

**QUARTERLY REPORT  
ON INFLATION**

**NOVEMBER 2004**

**Published by the Magyar Nemzeti Bank**  
**Gábor Missura, Head of Communications Department**  
**1850 Budapest, Szabadság tér 8–9.**

[www.mnb.hu](http://www.mnb.hu)

**ISSN 1585-0161 (print)**

**ISSN 1418-8716 (online)**

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

*Using an inflation targeting system, the Bank seeks to attain price stability by implementing a gradual, but firm disinflation programme over the course of several years. 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 that are consistent with achieving the inflation target. The Council's decision is the result of careful consideration of a wide range of factors. These include 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 a clear insight into the operation of monetary policy and enhance transparency, the Bank publishes the information available at the time of making its monetary policy decisions. The Quarterly Report on Inflation presents the forecasts prepared by the Economics Department for inflation and the macroeconomic developments underlying the forecast. The forecasts of the Economics Department are based on certain assumptions. Hence, in producing its forecast, the Economics Department 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 the Economics Department staff under the general direction of Ágnes CSERMELY, Head of Department. The project was managed by Barnabás FERENCZI, Deputy Head of the Economics Department, together with Attila CSAJBÓK, Head of the Monetary Assessment and Strategy Division, Mihály András KOVÁCS, Deputy Head of the Conjunctural Assessment and Projections Division, and Zoltán M. JAKAB, Head of the Model Development Unit. The Report was approved for publication by István HAMECZ, Managing Director.

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The Report incorporates valuable input from the MNB's other departments as well as the Monetary Council's comments and suggestions following its meetings on 2 and 22 November 2004. However, the projections and policy considerations reflect the views of the Economics Department staff and do not necessarily reflect those of the Monetary Council or the MNB.



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## OVERVIEW

<b>Conducive global financial environment</b>	The worldwide economic recovery has so far been associated with low inflation and official interest rates. Global indicators of risk have also remained at depressed levels. If international economic growth does not falter due to the risks which have arisen in the course of the year, the likelihood of leading central banks choosing a faster track to increasing interest rates will grow.
<b>Stable forint exchange rate and falling short-term yields – long-term risks remain</b>	The forint exchange rate has been fluctuating along an appreciating path, its reactions to adverse fundamental news being slight and brief, which may be explained by the MNB's cautious approach to interest rate cuts this year, in addition to the positive stimuli from the global financial marketplace. The decline in yields at the short end indicates that the perception of risks related to near-term economic developments has improved over the past quarter. All of this, however, has not been associated with a perceptible improvement in Hungary's equilibrium indicators – market participants have remained undecided regarding the convergence path.
<b>Staff's forecast is conditional on certain assumptions</b>	The forecast presented in this issue of the Report has been prepared under the assumption of unchanged monetary conditions, i.e. constant exchange rates and interest rates. In respect of fiscal policy for 2005, we have prepared our forecast on the basis of the tax legislation already adopted and the 2005 budget bill presented by the Government to Parliament. For 2006, we assumed that the planned reduction of 0.6 per cent in deficit would be achieved.
<b>Disinflation has started...</b>	The consumer price index fell to 7 per cent, with core inflation dipping below 6 per cent according to third-quarter data. This decline was quite widespread, indicating a robust process of disinflation. The drop in inflation, following its sharp rise due to the increase in indirect taxes (VAT and excise duties), can be explained by the appreciation of the forint vis-à-vis the euro, more moderate consumption, and a decrease in inflation expectations, which helped to counterbalance the unbroken strong growth in unit labour costs.
<b>... accompanied by moderating demand-pull inflationary pressure</b>	The growth rate of household consumption has slowed somewhat this year, after rising strongly in 2002–2003 and, as a consequence, its inflationary impact has been declining. Although actual data for the second quarter reflect a pick-up in consumption growth, this may be ascribed primarily to transient factors.
<b>... and wage inflation</b>	Labour market tightness, although still present, has eased somewhat, and the rates of wage inflation and labour demand growth have slowed. While wage growth still appears to be high, after allowance for developments in productivity, growth in labour costs appears to have started tapering off.
<b>Inflation expectations cooled</b>	According to the latest polls, inflation expectations continued to recede in the period under review. Households and corporate managers' perception of inflation also declined. The survey of inflation prospects, conducted in October, showed that market analysts revised down their short-run inflation expectations, but left their forecast for end-2005 unchanged.
<b>GDP growth stabilises between 3.5–4 per cent</b>	After this year's brisk investment activity and resulting growth of around 4 per cent, the rate of economic growth is expected to stabilise in the coming two years. GDP growth is likely to be between 3.5–4 per cent in 2005 and 2006.

**...accompanied by a slowdown in domestic use**

Looking at the components of growth, consumption is likely to rise more slowly in the forecast period than in previous years. The rate of consumption growth is expected to remain below real income growth, implying a decline in households' propensity to consume. Our forecast of investment reflects a slowdown in household and public sector fixed investment activity, along with stabilisation in corporate sector investment growth.

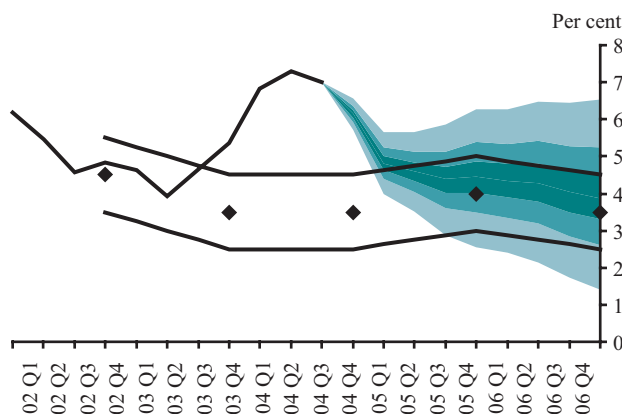
**... and an improvement in the goods balance.**

Net exports are expected to contribute positively to economic growth over the next two years, driven by decreasing import demand in response to the slowdown in domestic absorption and by a gradual increase in Hungary's export market share.

**Gradual disinflation**

In the central inflation projection, disinflation is assumed to continue. We expect the consumer price index to be slightly below 6 per cent at end-2004, 4.5 per cent at end-2005 and around 4 per cent at end-2006. The central projection has remained broadly unrevised relative to that presented in the August Report.

**The fan chart of the inflation projection**



**Modest decline in core inflation**

Next year, the effects of macroeconomic factors contributing to disinflation, such as the anticipated strong exchange rate, the slower increase in wage costs and lower consumption growth, are expected to be countered in part by certain inflationary shocks, such as rising energy prices. Disinflation may be more solidly based in 2006, when the fall in the growth rate of unit labour costs, the assumption of a relatively strong forint exchange rate and the anticipated lower path of oil prices will all exert their effects.

**The likelihood of inflation crossing above the upper bound of the target range in 2005 should still not be neglected**

Based on the fan chart plotting the uncertainties around the inflation projection, the likelihood of the consumer price index rising above the ceiling of the target range cannot be disregarded. The principal factors behind the upward risks to the inflation outlook are a higher path of oil prices relative to our assumption and more lax fiscal policy. However, to a certain degree the possibility of external demand expanding at a more modest pace offsets those risks on the upside. Compared with the projection in the August Report, there has been a slight reduction in the risk of higher inflation at end-2005.

