7	5.9	5.0	5.1	5.0	4.7	3.8	3.5	3.2	3.0	2.9
CPI	100.0	8.5	8.6	7.7	6.9	6.3	5.4	4.6	3.5	3.1	3.0	3.0	2.9

Yearly average				
Core inflation		6.0	4.6	3.1
CPI		7.9	5.0	3.0

considerably during the autumn, and on the other hand, due to the growing popularity of bio fuels and to the growing volume of food imports of emerging markets, the leading forecasting institutions prognosticate a long-term path of massive price increases, despite adjustments in supply. Nevertheless, similar to our August forecast we still believe that the price level of unprocessed foods will decline in the second half of 2008. As a result food prices might be a major factor behind the declining inflation in the second half of 2008.

Apart from food prices, energy prices will also exert pressure on prices longer than previously expected, due mostly to increases in the price of electricity. The price of electricity supplied to households, that appears directly in the consumer price index, is a regulated price, while production costs will be influenced by the increasing price of electricity supplied to the corporate sector on the liberalized market. The latter may be felt indirectly in the consumer price index as well.

Box 3-2: Changes in our forecast relative to the August Report

Higher forecast due to the continued increase of the prices of agricultural products and electricity and slower wage adjustment

Consistent with our forecasting practice, we have prepared conditional forecasts. Included among our main assumptions are fixed levels of foreign exchange rates (EUR/HUF, EUR/USD), the base rate and long-term yields, in addition to the October average forward oil price path. The average EUR/HUF exchange rate in October was approximately 2 per cent weaker than the July average used in the previous quarter. The climb in spot oil prices in dollars is offset to a large extent by the dollar's decline against the euro, and by the decline in the forward oil price path. On the whole, these basic assumptions show an upward trend, but did not justify any major changes from the August forecast.[26]

Table 3-2

Changes in major assumptions relative to the August Report*

	August 2007			Current		
	2007	2008	2009	2007	2008	2009
Central bank base rate (per cent)**	7.75	7.75	7.75	7.5	7.5	7.5
EUR/HUF exchange rate	248.6	246.8	246.8	250.8	250.8	250.8
EUR/USD exchange rate (US cents)	135.0	137.2	137.2	1.36	1.42	1.42
Brent oil price (USD/barrel)	69.6	75.0	73.8	71.0	80.2	77.0
Brent oil prices (HUF/barrel)	12 793	13 491	13 285	13 018	14 135	13 566

** Annual averages, based on the monthly average exchange rate in August 2007 and the crude oil futures price.*

*** End-of-year values.*

[26] The effect of the massive oil price increase in the second half of October is better reflected if only the data of the last 10 working days is used. In this case average 2008 inflation would be 0.3 per cent higher and 2009 by 0.2 per cent.

In terms of regulated prices during the last quarter specific information regarding public transport, water and sewerage fees are worth mentioning. These effects together will increase inflation by 0.1 per cent in 2008. In the absence of specific information we continue to provide rule-based forecasts for other sub-categories, based on core inflation. We have updated this latter rule consistent with the developments in recent years, as a result of which we have increased our forecast for regulated prices, but the inflationary impact of this change remains below 0.1 per cent.

As indicated in the previous subchapter, the higher inflation path is attributed to a large extent to the stronger-than-expected rise in food prices, and higher unit labour costs and electricity price also need to be mentioned. In August, we postulated that the agricultural price shock in 2008 will result in an increase of close to 1 percentage point of overall price level of the consumption basket, then in 2009 the overall price level could drop by 0.3 per cent. Based on the latest information, we consider the shock to be greater, and any consequent reduction in the price level may be smaller, thus leading to a smaller disinflationary impact.

Regarding the effects of labour market processes, it is worth noting that our forecast of unit labour costs for 2007 is somewhat higher than previously expected as sizeable work force adjustment has not materialized this year. Meanwhile, the higher 2008 inflation might suggest a slightly slower wage adjustment, compared to our former expectation.

According to the latest information, in the deregulated electricity market prices are expected to rise starting January 2008, and this will have a direct effect on production costs in the corporate sector. In this sector we anticipate higher price increases than in our August forecast, both for 2008 and 2009. The additional inflationary impact will be around 0.2 per cent annually.

Chart 3-5

Changes in the forecast for agricultural producers' prices

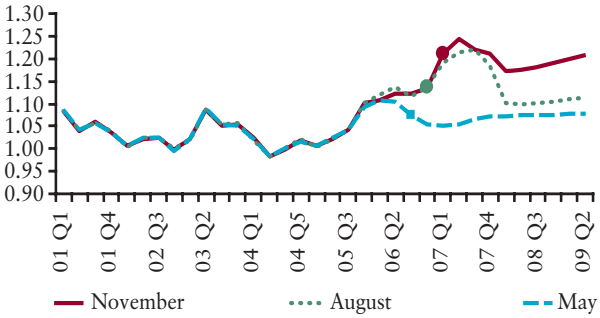


Table 3-3

Changes in the forecast relative to August 2007

	2006	2007		2008		2009	
	Actual	Projection					
		August	**Current**	August	**Current**	August	**Current**
Inflation (annual average)							
Core inflation[1]	2.4	5.9	**6.0**	4.3	**4.6**	2.7	**3.1**
Consumer price index	3.9	7.6	**7.9**	4.5	**5.0**	2.4	**3.0**
Economic growth*							
External demand (GDP-based)	3.9	3.4	**3.4**	3.0	**2.9**	3.2	**2.9**
Fiscal impact on demand[2]	2.6	x	**-3.6**	x	**–0.8**	x	**-0.1**
Household consumption	1.9	-0.9	**-2.1**	0.2	**0.4**	1.6	**1.6**
Memo: Household consumption expenditure	*1.4*	*x*	*-0.3*	*x*	***0.9***	*x*	***1.8***
Fixed capital formation	-2.1	1.8	**1.7**	4.5	**4.2**	5.8	**5.5**
*Domestic absorption ** *	*0.4*	*-0.2*	***0.0***	*1.1*	***1.2***	*3.0*	***3.0***
Export	17.9	14.7	**15.1**	12.4	**11.6**	11.3	**10.3**
Import[3,**]	12.4	11.9	**13.1**	10.6	**10.3**	11.0	**10.2**
GDP	3.9	2.0	**1.6**	2.7	**2.4**	3.4	**3.2**
Current account deficit [3,**]							
As a percentage of GDP	6.5	x	**5.5**	x	**5.3**	x	**5.2**
EUR billions	5.8	x	**5.7**	x	**5.9**	x	**6.1**
External financing requirement [3,**]							
As a percentage of GDP	5.7	x	**4.3**	x	**3.3**	x	**2.8**
Labour market							
Whole-economy gross average earnings[4]	8.2	x	**8.4**	x	**6.5**	x	**5.4**
Whole-economy employment[5]	0.7	x	**0.4**	x	**-0.1**	x	**-0.2**
Private sector gross average earnings[6]	9.4	x	**9.7**	x	**7.7**	x	**6.8**
Private sector employment[5]	0.9	x	**1.1**	x	**0.0**	x	**-0.3**
Private sector unit labour cost[5,7]	4.7	x	**7.0**	x	**4.4**	x	**3.0**
Household real income	-1.5***	x	**-3.0**	x	**2.1**	x	**2.4**