The inflation projection for 2006, however, is surrounded by more uncertainties. There is a significant probability of inflation exceeding the upper limit of the  $3.5 \pm 1$  per cent inflation target. This probability, higher than in 2005, is due to inflationary risk related to fiscal policy, household consumption and oil prices in 2006.



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**The external balance remains unchanged this year and may start to improve slowly later**

The current account deficit is likely to reach the equivalent of 9 per cent of GDP in 2004, similarly to the outturn for the previous year. However, both the deficit and Hungary's external financing requirement are projected to fall gradually in 2005–2006. The external balance is nevertheless anticipated to improve only in 2006, if the assumed fiscal tightening is implemented.

**No fiscal policy tightening is expected for 2005**

Our forecast for the 2004 fiscal position has changed only slightly relative to the August issue of the Report.

In contrast with the practice of developing assumptions in earlier Reports, we have prepared our own forecast of the 2005 fiscal path. Based on the proposed budget and the adopted tax legislation (both underlying the forecast), and other available information, we maintain our view that, unless further government measures are taken the fiscal deficit will hardly fall next year relative to the outcome expected for 2004. In addition, another factor that will hamper any more rapid improvement in external balance is that the impact of general government on demand will be stimulative next year, as the official indicators of deficit will only partially reflect robust investment activity.

We have prepared the 2006 central projection on the basis of the 0.6 per cent deficit reduction target announced by the Government. The risks relating to this projection are presented in an alternative path which only takes into account measures which have already been resolved, other determinations and past trends, in line with recent practice. This scenario shows that a fiscal tightening of some 1.5 per cent would be needed in 2006 to achieve the planned 0.6 per cent deficit reduction.

## *Summary table of the main scenario*

(Projections are conditional, with the main scenario reflecting the projection that applies if all of the assumptions presented in Chapter 3 are valid; unless otherwise specified, percentage changes on a year earlier.)

	2003	2004	2005	2006
	Actual	Projection		
<b>CPI</b>				
December	5.7	5.9	4.4	3.9
Annual average	4.7	6.8	4.5	4.2
<b>Economic growth</b>				
External demand (GDP-based)	0.5	1.9	2.1	2.2
Household consumption	7.6	3.3	1.8	1.9
Gross fixed capital formation	3.4	9.2	4.2	3.6
Domestic absorption	5.4	4.8	2.5	2.3
Exports	7.6	14.5	11.3	11.0
Imports	10.4	14.8	9.3	9.2
GDP	3.0	4.0	3.7	3.5
<b>Current account deficit</b>				
As a per cent of GDP	9.0	9.0	8.6	7.9
EUR billions	6.6	7.3	7.7	7.5
<b>General government</b>				
ESA deficit	6.2	5.6	5.5	4.9 <sup>5</sup>
Demand impact <sup>1</sup>	(-0.5)	(-0.7)	(+0.3)	(-0.7) <sup>5</sup>
<b>Labour market</b>				
Whole-economy wage inflation <sup>2</sup>	10.9	8.3	7.9	7.3
Whole-economy employment	1.2	-0.4	-0.1	0.5
Private sector wage inflation <sup>3</sup>	8.7	9.4	8.3	7.8
Private sector unit labour cost <sup>3</sup>	4.4	5.9	4.4	2.7
Private sector employment <sup>4</sup>	0.7	0.0	0.8	0.8
Real disposable income of households	4.3	3.9	3.2	2.3

*For the change of the projections relative to the August 2004 Report or a comparison with other forecasts, see Chapter 4.1.*

<sup>1</sup> *Change in the SNA primary balance, adjusted for the effects of payments to the private pension system. Negative values reflect tightening.*

<sup>2</sup> *In the case of general government, this was calculated on the basis of our estimate of annual wage inflation; the thirteenth-month wage for 2004, to be disbursed in January 2005, was added to 2004 wages.*

<sup>3</sup> *Weighted average of manufacturing and market services.*

<sup>4</sup> *According to the CSO Labour Force Survey.*

<sup>5</sup> *Assumption, based on the Convergence Program.*

# 1 FINANCIAL MARKETS



## 1.1 FOREIGN INTEREST RATES AND INVESTORS' PERCEPTION OF RISK

Given Hungary's financial openness and the key role played by international capital flows, global market developments are crucial for domestic financial market developments. Risk-free yields evolving on markets around the world represent the basis on which domestic money market yields are built. In addition to international risk-free interest rates, yields in Hungary incorporate a number of risk premium elements and, consequently, tend to be slightly or considerably higher than their counterparts, depending on variations in a given risk element over time. Therefore, we begin the analysis Hungarian financial market yields with a summary of developments in the global financial marketplace.

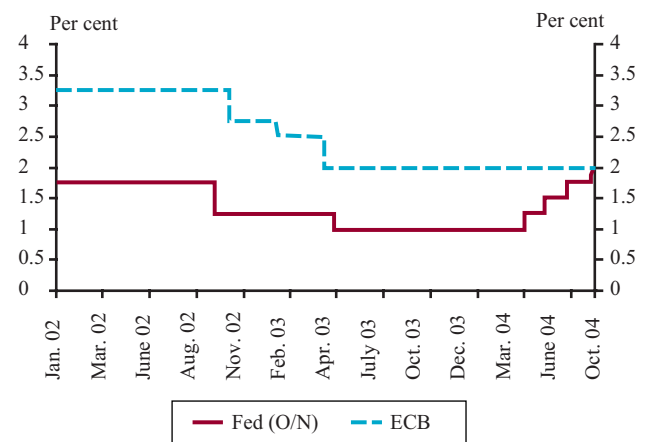
The international financial community has recently produced an exceptional situation. The rate of global economic growth has been fast by historical standards, with inflation remaining low in developed countries. In our latest Report we wrote that US financial markets had been expecting an interest rate increase since April. And since June the Fed has raised its key interest rate four times, by 25 basis points each, to the current level of 2%. Markets have priced in an additional 25-bp increase in the early months of 2005. Although the ECB has not yet followed the Fed's interest rate increases, European markets also started to expect interest rate hikes in the summer.

Solid global growth, however, increases the probability of inflation picking up over the longer term, which in turn adds to the likelihood of interest rate increases by central banks. As a result, global interest rate levels may start to rise, dampening capital flows into emerging markets, including the newly-joined economies, such as Hungary. Consequently, the risk premium on forint-denominated assets, normally added to the increased global risk-free interest rate, would also be put under pressure to rise.

However, the risks associated with a delay in the global economic recovery were present throughout the period under review, and in October such risk even seemed to be growing, at the expense of signs feeding optimism. Developments in oil prices are regarded as one of the

Chart 1.1

Federal Reserve and ECB key interest rates



prime risk factors. An increase in oil prices represents a dilemma for central banks, as it dampens growth and fuels inflation simultaneously. The extent to which energy costs bring about second-round inflation effects is of key importance when setting prices and wages. There have been no signs of these effects so far either in the US, or in Europe. In the autumn months, US and European markets began to anticipate slower economic growth relative to their optimistic forecasts in the summer and, as a result, they expected any central bank interest rate increases to take place later. The European Commission revised slightly downwards its growth expectations in the regular autumn forecast released in November. Changes in Euribor futures for euro inter-bank term deposit rates show that in mid-October the expected date of official interest rate increases was shifted from end-2004 or next March to next June. In addition to a slight downward revision of growth prospects, the most recent announcements by the president of the ECB may also have contributed to this shift.

The adjournment of central bank interest rate increases also had an impact on US and European long-term yields: as an effect of the slower-than-expected interest rate rises in early summer, long-term bond yields declined slightly.

As far as the sustainability of the current recovery is concerned, global imbalances carry additional risk factors. These include the high budget and current account deficits in the US, weak corporate investment activity, the risk that the overheated Chinese economy may suddenly turn from boom to bust and possible large-scale realignment of the exchange rates of major international currencies. Thus, it is still more probable that central bank interest rates will be raised in the US and Europe, although this may take place later than expected in the summer, and may be delayed even further if the downside risks to global economic activity continue to grow.

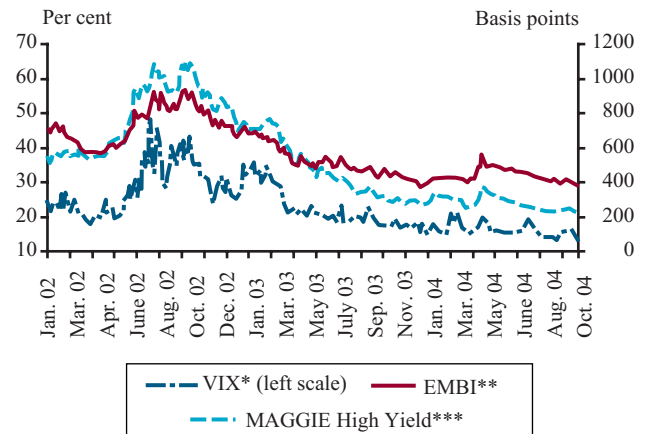
Risk indicators of global financial markets have not yet reflected the dangers associated with global economic activity. This year's risk indicators have been driven mainly by investors' assessment of a scenario which threatened unexpectedly rapid increases in central bank interest rates in the US and in Europe and a subsequent exaggerated reaction by financial markets to such increases. The Fed has embarked on the adjustment of its historically low interest rates in a prudent, well-prepared manner and at a moderate pace. Consequently, there have been no large-scale capital flows from high-risk emerging markets towards more developed markets. Following their spring upsurge, the values of risk indicators declined to their earlier levels in the summer and have been declining since then. Nevertheless, the occurrence of a worst-case scenario cannot be ruled out entirely, if global financing conditions were to change radically.

Investors' perception of risks in the countries of Central and Eastern Europe has only been temporarily affected by the rapid easing of political uncertainties at the government level in Poland, the Czech Republic and Hungary. In September, the larger-than-expected downturn in inflation rates also contributed to the improvement in investors' assessment of the region as a whole. In early October, prompted by approved budgetary restrictions and keeping its promise, the credit rating agency Standard&Poor's upgraded the outlook for Polish debt from negative to stable. At the same time, however, it revised downward the rating of the Czech Republic due to the country's burgeoning budget deficit and debt.

As far as Hungary is concerned, Standard&Poor's published a warning at end-August stating that it would downgrade Hungary's rating if the country's fiscal position did not improve. Finally, it left Hungary's credit rating unchanged in October citing an expected future improvement in the fiscal position and a better outlook for growth. The markets' perception of risks facing the Hungarian economy has not deteriorated markedly either, despite the fact that the external equilibrium position and the budget balance have failed to improve recently. The forint exchange rate and domestic currency-denominated government securities yields have been

Chart 1.2

## Global risk indicators



\* VIX - Implied volatility derived from options for the S&P500 index.

\*\* EMBI Global Composite.

\*\*\* MAGGIE High Yield - Interest rate premium index (basis points) euro-denominated corporate and government bonds calculated by JP Morgan-Chase.

affected by a number of domestic events only for transient periods, with no permanent change in either direction. Euro-denominated government bond yields, reflecting country risks, have risen slightly; however, the extent of this has not yet been indicative of a significant change.

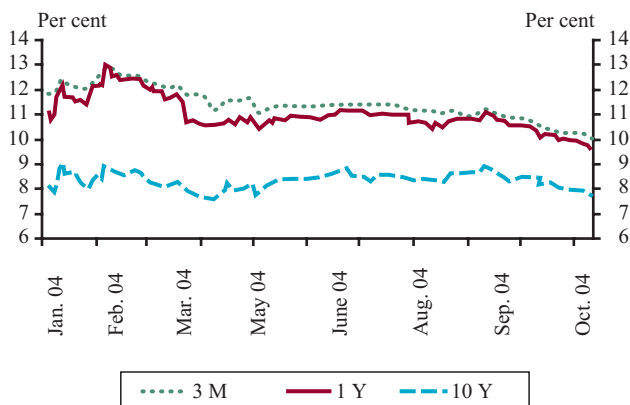
To summarise, global financial developments have created an exceptional situation in recent months. Economic growth worldwide has been rather rapid even in comparison with the last few decades, but the risks related to the sustainability of economic activity have grown. Inflation has remained moderate, and as a result central bank interest rates in the industrialised world have increased only slowly or remained at their earlier low levels. Global risk indicators have continued to reflect favourable financial market conditions. This has given small-sized emerging countries with open economies considerable leeway, as they have been able to finance their current account deficits at low interest rates, while their exports have secured economic recovery for them, due to the rapid growth in external demand. Therefore, the elements of domestic interest rates closely influenced by world financial markets (i.e. global risk-free interest rates and global risk premia) have remained low. The global recovery, however, remains fragile: in particular, short-term developments in oil prices put growth and inflation at risk. It is possible, therefore, that interest rates will remain at a low level over the short run, but this is only likely if the rate of global economic growth slows down. Under a more favourable growth scenario, however, the likelihood of foreign interest rates rising more rapidly also increases. Consequently, the current external environment characterised by rapid global economic growth and the combination of low inflation and interest rates is unlikely to be sustained for a prolonged period.

## 1.2 YIELDS

Yields on Hungarian government securities bounced up and down during the period following the last Inflation Report. In August, yields began to rise, but then started falling significantly from mid-September. The most pronounced drop was observed in maturities of less than 1 year.