[1] For technical reasons, the indicator that we project 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 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-flow basis. [5] According to the CSO labour force statistics, however, due to the change of the method the data is not directly comparable with the previous published one. [6] Data including the effect of whitening, consistent with headline CSO data. [7] Private sector unit labor cost calculated with wage indicator excluding the effect of whitening and changed seasonality of bonuses.

** Our analyses and forecasts are based on the quarterly data of the GDP flash report published by the CSO on 7 September. In the summary table we have indicated changes in volume during the period in question relying on the same publication. Let us point out, however, that the figures contained in the CSO publication entitled 'Gross Domestic Product 2006 (second estimation)' since published deviates from the numbers shown in this table as regards certain partial aggregates. For the latter, however, we do not have quarterly data to use for our prognosis.*

*** Our projection for 2007 includes the impact of the Hungarian Army's Gripen purchase, which raises the current account deficit and increases community consumption and imports.*

**** An MNB estimate.*

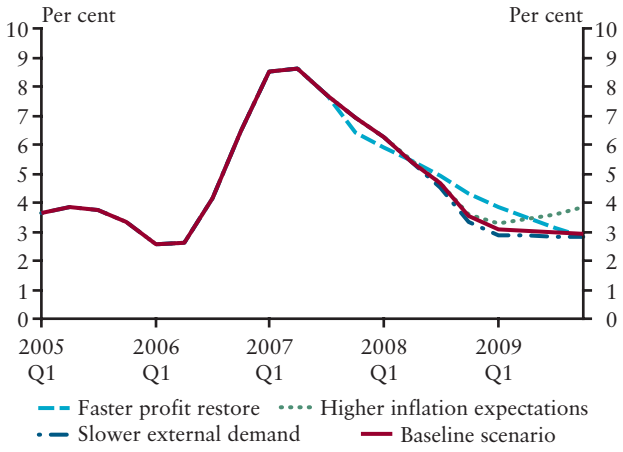
3.2. Risks around the main scenario

The baseline scenario in the inflation forecast represents the outcome that we deem most probable. Naturally, there are numerous other alternatives as far as the scenario is concerned: the five alternatives we believe to be the most important is summarized in the risk distribution. We use fan charts to illustrate the baseline scenario of inflation and growth, and the risks surrounding them.

From the perspective of inflation, the largest degree of uncertainty lies in the fact that the one-off hike in prices could lead to persistently higher inflation expectations. If employees lose faith and no longer expect that inflation will return to the level consistent with price stability, or at least close to it, they will demand higher wages to compensate for the higher inflation. In this case, the nominal wage path may depart from productivity growth, that could ultimately force companies to higher price increases. Having regard to the sequence of supply and cost shocks, and also to their sizes, recently the second-round impacts are considered to be the greatest inflation risks, which could shift the 2009 path upward significantly.

Chart 3-6

Inflation baseline scenario and risk paths



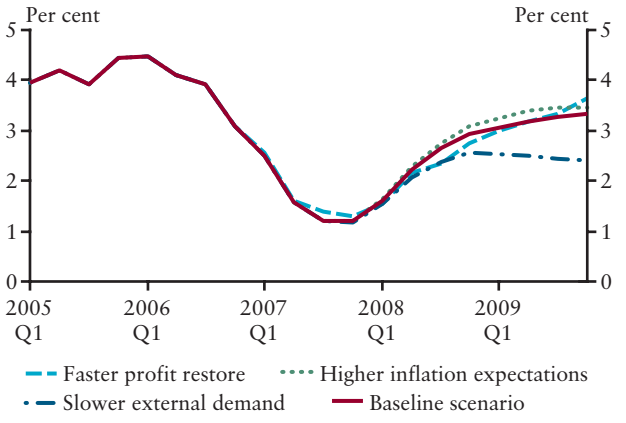
Similarly, trends in the profit situation of the corporate sector also involves risks pointing towards higher inflation. In our baseline scenario, we predict that the loss of profits seen recently will stop, but the previous profit levels cannot be restored over this forecast horizon due to weakening demand. In our alternative scenario, we project that adjustments to restore profits will be implemented faster and more intensely, meaning massive lay-offs and steeper price increases. In our view, this path leads to lower employment and output and to higher inflation, and represents a realistic risk primarily in 2009.

As we have indicated in relation to our previous forecasts, the impacts of fiscal tightening measures are surrounded by a great deal of uncertainty. On the one hand, it is difficult to predict the disciplinary effect that lower demand is likely to have on pricing setting in the corporate sector. In the light of our forecasting methods, we see some potential that the disinflationary impact of the aforementioned slowdown will be greater than what we have expected. On the other hand, there are certain signs indicating that the sagging GDP path is attributable to some extent to lasting supply side factors. This is also supported by the fact that there are no signs, for the time being, pointing towards a cyclical decline in employment nor in terms of capacity utilization. The lower dynamics of potential output has the tendency to reduce disinflationary impact. In our opinion, therefore, the inflationary impacts of a slower growth path are now surrounded by symmetrical risks, which, on the other hand, increases the uncertainty factor around our forecast.

Of the uncertainty factors related to economic growth, external demand appears to be the most significant. The crisis in the US mortgage markets this summer exacerbated existing worries relating to medium-term growth plans of markets in Europe and overseas. It appears to be a realistic alternative scenario that the devalued assets due to risk repricing are likely to bring about lower global demand through the wealth effect. This could cause direct setbacks in Hungarian net exports and, via slower growth in global energy prices and

Chart 3-7

Baseline scenario of growth and risk paths

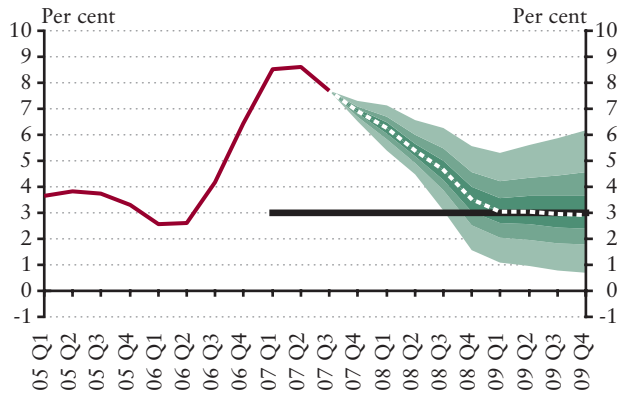


lower international inflationary environment it could indirectly have a slowing effect on inflation in Hungary. Presently, we look upon this risk path as the most relevant from the perspective of growth prospects, and in our view it could lead to a level below the GDP baseline scenario in 2009.