**Chart 1.3**

### Benchmark yields in the government securities market

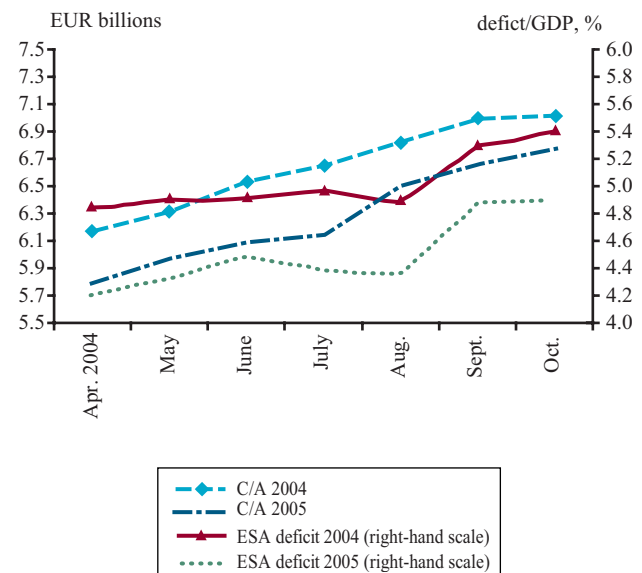


In addition to the macroeconomic outlook for Hungary, forint yields are also influenced by major global financial market developments (see Chapter 1.1) and investors' perception of risk. With favourable global conditions from early August to mid-September, news on domestic fundamentals (mainly centred on uncertainty about the members of the new Hungarian Government and its economic policy, as well as the developments in the budget deficit) pointed towards higher risks, resulting in rising yields. Since mid-September, however, short-term yields have begun to fall. This decline became stronger during October and early November. The Reuters analysts' survey revealed a further deterioration from September to October in the future prospects for key macro-economic fundamentals (the budget and the current account deficits) being of key importance from the point of view of risk assessment. Thus, the improvement in short-term risk assessment reflected in falling yields should be attributed to other factors. In addition to the

favourable global environment, the formation of the new government and stabilisation of the exchange rate at a strong level during the entire period may also have contributed to investors' improved perception of risk.

**Chart 1.4**

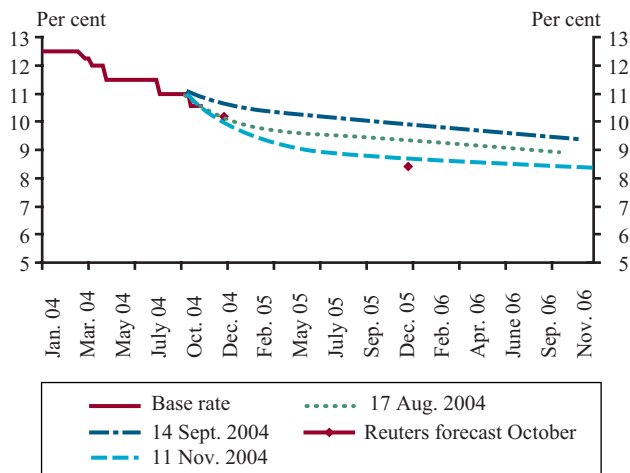
### Historical changes in the expectations of the current account balance and the government deficit-to-GDP ratio



In the period under review, the Monetary Council reduced the Bank's key policy rate by 50 basis points at its rate-setting meetings in August and October, in line with its practice of taking cautious monetary policy measures. These interest rate cuts were consistent with market expectations and did not trigger any considerable shifts in yields. The path of the key policy rate expected for the next two years decreased significantly between mid-August and mid-November, while markets temporarily expected a significantly higher base rate in the middle of the period. A further base rate cut of about 180 basis points by end-2005 would be consistent with the slope of the yield curve. According to the October Reuters survey, market analysts anticipate a 200 basis point cut over the same period.

**Chart 1.5**

**Expected path of the central bank base rate on the basis of the forward yield curve**



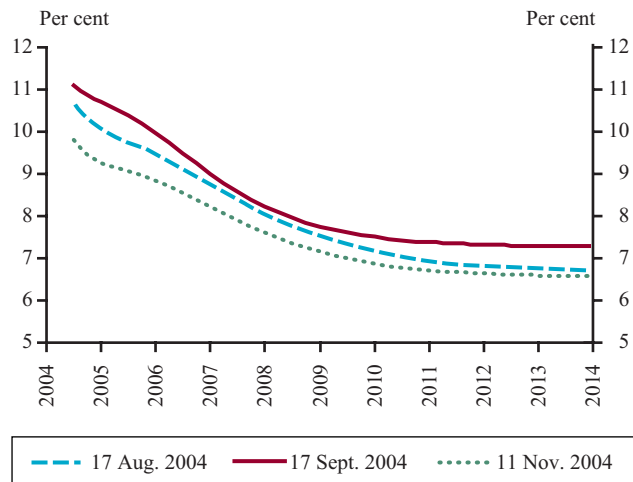
In October, the significant gap between the yield curve and interest rate expectations revealed by the Reuters poll narrowed, pointing to a lower degree of uncertainty around the expected path of the MNB's key policy rate.

Longer-term yields behaved differently from short-term yields in a number of aspects. The changes in the path of the implied forward yield curve, reflecting yield expectations, indicate that they moved up at all maturities from August to mid-September, most likely in response to uncertainties arising from the formation of the new government. This was, however, followed by a significant fall at all horizons in future expected yields. All in all, compared to August, until November the forward yield curve rotated around its 10-year-endpoint.

The risk assessment of the long-term path of the Hungarian economy is best captured by EUR/HUF forward yield differentials: longer-term differentials are also indicative of the expected date of the adoption of the euro. Forward differentials starting in 5 and 10 years time have followed a rather unfavourable path in 2004 as a whole. Long-term forward differentials followed an upward trend until September, and then started to fall, eventually becoming stable beginning early November. The permanently high risk premium at longer horizons reveal that market participants have definitely grown more pessimistic about the outlook for the Hungarian economy over the long term relative to earlier years. In this respect, market concerns related to the conver-

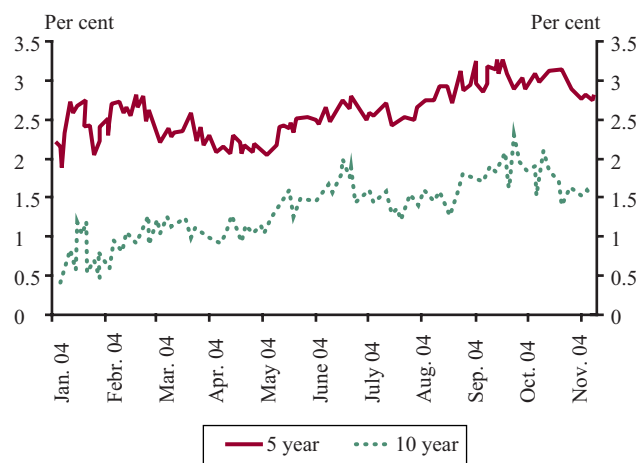
**Chart 1.6**

**Implied one-year forward rates for different dates**



**Chart 1.7**

**Three-month implied forward differentials**



gence path with the objective of adopting the euro in 2010 have also mounted.

On the whole, movements in short and long-term yields indicate that, although investors' assessment of short-term developments has improved over the past three months, long-term risks remain persistently high. The sustained uncertainty related to long-term developments points to the fact that market participants expect a more unfavourable macroeconomic path in the coming few years than predicted in the convergence programme targeting the adoption of the euro.

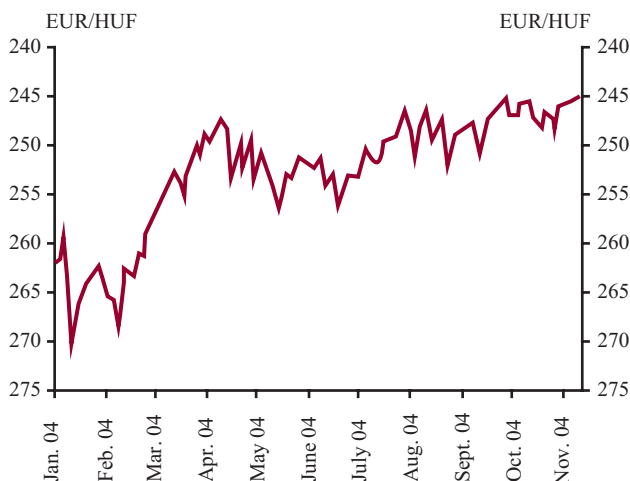


## 1.3 EXCHANGE RATES

The exchange rate of the forint has followed a relatively stable path along a trend of moderate appreciation; it has appreciated against the euro by nearly 2 per cent since our last report. The volatility of the exchange rate has declined relative to earlier periods, despite the fact that several episodes of temporary weakness interrupted the trend of the exchange rate. The announcement of the formation of a new government in early August, followed by the replacement of the prime minister, uncertainties surrounding the members of the government and its expected economic policy and, since mid-October, the increased risks related to the planned amendment of the Central Bank Act have all been reflected in movements of the exchange rate. Concerns about this year's budget and Q2 current account data have also had a negative effect on the exchange rate. However, the episodes of depreciation proved to be temporary and moderate in most cases.

**Chart 1.8**

### Exchange rate of the forint



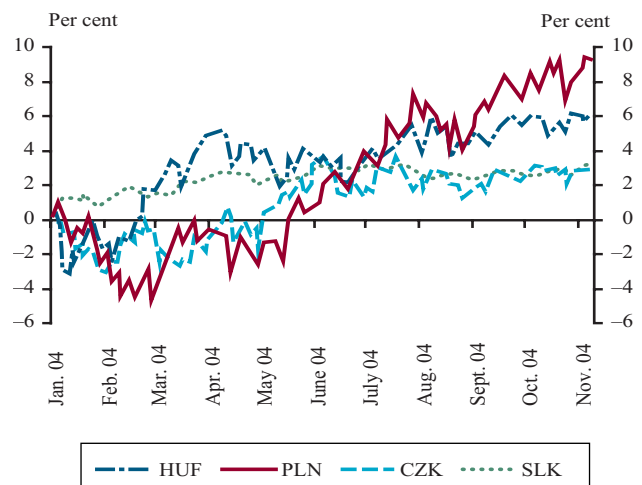
The MNB's cautious approach to interest rate cuts has also contributed to the stabilisation of the exchange rate. This has led to a situation in which changes in the perception of risk have been typically reflected in the yield curve, as opposed to the exchange rate. In addition, the proximity of the upper limit of the intervention band may explain

why movements in the exchange rate have been confined to a relatively narrow range. Regional and global factors may also have had a favourable impact, in that reactions of the forint exchange rate to unfavourable news about economic fundamentals have been mild and short-lived.<sup>1</sup> The global financial market risk environment remains extraordinarily benign. In addition, exchange rate developments in Central and Eastern Europe have also been favourable: since June, the zloty has strengthened considerably and the Czech and Slovak currencies have been fairly stable.

**Chart 1.9**

### Exchange rates of the currencies of selected new EU Member States vis-à-vis the euro

Appreciation in percentages since 2 January 2004

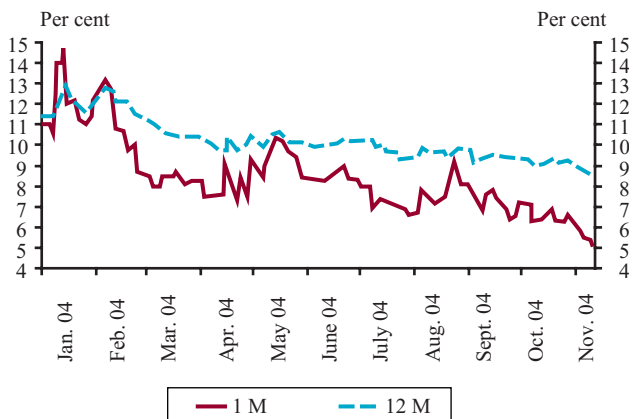


The implied volatility of forint-denominated derivative products (options) and Reuters' monthly surveys of macroanalysts' expectations can be used to obtain a picture of the uncertainty in the market's shorter-term exchange rate expectations. The development of the one-month implied volatility reflects the uncertainties of August; however, expected fluctuations in the exchange rate show a downward trend. Changes in one-year implied volatility also suggest that the uncertainty surrounding exchange rate expectations has fallen somewhat in recent months.

<sup>1</sup> See Chapter 1.1.

**Chart 1.10**

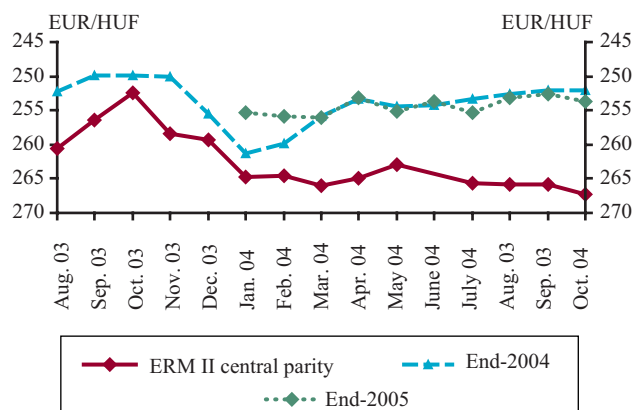
**EUR/HUF implied volatility**



The October Reuters survey provides a similar picture: the dispersion of exchange rate levels expected by analysts by end-2004 and end-2005 has decreased somewhat. All these aspects suggest that the uncertainty about expectations has declined in line with the decline in exchange rate volatility, at least in the short run.

**Chart 1.11**

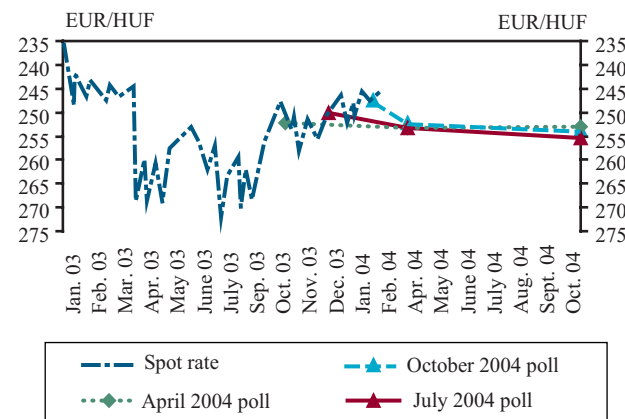
**Analysts' exchange rate expectations for end-2004 and end-2005**



Despite the appreciation since mid-July, the exchange rate expected for end-2004 (EUR/HUF 252) does not differ considerably from the level in the July Reuters survey of macroanalysts. Forecasters predict a broadly horizontal path up to December 2005 (the rate expected for this date is EUR/HUF 253), which does not represent a shift away from the level anticipated in the July survey either. According to the Reuters poll, market expectations related to the date of Hungary's euro adoption have shifted even further out since the August survey. Analysts participating in the survey hold the view that the date of adoption of the euro by Hungary could be delayed beyond the target date of 2010 by years. This indicates that, in contrast to the short run, long-term expectations of exchange rate and yields have not improved considerably.