The risks illustrated are practically symmetrical in 2008 on the whole, as far as inflation and growth are concerned. In 2009, due mostly to higher expectations, in our opinion there are considerable upside risks to inflation, while economic growth is likely to drop if external demand fails to reach the level predicted in our baseline scenario.

Chart 3-8

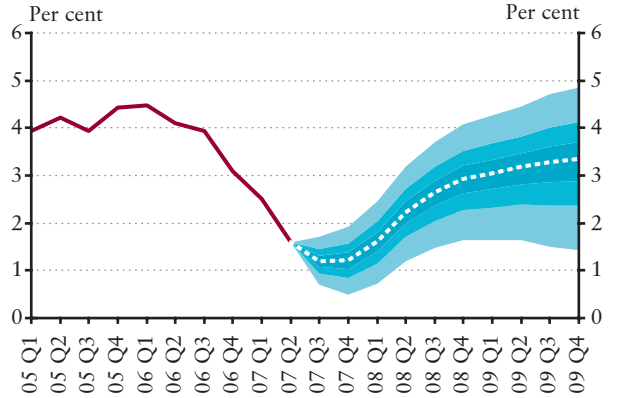
Inflation forecast fan chart*



** The fan chart represents the uncertainty around the central projection. Overall, the coloured area represents a 90 per cent probability. The central, darkest area containing the central projection for the consumer price index illustrated by the white dotted line (as the mode of distribution) refers to 30 per cent of the probability. The continuous, horizontal line from 2007 shows the value of the announced inflation targets.*

Chart 3-9

GDP fan chart*



** The fan chart represents the uncertainty around the central projection. Overall, the coloured area represents a 90 per cent probability. The central, darkest area containing the central projection for GDP illustrated by the white dotted line (as the mode of distribution) refers to 30 per cent of the probability.*

3.3. Background information for the forecast

Effects of an alternative interest and exchange rate path

We examined the impact on our forecast if we were to use the last Reuters Poll from October and rely on the exchange rate and interest rate expectations it contains. Compared to the projections in the baseline forecast, the analysts do not project a significantly different path for the exchange rate, while in the case of central bank base rate they predict a cut of 100 basis point by the end of 2008. Applying these presumptions on our forecast, there are no significant changes neither our inflation forecast, nor in our growth forecast.

Chart 3-10

Exchange rate assumptions based on Reuters survey prepared in November and fixed rate projection*

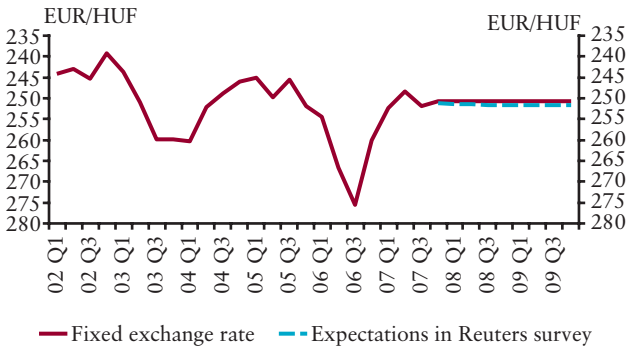
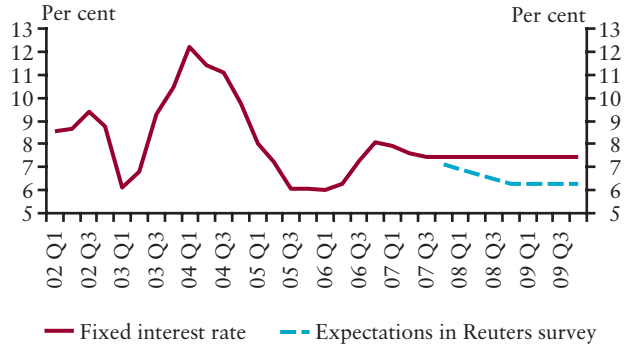


Chart 3-11

Central bank base rate assumptions based on Reuters survey prepared in November and the fixed rate projection



Our forecast compared to other forecasts

Comparing our forecast to the prognosis of other analysts brings the following conclusions. The inflation prognosis for 2007 and 2008 is somewhat higher than the common market expectation.

On the other hand, as far as the rate of economic growth is concerned, the MNB's position for both years is slightly more pessimistic compared to the market. As regards the current account deficit, (in absolute figures), the Magyar Nemzeti Bank – similarly to the new IMF prognosis – anticipates that the deficit will be somewhat higher than the average indicated in the forecasts of market analysts, while in the case of general government deficit its projection is about the average.

As for our forecasts about the size of Hungary's export markets and the GDP growth rate of Hungary's trade partners, we have made downward corrections relative to August 2007, similar to international institutions, but our forecast is practically the same as that of the others.

Table 3-4

Comparing the MNB baseline forecast to other forecasts

	2007	2008
Consumer Price Index (annual average growth rate, per cent)		
MNB (November 2007)	7.9	5.0
Consensus Economics (October 2007)[1]	7.4 - 7.7 - 7.8	3.3 - 4.4 - 5.6
OECD (May 2007)	7.2	3.7
European Commission (Autumn 2007)	7.7	4.9
IMF (October 2007)	7.6	4.5
Reuters-survey (October 2007)[1]	7.6 -7.8 -7.9	4.0 - 4.6 - 5.0
GDP (annual growth rate, per cent)		
MNB (November 2007)	1.6	2.4
Consensus Economics (October 2007)[1]	1.5 - 2.1 - 2.6	2.2 - 3.0 - 3.5
OECD (May 2007)	2.5	3.1
European Commission (Autumn 2007)	2.0	2.6
IMF (October 2007)	2.1	2.7
Reuters-survey (October 2007)[1]	1.4 - 2.0 - 2.4	2.2 - 3.0 - 3.8
Current account deficit (billion EUR/USD)		
MNB (November 2007) (EUR)	5.7[4]	5.9
Consensus Economics (October 2007)[1] (USD)	4.5 - 6.0 - 7.0	4.2 - 5.9 - 7.8
Reuters-survey (October 2007)[1] (EUR)	4.4 - 5.0 - 5.3	3.6 - 4.7 - 5.2
Current account deficit (percent of GDP)		
MNB (November 2007)	5.54	5.3
OECD (May 2007)	3.6	2.2
European Commission (Autumn 2007)	4.4	3.4
IMF (October 2007)	5.6	5.1
Budget deficit (ESA-95 method, per cent of GDP)		
MNB (November 2007)[3]	6.1	4.0
Consensus Economics (October 2007)[1]	6.0 - 6.2 - 6.5	3.9 - 4.3 - 5.1
OECD (May 2007)	6.7	4.8
European Commission (Autumn 2007)	6.4	4.2
Reuters-survey (October 2007)[1]	5.8 - 6.1 - 6.6	3.7 - 4.2 - 4.9
Forecasts on the size of Hungary's export markets		
MNB (November 2007)	8.0	7.1
OECD (May 2007)[2,5]	7.2	7.5
European Commission (Autumn 2007)[2,6]	8.1	7.8
IMF (October 2007)[2,6]	6.9	7.6
Forecasts on the GDP growth rate of Hungary's trade partners		
MNB (November 2007)	3.4	2.9
OECD (May 2007)[2,5]	3.5	2.9
European Commission (Autumn 2007)[2,6]	3.6	3.1
IMF (October 2007)[2,5]	3.6	3.1

The MNB projections are so-called 'conditional' projections. Therefore, they cannot always be directly compared to other projections.

[1] In addition to the averages of polled analysts' responses (the values in the middle), the smallest and largest values are also indicated for the Reuters and Consensus Economics surveys in order to illustrate distribution. [2] Values calculated by MNB; the projections of the named institutions regarding individual countries are considered with the weights used for calculating the MNB's own external demand indicators. This way, the forecast may differ from the numbers published by the aforesaid institutions. [3] The MNB prepares a forecast for the ESA deficit concurrently with the full Report. [4] Our projection takes account of the negative effect on the current account resulting from Gripen purchase. [5] The OECD did not publish any information about Romania, therefore Romania is not included in our OECD forecast. [6] Since August 2007 the methodology used was revised, we have included the forecasts of Hungary's trade with Romania as well.

Sources: Consensus Economics Inc. (London) (October 2007); Eastern Europe Consensus Forecasts (October 2007); European Commission Economic Forecasts, Autumn 2007; IMF World Economic Outlook (October 2007); Reuters survey (October 2007); OECD Economic Outlook (May 2007).

4. Fiscal and external balance

4.1. Developments in general government deficit indicators

According to our forecast, the accrual-based budget deficit (ESA deficit) may be lower in 2007 and 2008 than the deficit target set forth in Hungary's Convergence Programme, but the pace of fiscal adjustment is expected to falter in 2009, and there is a risk of failure to meet the deficit target. According to our baseline forecast and the asymmetric distribution of risks with a bias towards a higher deficit, additional measures are required in order to meet the target for 2009.

According to our baseline forecast, the fiscal path differs in terms of dynamics from the path laid out in the Convergence Programme. The reason for this is that during the initial phase of the programme, the deficit dropped at a pace faster than projected in the programme due to better-than-expected revenues, while at the same time, as far as expenditures are concerned, it is apparent that government expenditures are catching up with higher revenues. In other words, the extra revenue is partly spent in this year, and it will be mostly spend in the next year (for example, the wage freeze implemented in the public sector will not apply to 2008). Consequently, applicable to the entire path, fiscal adjustments will be implemented under higher government revenue centralisation (and redistribution) ratios in contrast with what is contained in the Convergence Programme, and this could curb economic growth because of the higher-than-expected tax burden.

According to our forecast, the deficit reduction in 2008-2009 will be based mostly on expenditure cuts. In addition to the measures introduced to reduce current expenses on a long-term path, in 2008 a sizeable reduction of one-off expenditure items will be a significant factor in reducing the deficit, estimated at 1.5 per cent of the GDP.[27] However, in 2009 these one-off items will have a lesser impact in reducing expenditure, while the level of tax revenues relative to the GDP will begin to decline if the level of tax evasion stops declining and the inclusion of incomes from the informal economy fails to continue.[28] For 2009 we have prepared a conditional, rule-based forecast, containing only the foreseeable impacts of the measures already announced.

Revenues

As a result of the measures taken by the government to increase revenues, the level of revenues relative to GDP from taxes and contributions increased during the fourth quarter of 2006, and even more significantly in 2007, while at the same time these measures are responsible for lower consumption and for reductions in disposable income. Consequently, the revenues of the general government from

Table 4-1

Fiscal deficit indicators in our baseline scenario

(as a percentage of GDP)

	Preliminary actual	Forecast		
	2006	2007	2008	2009
1. GFS balance	**-9.3**	**-6.0**	**-4.4**	**-3.9**
2. Primary balance	-5.5	-2.4	-0.9	-0.5
3. ESA balance adjustments	0.1	-0.1	0.4	0.2
4. ESA balance (1+3)	**-9.2**	**-6.1**	**-4.0**	**-3.8**
5. Quasi fiscal expenditures and other adjustments	-0.7	-0.3	-1.5	-1.4
6. Augmented (SNA) balance (4+5)	**-9.9**	**-6.4**	**-5.5**	**-5.2**
7. Augmented (SNA) primary balance	-6.1	-2.5	-1.7	-1.6
8. Fiscal demand impact	**+2.6**	**-3.6**	**-0.8**	**-0.1**
Note				
ESA balance: Convergence programme	-10.1	-6.8	-4.3	-3.2

[27] These expenditure items include the recording of Gripen plane purchases, MÁV capital injection, costs of motorway construction including in the central budget, one-off extraordinary budgetary subsidy provided to MÁV, the projected release of the unspent appropriations of budgetary chapters and units during 2007.

[28] Let us note that the Government also addressed this possibility in the 2006 Convergence Programme.

taxes and contributions – following the initial growth relative to GDP – will take a downturn on the long run, which also means that as of 2008 the revenues of the general government (taxes and contributions) will no longer be a factor in the fiscal adjustments.