**Chart 1.12**

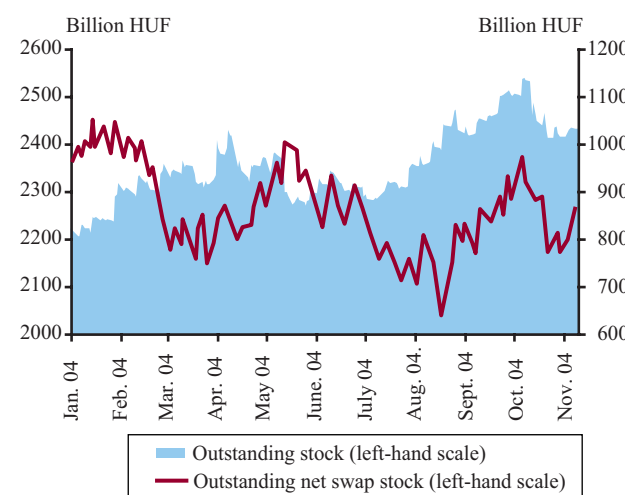
**Shifts in the forint exchange rate and Reuters analysts' exchange rate expectations**



Following a long period of stagnation in mid-2004, foreign investors have significantly stepped up their holdings of forint-denominated government securities since early August, apart from a short period at end-August, when concerns relating to the composition of the new government and its policies mounted. After this episode, foreign investors' holdings of government securities resumed their upward trend, but declined a little in October. There has been a small increase in November in the average maturity of holdings, but it still remained low compared with earlier years.

**Chart 1.13**

**Foreign investors' holdings of government securities and net swaps**



The build-up in foreign investors' holdings of government securities has not been accompanied by taking pro-forint positions. This is consistent with the increase in net swap positions and the relative stability of the exchange rate in recent months. The co-movement of government securities holdings and net swap positions

may be due to the fact that foreign investors purchasing government securities avoid taking pro-forint positions and cover exchange rate risks related to government securities by entering into swaps. This view is also sup-

ported by the fact that the exchange rate has been fluctuating near the upper limit of the intervention band, where the risk of a depreciation is much larger than that of a significant appreciation.

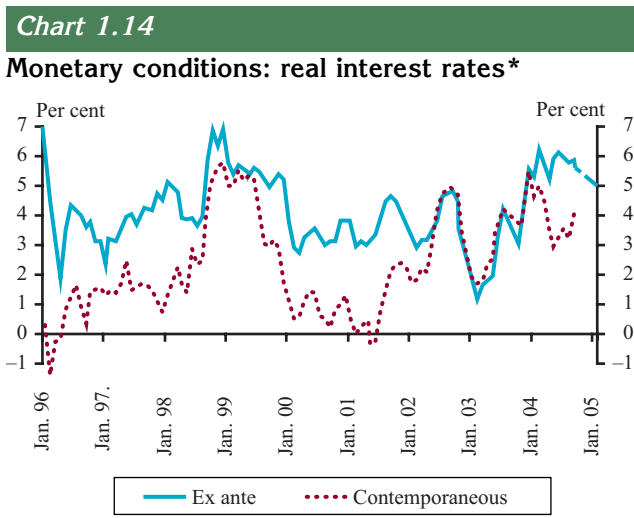
## 1.4 MONETARY CONDITIONS

1

### 1.4.1 REAL INTEREST RATES

Monetary policy primarily affects the real economy through the real exchange rate and real interest rates. Given the dominance of external trade in the Hungarian economy, the forint exchange rate channel plays a more important role. Below, we briefly outline the recent changes and possible future developments in these two variables as anticipated by market participants. This description of market expectations relies on the Reuters survey, which, although not a perfect representative sample of all economic agents, provides a good picture of general trends.

The forward-looking real interest rate, which is an important source of information about the monetary policy stance, has fallen slightly in recent months, but its level has remained high by historical standards, exceeding 5 per cent. This drop in the forward-looking real interest rate is mainly due to the decline in one-year yields, given that inflation expectations for 2005 barely changed up to October according to the Reuters survey of analysts. Their expectations suggest that the forward-looking real interest rate expected for early 2005 may decline further, although remaining above 5 per cent.

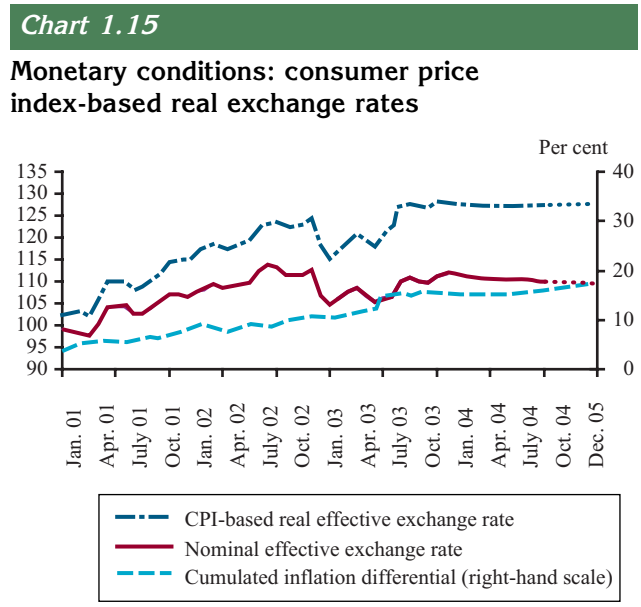


\* The forward-looking real interest rate was calculated using 12-month inflation expectations based on the Reuters survey.

Due to the impact of indirect tax increases on inflation, the contemporaneous real interest rate is considerably lower than the forward-looking real interest rate. In September, the contemporaneous real interest rate rose from the level reached in earlier months to nearly 4 per cent. This was due mainly to the stronger-than-expected disinflation data for September. As the effect of indirect tax increases winds down, the level of the contemporaneous real interest rate may come near to that of the forward-looking real interest rate by early 2005.

### 1.4.2 REAL EXCHANGE RATES

Following the massive nominal appreciation in the period February–March, the real effective exchange rate calculated on the basis of the consumer price index strengthened only moderately. The 1-per-cent appreciation since May was caused by excess inflation in Hun-



\* Real effective exchange rate, average in 2000 = 100 per cent. Higher value represent appreciation. Expectations for end-2004 were calculated on the basis of the Reuters inflation and exchange rate consensus assuming that trading partners' inflation remains unchanged compared to the average of the previous year and that appreciation expectations for the effective exchange rate are identical to those relating to the EUR/HUF exchange rate.

gary. During the period, the nominal effective exchange rate remained practically unchanged.

Based on market analysts' exchange rate and inflation expectations, we have calculated the real exchange rate path they anticipate up to end-2005. The slight real depreciation expected for the rest of this year is mainly due to the expected depreciation

of the nominal exchange rate by end-2004, while, taking the expected horizontal exchange rate path into account, the real appreciation expected for 2005 is wholly attributable to the differential between domestic and foreign inflation. The expected trend of the real exchange rate remains somewhat below the pace of equilibrium real appreciation for the Hungarian economy.