This year, due to higher wage improvements in the private sector and the fact that consumption expenditure declined less than previously expected, the macroeconomic path produces extra tax revenues for the general government. In our forecast, we assumed that the surplus in tax revenues shown for 2007 will begin to decline relative to GDP, due fundamentally to tax bases (real wages and consumption) failing to expand in parallel with GDP. As the growth rate of purchased private and public consumption in the 2008-2009 period is expected to remain below the growth rate of GDP at current prices, the rate of VAT revenues relative to GDP will also begin to decline. The rate of reduction, however, will be less steep than previously expected, and according to our estimate VAT revenues will decline by 0.1-0.2 percentage points of GDP during the next two years.

In 2007, revenues from social contributions were significantly higher than projected, with revenues from health insurance contributions taking the lead in this surplus. This year the amount of contribution revenues that the general government may realise could be as much as HUF 110 billion higher than it was previously expected. The greater part of this extra revenue could be attributed to the inclusion of incomes from the informal economy, and the other part to the higher-than-projected wages. Accordingly, the higher revenue path is attributed, to some extent, to the fact that the impact of the reduction in tax evasion was stronger than predicted, as it is also shown in the significantly higher effective rates of healthcare contributions, which is an indication of sizeable tax evasion.[29] As for revenues from excise duties, efforts to push back the informal economy are now a major factor, due largely to improved efficiency in tax control.

In our view, the impact of efforts to combat the informal economy will be prolonged, taking this into account as a base effect in our baseline forecast for the prognosis of tax and contribution revenues. At the same time, as far as profit taxes are concerned, they frequently remained behind our expectations during the year, and therefore we have provided a conservative forecast for these taxes (corporate tax, EVA).

Expenditures

During the first two years of fiscal adjustments, reductions in so-called one-off items (motorway construction projects, MÁV consolidation, Gripen purchase, etc.) had a major impact in reducing the deficit. Previously, we estimated the impact of one-off items for the improvement of balance accounts in 2007 for around 1.0 per cent of GDP, however, the government embarked on spending the extra revenues by way of making payments which are also regarded as one-off items.[30] The impact of these items will continue to be considerable in 2008, we estimate that this type of reduction of expenditures may improve the budget balance by around 1.5 per cent of GDP.

At the same time, it is apparent that the government managed to make successful adjustments in some areas to reduce its current expenditures. For example, in the central budget tight expenditure control was introduced during the first nine months, resulting in substantial differences in deficit trends compared to what was seen in previous years, and most expenditure limits remained unaffected on a time-proportional basis. Furthermore, the fact that this year the stock of the so-called unspent appropriations did not increase also indicates tighter expenditure control measures, which constitutes a major improvement compared to previous years.

In 2007, the government sector's objective for the reduction of public employment appears to materialise, but public sector wages are likely to exceed the figures shown in the Convergence Programme, particularly from 2008 onwards, and the risk of higher wage path appears to pertain to 2009 as well.

Sizeable fiscal adjustment took place in connection with the subsidies of pharmaceutical products. At the end of 2006, the act on the supply of pharmaceutical products paved the way for a sustainable path of cutting costs, and the system of access and pricing (introduction of minimum price charged, reference products, etc.) was also amended. Additional measures (e.g. prescription control, upper limit for subsidies, etc.) support the long-term sustainability of subsidy reduction. These measures, on the whole, not only decreased the subsidies per consumption, but they also helped to reduce consumption itself. According to our forecast, only moderate increase is expected in the future in the volume of subsidies provided for medicines, in other words, the

[29] Our projection, even though it is significantly higher than before, still contains a positive risk factor, in view of the fact that the number of non-contributors could be reduced further, due in principle to closer ties between healthcare services and payments of contributions, to an unknown extent until the end of this year, or early next year.

[30] Extraordinary current subsidy to MÁV, furthermore, we assume that the stock of the so-called unspent appropriations accumulated during previous years will also be reduced considerably this year.

adjustments to maintain the lower level of support appears sustainable on the long run.

Major fiscal adjustments are taking place in the field of public services. The key elements of the adjustment are increasing prices and charges and decreasing price subsidies. These measures are considered as permanent adjustments in several areas (natural gas, utilities), and our budgetary baseline forecast, in line with the forecast for regulated prices, contains permanent reduction of these types of subsidies in real terms.

In terms of impact and magnitude, substantial fiscal adjustments are being implemented through the financing of local governments. According to our estimate, in 2007 local governments will receive less funds (approximately HUF 50 to 60 billion) from the central budget (they did not receive any compensation for the surprise inflation), and this tendency will continue in 2008 as well, as the real value of central subsidies will be further reduced (thus fiscal adjustments will have to be implemented in the education and health sectors).

As far as medical treatment and preventive care is concerned, fiscal adjustments were also introduced in 2007 to level out expenditures in several different ways, however, in consequence of the plans for easing the volume limits for services next year, and their eventual elimination effective as of 2009, expenditures may once again increase in real value. Nevertheless, we do not have the necessary information at our disposal to provide a more accurate assessment regarding the impact of these measures. Accordingly, it is highly uncertain whether or not the efforts to cut expenditure in this particular item can be sustained over the long run.

Despite the aforementioned successes in fiscal adjustment, it is apparent that the government desires to spend some of the extra tax revenues from 2007. We work on the assumption that in 2008 the real incomes of employees working in the public sector will not decrease any further, in other words the freezing of wages in the public sector for two years, as planned, will not materialise. As the Convergence Programme promises higher real incomes for 2009 in the public sector, it would require considerable cuts in purchases of goods and services and other expenditures in order to achieve the deficit objective for 2009 (there is no room for the government to cut investment spending in real value). Since the future measures to be taken by the government to implement the necessary reductions in costs in 2009 (announced and fixed in legal regulations) are still unknown, we cannot take them into consideration for our baseline forecast.[31]

Box 4-1: Which factors are behind the change in our projection for the 2007 ESA budget deficit?

According to our baseline forecast, this year the ESA deficit could decrease below the level indicated in the Convergence Programme by around 0.7 per cent of GDP. The substantial improvement in the deficit results mostly from the amount of revenues, as these turned out higher than expected. Compared to our projection in the May Report, tax and social contribution revenues may be 0.4 per cent higher relative to GDP in 2007. Some of this is the result of the economic cycle taking a different path than previously anticipated, therefore the wage adjustments in the private sector were less accommodative than previously anticipated. The other part of the extra revenues related to efforts to combat the tax evasion. Apparently, the central budget has embarked on a higher revenue path than projected in the Convergence Programme. In the May Report we estimated the ESA deficit to be 6.0 per cent this year: the extra revenues would have the potential to reduce the deficit to around 5.5 per cent of GDP, but in the meantime the government has approved additional budgetary expenditures (e.g. MÁV, higher expenses for budgetary institutions), where the latter is responsible for our central forecast of 6.1 per cent for 2007.

The 2008 budget

The draft of the 2008 budget act indicates a 4.1 per cent ESA deficit objective. According to this bill, the criteria recommended by the European Commission in connection with the surplus primary balance, which was taken into consideration in the Convergence Programme, will be satisfied next year.[32] According to our baseline forecast the ESA deficit next year will be 4.0 per cent, accompanied by risk factors pointing slightly towards a higher deficit. The interest balance shown in our baseline forecast is better than contained in the bill, and the estimated interest balance may

[31] The Government shall have the opportunity to cut back and moderate expenditures in the various budget chapters and institutions in the bill for the 2009 budget, however, this is merely a presumption, the expected impacts of which are addressed in our risk assessment.

[32] According to the recommendation of the European Commission, when calculating the primary balance of the Maastricht balance indicator, only interest payments shall be excluded instead of interest balance. The requirement for the primary balance in surplus on a cash-flow basis of the central government, as specified in the bill for the control of public finances, is not satisfied (Parliament is yet to adopt the act for the control of public finances; according to the bill, the rule for real debts is set to enter into force in 2011).

be 0.2 per cent lower relative to GDP than what the bill envisages. All in all, the position we anticipate for the central budget and extrabudgetary funds is better by 0.1 percentage point of GDP than that shown in the bill. Our forecast for the position of the social security funds is practically the same as that of the government, and according to our forecast, the deficit of local governments will be 0.1 per cent higher relative to GDP, compared to what is contained in the bill.

As for tax and contribution revenues, our forecast relating to indirect taxes is at about the same level as the revenue forecast in the budget bill, and in respect of profit taxes our estimate is slightly more conservative, due mostly to the base effect and the slight difference between the forecast for economic growth.

The position of the social security funds is predicted to be close to balance and demands special attention. The fiscal adjustment measures intended to increase revenues focused on improving the balance of the social security funds. Consequently, in 2007 they may produce a surplus, and the impacts of these measures are likely to sustain the position close to balance in 2008 as well (whereas for 2009 we foresee a deficit of 0.2 per cent of GDP).

As for the net expenditures of budgetary units and the various chapters, we applied the figures contained in the bill for the purposes of our forecast, because, contrary to what we have seen in the past years, we expect that the appropriations could be met in 2008. The budget proposals for 2008 indicate that expenditures related to capital formation are still historically low, although the budget contains a more significant, but unclassified expense item that, if used, may modify the overall picture.

In our view, the local government sector constitute a significant risk factor in the implementation of the 2008 budget. Local governments are forced to introduce further fiscal adjustments due to the reduction of funds from the central budget, meaning that the loss in real value of subsidies must be compensated by the sector on its own. The sector's ability to react to such tightening measures is not known. Further risks might come from the assumed budgeting of MÁV, the Hungarian state railways company. The subsidies provided to MÁV will also be cut significantly next year, which leaves the question as to whether reorganisation of the company will be able to compensate for these cuts in funding.

Risk distribution in our baseline forecast, 2007-2009

Description of the model simulation

A fiscal fan chart to demonstrate the uncertainties surrounding the fiscal path was first published in our May Report. Interpretation of the ranges is consistent with the interpretation of the ranges contained in the inflation and GDP fan charts.

We prepared the distribution of uncertainty with model simulations, as it ensures that the distribution of items which are tied to macroeconomic variables – on the revenue side particularly VAT, personal income taxes, corporate taxes and social security contributions, and on the expenditure side pensions – is consistent with the distribution of the determining variables. In the cases of inflation and GDP, we used the probability factors contained in the fan charts drawn up for these variables, whilst for the other macro-variables we relied on symmetrical uncertainty factors and the variance calculated from the historical forecasting errors. As for the other items of the whole general government deficit – the most important of which are the expenditures of the central budget – the distribution of uncertainty was determined by the experts who prepared the baseline forecast.

Distribution of uncertainty for the 2007-2009 period

The risks inherent in forecasting the deficit are shown in the chart below. The distribution around the baseline forecast shows marginal downside risk for 2007, while the risks point toward a greater deficit for 2008 and 2009.

Chart 4-1

Budget deficit fan chart

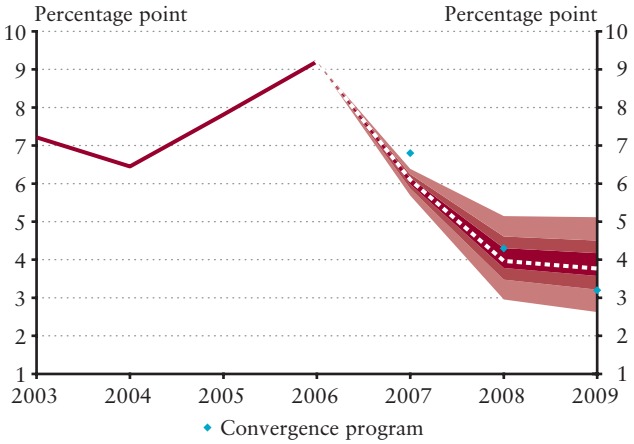


Table 4-2

Fan chart bands

	Low 90	Low 60	Low 30	High 30	High 60	High 90
2007	5.7	5.9	6.0	6.2	6.2	6.4
2008	3.0	3.5	3.8	4.3	4.6	5.1
2009	2.6	3.2	3.6	4.2	4.5	5.1

As for the driving factors behind the distribution, the uncertainties surrounding the macro path point towards a lower deficit for all three years: although growth carries downside risks, the deficit reducing (revenue increasing) impact of inflation, if it was higher than predicted in the baseline forecast, will offset this effect.

In 2007, the distribution of expert items of the central budget is symmetrical, while it points towards a higher deficit for 2008 and 2009. There are several reasons for the asymmetry predicted for next year. On the one hand, there is uncertainty concerning the ability of local governments to adopt to the reduction of standard subsidies in terms of real value, and on the other hand, it is conceivable that the substantial reduction of support to MÁV, as projected in the baseline forecast, will not be carried out to the extent planned. In our opinion, the baseline forecast for revenues from excise taxes and social security expenditures indicates a risk factor of a smaller value that however, points towards a higher deficit. The tilt shown in the 2009 forecast that points towards a higher deficit originates from the uncertainty involved in the risk of implementation of measures for the reduction of expenditures by budgetary institutions.

All in all, this year the symmetry of expert items constitutes the major factor, whereas the macro path pointing towards a lower deficit for 2008 and 2009 will only mitigate and will not be able to eliminate the upside tilt shown in the expert forecast.

If we were to compare our forecast to the objectives laid down in the Convergence Programme, this year's and next year's figures strongly appear feasible in terms of fulfilment, but in 2009 the band covering sixty per cent of the fan chart will be positioned above the target value in its entirety.