## **2 INFLATION AND ITS DETERMINING FACTORS UP TO MID-2004**





## 2.1 ECONOMIC ACTIVITY

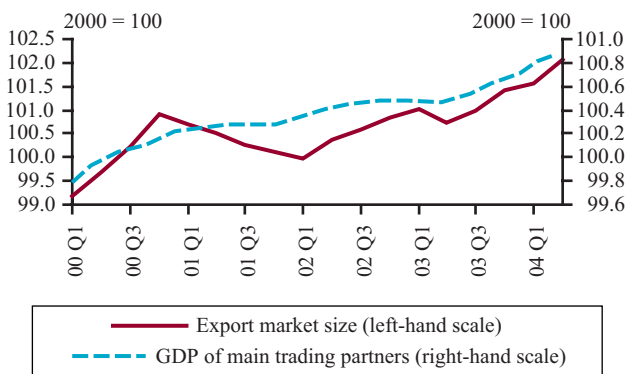
Gross domestic output continued to pick up in 2004 Q2, driven by sustained vigorous external demand. However, a closer look at the recovery reveals that in the corporate sector there are signs suggesting that short-term growth dynamics slowed relative to Q1. Nevertheless, demand generated by both the general government and households contributed to economic recovery to a larger-than-expected extent.

### 2.1.1 EXTERNAL DEMAND

The economic recovery in Europe, key to Hungary's domestic economic activity, was as robust in Q2 as it was in Q1. The engine of this recovery was a further acceleration in export growth, whereas neither household consumption nor fixed investment showed any sign of an upturn. GDP growth in Hungary's trading partners was somewhat lower than in Q1, but even so, it increased at an annualised rate of approximately 2 per cent. Calculated as Hungary's foreign trade partners' weighted increase in imports, the size of Hungary's export markets grew even more markedly, with an annualised increase of close to 10 per cent in Q2.

**Chart 2.1**

**Size of Hungary's export markets and GDP in its foreign trade partners**



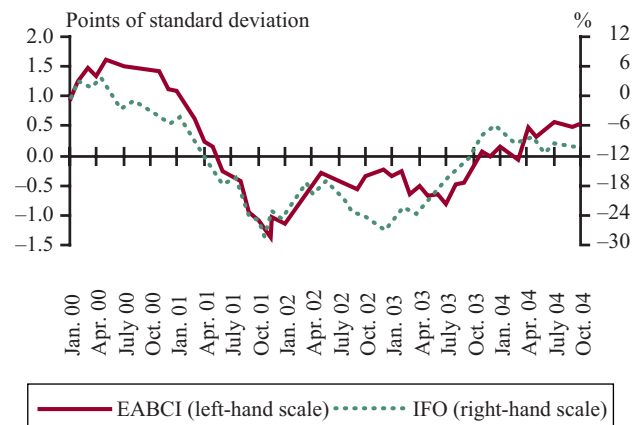
\* Volume of goods and services imports in Hungary's main foreign trade partners. Weighted average, with weights from the structure of Hungary's exports by countries. Based on logarithmic values.

Data for Q3 somewhat shade this favourable picture. In July and August, both industrial production and the volume of new orders declined in the euro area, especial-

ly in Germany, Hungary's most important trading partner. The IFO Institute's business climate index has been falling virtually since early 2004, reflecting an unfavourable outlook for industrial economic activity in Germany. Furthermore, business confidence indices of the euro area (EABCI) also remained flat in Q3.

**Chart 2.2**

**Business confidence indices of the euro area (EABCI) and the German IFO Institute**



With respect to cost developments, it was mainly high oil prices that affected external demand, although the appreciation of the euro vis-à-vis the dollar softened this impact considerably. In our view, a strong euro poses no imminent threat to competitiveness in the euro area, as long as economic growth in the USA, sustained by high domestic demand, continues at a similar pace. However, the recent interest rate increases by the Federal Reserve suggest that the US economy is likely to slow down. If this is the case, higher energy prices and a strong euro may be more acutely felt in the euro area as well.

### 2.1.2 OUTPUT

In 2004 Q2, gross manufacturing output growth remained high, exceeding 10 per cent on an annualised quarterly basis. However, value added in the sector slowed significantly: Compared with an increase of 9 per cent on an annualised quarterly basis in Q1, it bare-

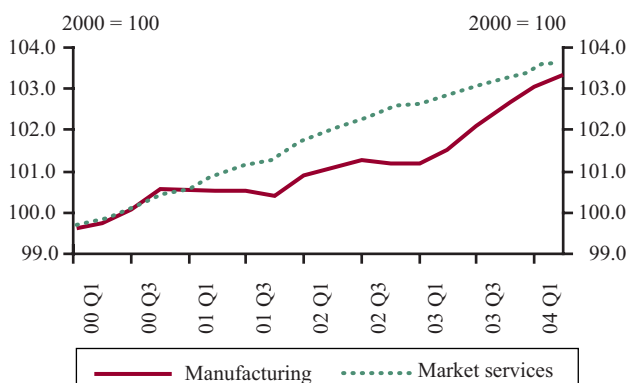
ly rose by more than 5 per cent in Q2. In the short run, the latter is likely to have been a better indicator of economic activity in the corporate sector, as gross output has also slowed down recently, judging from available data for Q3.

Given the favourable developments in external demand in Q2 and goods exports reflecting equally favourable economic activities, the extent of the slowdown in manufacturing output is slightly surprising. This is, however, somewhat mitigated by the fact that value added in manufacturing in 2003 Q4 and 2004 Q1 was much higher than expected based on external demand prevailing at that time. The slowdown in Q2 can be seen as a correction in the growth of manufacturing output. Moreover, lagging productivity growth may also be responsible for the slowdown in production.

In 2004 Q2, value added in market services also fell behind what had been expected (with annualised growth amounting to roughly 3 per cent, relative to 4.5 per cent in the preceding quarter), despite the fact that higher-than-assumed household consumption would also have justified a more marked increase, in addition to robust external demand. Recent data suggest that value added in market services is increasingly slow in responding to changes in the factors that used to influence it strongly. Of its chief components, two (transportation and commercial services) show unambiguous signs of a slowdown. The annual average increase, which stood around 4–5 per cent even during the recent downturn, has been moving increasingly nearer to the 3 per cent threshold.

**Chart 2.3**

**Value added in manufacturing and market services\***



\*Based on logarithmic values.

Quarterly growth in construction was vigorous in Q2, amounting to an annualised 6 per cent. The sector seems to have returned to the growth trajectory that it left in 2003 Q1. July and August data on construction point to consistent expansion in the sector.