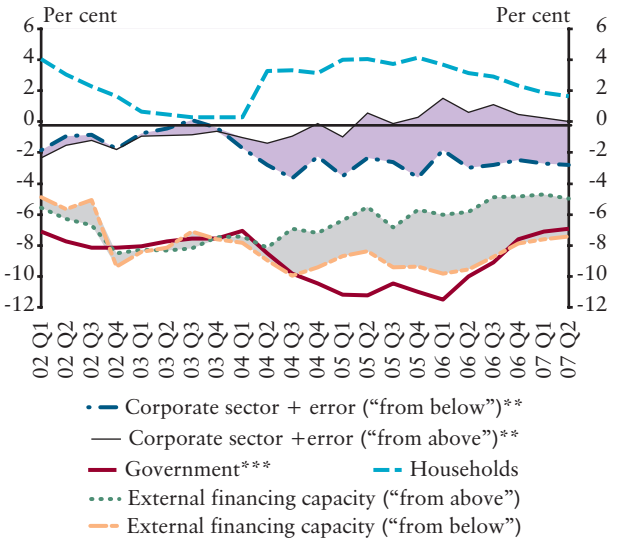
4.2. External balance

According to the official figures, during the first half of 2007 the sum of the current account and capital account balance, meaning the external financing requirement amounted to 5 per cent of GDP, similar to the level seen at the end of the previous year.[34,35] After the considerable drop in the external financing requirement in 2006, the reason why the improvement in the external balance lost momentum during the first half of 2007 was that the declining financing requirement of the general government was offset by the significant reduction in the net savings of households in connection with consumption smoothing, and the slight increase in financing requirement of the non-financial corporate sector. The seasonal nature of EU transfers also contributed to the temporary stabilisation in the external financing requirement, as the majority of these items are typically accounted during the second half of the year. The reduction in the financing requirement of the consolidated general government is attributed, first and foremost, to the unexpectedly high revenues (VAT, personal income tax, contributions and corporate tax), resulting from higher tax bases and from improvements in the efficiency of tax collection procedures. Households have smoothed the impact of reductions in their real incomes by downsizing their financial assets to a lesser extent, and by borrowing to a larger extent, on account of which the savings of this sector relative to GDP fell to 1.6 per cent.

Following the stabilisation early this year, in our opinion the external balance will continue to improve in the second half of 2007. In the wake of the fiscal measures introduced to improve the central budget, the financing requirement of the consolidated general government for 2007 will drop to 6.4 per cent of GDP according to our forecast.[36] The steady decline in the net financing capacity of households since early 2006 slowed down by the end of 2007, which means that the net annual savings within this sector could settle at around 1.7 per cent of GDP. On account of more intense investment activity, the financing requirement of the corporate sector relative to GDP may be a little higher than it was in 2006. As a result of these trends, the external financing requirement of the entire economy relative to GDP may decline considerably, to 4.3 per cent and 6.1 per cent, respectively, of the official top-down value and the 'bottom-up' measure of the external financing requirement.

Chart 4-2

Developments in the financing capacity of the sectors*



* *Adjusted by the difference caused by imports brought forward on account of EU accession and by the import increasing impact generated by customs warehouses terminated due to EU accession and by the Gripen purchases.*

** *The financing capacity of the corporate sector is determined as a residual item, therefore, it contains the errors of other statistics as well.*

*** *In addition to the fiscal budget, the consolidated general government includes local governments, the ÁPV Zrt., institutions discharging quasi-fiscal duties (Hungarian State Railways [MÁV], Budapest Transport Limited [BKV]), the MNB and authorities implementing capital projects initiated and controlled by the government and formally implemented under PPP schemes.*

[34] The scheduled revision of balance of payments for the 2005-2006 period took place in September of 2007, according to which the external financing requirement for 2006 was 0.7 per cent higher than previously expected, reaching 5.7 per cent of GDP, while the 'bottom-up' external financing requirement rose significantly in both years.

[35] During the first half of 2007 the methodological uncertainty in connection with the balance of payments statistics eased somewhat: the 'Errors and omissions' item stood around EUR 1.1 billion, showing a considerable decline from the same period of 2006. Consequently, the 'bottom-up' external financing requirement dropped marginally relative to the end of 2006.

[36] Significant part of the improvement in the balance of the consolidated general government could materialise during the second half of the year. A major part of this is due to the expenditures implemented for the upgrading and replacement of MÁV railway wagons, that we have accounted for the first half consistent with the date of transfer from the central budget.

Table 4-3

GDP-proportionate net financing capacity of individual sectors

	2002	2003	2004	2005	2006	2007	2008	2009
	Estimation					Forecast		
I. Consolidated general government*	-8.7	-8.3	-8.4	-7.3	-9.9	-6.4	-5.5	-5.2
II. Households	2.7	0.2	2.4	4.2	3.2	1.7	2.1	2.8
Corporate sector and "error" (= A - I.- II.)	-0.8	0.1	-2.1	-2.9	0.9	0.4	0.1	-0.4
A. External financing capacity, "from above"(=B+C)**	-6.7	-8.0	-8.1	-6.0	-5.7	-4.3	-3.3	-2.8
B. Current account balance**	-7.0	-7.9	-8.4	-6.8	-6.5	-5.5	-5.3	-5.2
– in EUR billions**	-5.0	-5.9	-6.9	-6.0	-5.8	-5.7	-5.9	-6.1
C. Capital account balance	0.3	0.0	0.3	0.8	0.8	1.2	2.1	2.4
D. Net errors and omissions (NEO)***	0.3	0.3	-1.7	-2.8	-3.3	-1.9	-2.0	-1.9
External financing capacity, "from below" (=A+D)	-6.4	-7.7	-9.8	-8.7	-9.0	-6.1	-5.3	-4.7

** In addition to the fiscal budget, the consolidated general government includes local governments, the ÁPV Zrt., institutions discharging quasi-fiscal duties (MÁV, BKV), the MNB and authorities implementing capital projects initiated and controlled by the government and formally implemented under PPP schemes.*

*** During the 2004-2007 period, uncertainty in the measurement of foreign trade statistics point toward a higher current account deficit and a higher external financing requirement.*

**** In our forecast for the 'errors and omissions' item of the balance of payments we assumed that the cumulated figure for the last four quarters will remain unchanged.*

According to our expectations, the impact of consumption smoothing to diminish household savings is likely to peak during 2007, therefore, in 2008-2009 the reduction in the financing requirement of the general government could distinctly appear in the improvement of the external balance. In line with the increasing household real incomes, the net financing capacity of the household sector may gradually return to where it stood before the fiscal adjustment package. At the same time, parallel with growing corporate investments the financing requirement of the corporate sector may ultimately embark on an upward path. All in all, for the period ending in 2009 we expect to see the financing requirement of the general government drop further by more than 1 percentage point and a similar improvement in the external balance position relative to GDP.

Regarding the structure of the current account balance, the positive trend in the real economy balance lost momentum during the first half of 2007, attributable to import demand induced by intense consumption smoothing and growing investments, and to the temporary setback of exports during the second quarter. Nevertheless, in the second half of 2007 in our opinion the real economy balance will continue to improve, and if the favourable economic activity in Europe continues, the balance of goods and services could continue

Table 4-4

GDP-proportionate structure of the current account balance*

(relative to GDP, per cent, unless otherwise indicated)

	2001	2002	2003	2004	2005	2006	2007	2008	2009
	Fact/Preliminary fact						Forecast		
1. Balance of goods and services **	-1.5	-2.4	-3.8	-2.7	-0.5	0.4	1.9	2.2	2.4
2. Income balance	-5.4	-5.4	-4.9	-6.0	-6.5	-7.3	-7.8	-7.9	-8.0
3. Balance of current transfers	0.8	0.7	0.8	0.3	0.2	0.4	0.4	0.3	0.3
*I. Current account balance (1+2+3)***	*-6.1*	*-7.0*	*-7.9*	*-8.4*	*-6.8*	*-6.5*	*-5.5*	*-5.3*	*-5.2*
*Current account balance in EUR billions***	*-3.6*	*-5.0*	*-5.9*	*-6.9*	*-6.0*	*-5.8*	*-5.7*	*-5.9*	*-6.1*
II. Capital account balance	*0.6*	*0.3*	*0.0*	*0.3*	*0.8*	*0.8*	*1.2*	*2.1*	*2.4*
External financing capacity (I+II)**	**-5.5**	**-6.7**	**-8.0**	**-8.1**	**-6.0**	**-5.7**	**-4.3**	**-3.3**	**-2.8**

** The prognosis includes in 2006-2007 the import resulting from the Hungarian Army's Gripen fighter lease, amounting to close to 0.3 per cent of the GDP.*

*** During the 2004-2009 period, uncertainty in the measurement of foreign trade statistics point toward higher current account deficit and higher external financing requirement.*

to be an important driving force behind the reduction of the external imbalance. The GDP-proportionate deficit of the income balance may increase slightly, partly due to the increase in expenditures linked to debt-type investments, notably because, despite the lower external financing requirement, the growth of external indebtedness of the economy will not stop before 2009.

Financing the current account deficit

During the first half of 2007, the 'bottom-up' e*xternal financing requirement* was around EUR 3.8 billion, exceeding 7.5 per cent of the six-month GDP. The financing structure of the balance of payments underwent unfavourable developments from the standpoint of investors, since the outflow of non-debt creating sources was over EUR 2.5 billion, which resulted in a record high influx of debt creating financing. This materialized predominantly in the form of Hungarian banks borrowing funds from and issuing bonds abroad, while the volume of foreign borrowing in the corporate sector has also increased significantly. There were both clearly identifiable individual factors and more or less permanent trends that had a major role in the massive outflow of non-debt creating funds:

- The stock of direct capital investments of foreign investors declined significantly, mainly due to one-off factors. First, this may be attributed to the change in ownership of Budapest Airport and to the ensuing changes in the company's financing structure. Second, foreign investors withdrew more than EUR 420 million from their investments in Hungarian shares, linked for the most part to MOL's share repurchases.

- Similarly to 2006, local institutional investors made significant investments in foreign portfolio shares. Furthermore, resident companies once again made considerable direct capital investments abroad, worth close to EUR 1.4 billion.

As regards the structure of financing, we anticipate a massive outflow of non-debt creating funds for the whole year as well. In the case of direct capital investments, the outflow of capital may moderately exceed the inflow, due to changes in the financing structure of Budapest Airport. As far as portfolio shares are concerned, the volume of net outflow may exceed EUR 2.5 billion, where two factors are likely to have a dominating role: on the one hand, we expect that local institutional investors will continue to buy foreign shares, and on the other hand – due primarily to MOL transactions – the Hungarian equity portfolios of foreign investors may drop significantly. Let us point out that the growing trend of resident investors purchasing foreign equity portfolios and their direct capital investments could have a positive impact on the income balance over the long run, and hence improve the chances of long-term sustainability of the balance of payments.

Boxes and Special topics in the Report, 1998–2007

* Recurring analyses are not listed here.

May 2005*

August 2005

Boxes:

Special topics:

November 2005

Boxes:

May 2006

Boxes:

November 2006

Boxes:

* Recurring analyses are not listed here.

February 2007

Boxes:

May 2007

Boxes:

Aug 2007

Boxes:

Nov 2007

Boxes:

Appendix

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Occasional Papers 57. Lublóy, Ágnes (2006): Topology of the Hungarian large-value transfer system

Occasional Papers 59. Hornok, Cecília, Zoltán M. Jakab and Máté Barnabás Tóth (2007): Adjustment of global imbalances: Illustrative scenarios for Hungary

Occasional Papers 60. Benk, Szilárd, Zoltán M. Jakab, Mihály András Kovács, Balázs Párkányi, Zoltán Reppa and Gábor Vadas (2007): The Hungarian Quarterly Projection Model (NEM)

Occasional Papers 61. P. Kiss, Gábor (2007): Pain or Gain? Short-term Budgetary Effects of Surprise Inflation - the Case of Hungary

Occasional Papers 62. Kopits, George (2007): Fiscal Responsibility Framework: International Experience and Implications for Hungary

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Occasional Papers 67. Zsámboki, Balázs: Basel II and financial stability: An investigation of sensitivity and cyclicality of capital requirements based on QIS 5

Occasional Papers 68. Vadas, Gábor: Wealth Portfolio Of Hungarian Households – Urban legends and Facts (forthcoming)

Occasional Papers 70. Holló, Dániel–Mónika Papp: Assessing household credit risk: evidence from a household survey

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WP 2006/2. Frederikstein, Anders and Előd Takáts: Layoffs as Part of an Optimal Incentive Mix: Theory and Evidence

WP 2006/3. Holló, Dániel and Márton Nagy: Bank Efficiency in the Enlarged European Union

WP 2006/4. Jakab, Zoltán M., Viktor Várpalotai and Balázs Vonnák: How does monetary policy affect aggregate demand? A multimodel approach for Hungary

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