**2.1.3 HOUSEHOLD CONSUMPTION, SAVINGS AND FIXED INVESTMENT**

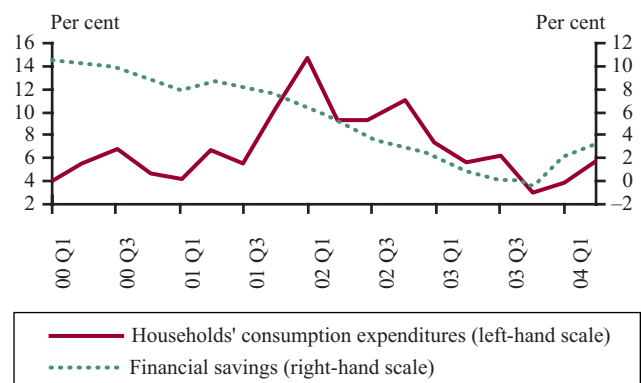
Based on CSO data, household consumption growth picked up in Q2. Nevertheless, the figures were not as high as seen in the previous two years, when households' propensity to consume<sup>2</sup> exceeded 90 per cent.

The growth rate (5.1 per cent relative to 2003 Q2) calculated from CSO data is, however, difficult to place in a business cycle context, since it is biased due to one-off effects, including changes in regulations on motor vehicle purchases and sales of ICT goods (see Chapter 4.5). If, in order to identify the underlying trend, we eliminate these one-off effects from the series, it is clear that the underlying growth is not so lively.

This would reflect developments in households' financial savings somewhat better. Financial accounts data for Q2 reveal that the sector's financial savings grew significantly, which would imply a sharp rise in household income, given the growth rate of consumption and the estimated strong dynamics of household investment. As an increase in real wages cannot fully account for such a rise in income, we must look to what is called 'other income' in order to identify the key source of household income growth. Based on available data, it is mainly interest income, income on equity (dividends and equity price gains), the disbursement of agricultural subsidies in relation to EU and the effect of tax benefits connected to subsidised mortgage contracts, to which the increase in other income can be ascribed.

**Chart 2.4**

**Household consumption expenditure and financial savings\***



\*Consumption: annualised quarter-on-quarter growth rate; savings: ratio to disposable income.

In line with developments last year, major indicators of households' investment (the stock of mortgage contracts and the number of dwelling permits) imply sustained activity. The number of completed dwellings increased by 45 per cent in the first three quarters of 2004 compared to the same period of 2003 (this is par-

<sup>2</sup> Consumption expenditure as a proportion of disposable income.

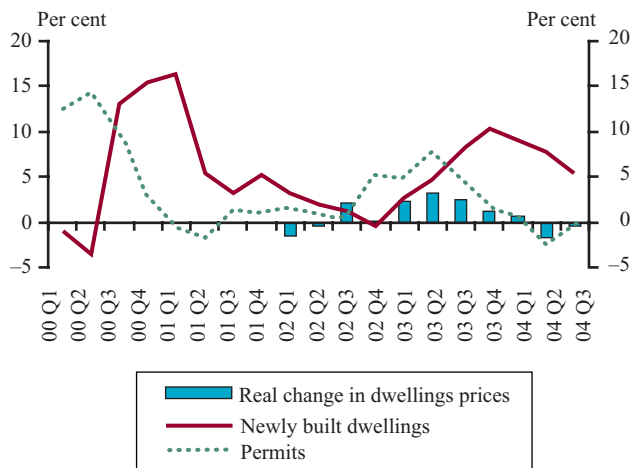
tially explained by base effects). It, however, also reflects supply inelasticities, i.e. buoyant construction activity in spite of falling relative real estate prices. The growth rate of real dwelling prices has been slowing since 2003 Q2, and actually showed a decrease from 2004 Q2 on, reflecting weakening demand.

As a consequence, the number of dwelling permits decreased. This, however, was not as rapid as we expected earlier: in the first nine months of the year the number of permits was still 2 per cent higher than in the correspondig (historically outstanding) period of the last year, partly reflecting statistical base effects.

**Chart 2.5**

### Dwelling permits and the number of newly built dwellings

Quarter-on-quarter growth



\* Data sources: Central Statistical Office. In the case of real prices for dwellings nominal prices are from the 'Origo' database (that contains information for Budapest only), as a deflator we use CPI.

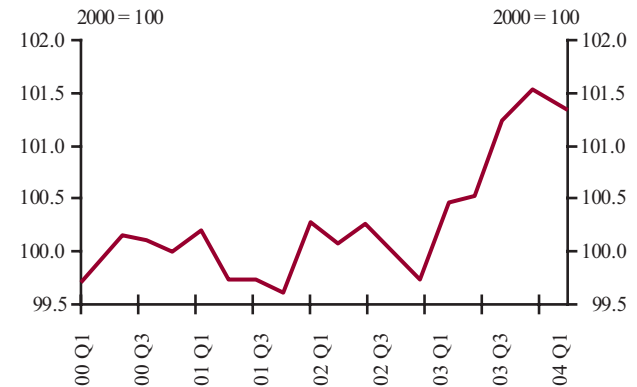
### 2.1.4 CORPORATE FIXED INVESTMENT AND INVENTORIES

There was a surprise plunge in corporate fixed investment activity in 2004 Q2, exceeding an annual rate of 5 per cent.

Despite a downward adjustment of the earlier robust growth, our perception of the underlying trend remains unchanged. Fuelled by an upturn in the external business cycle, corporate fixed investment activity began to gather momentum in 2003, with a relapse in 2004 Q2 mainly representing a one-off impact in the trend. Thus, trendlike growth continues, though its rate may flatten out. The latter point seems to be corroborated by the fact that the capacity utilisation indicator (based on a Kopint-Datorg survey), in contrast with earlier consistent growth, has been broadly unchanged for two quar-

**Chart 2.6**

### Corporate fixed investment\*



\* The time series are the MNB's own estimates based on CSO publications on investment. Based on logarithmic values.

ters now. Other business surveys point to a diminishing number of corporate managers that deem existing capacity as insufficient to meet future orders.

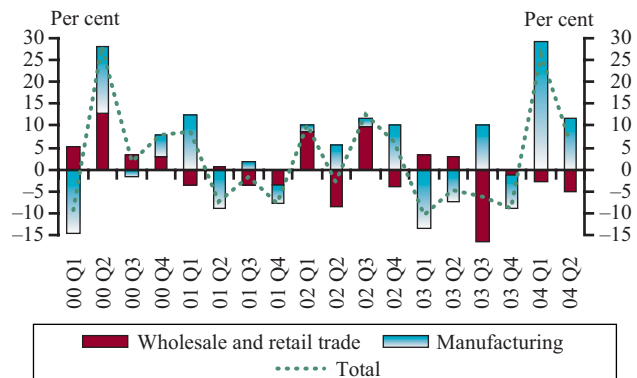
With respect to industrial economic activity, it is important that manufacturing fixed investment only slowed moderately, but it is market service providers' fixed investment activity that shows signs of a more significant slowdown. This corresponds more closely to existing trends in production and an ongoing substitution of costlier labour with capital.

Data for Q2 reveal further growth in whole-economy inventories. This, however, masks a fall in manufacturing stocks. Although the level of inventories purchased increased slightly, consistent with the current business cycle, that of own-produced inventories decreased considerably. By contrast, commercial inventories have been growing vigorously. The sales prospects of trading companies are likely to have been over-optimistic; as a result, they retained a sizeable amount of stocks owing to a slowdown in household consumption in H1.

**Chart 2.7**

### End-of-quarter stock of inventories

Contribution to annualised quarter-on-quarter growth rates



### 2.1.5 EXTERNAL TRADE

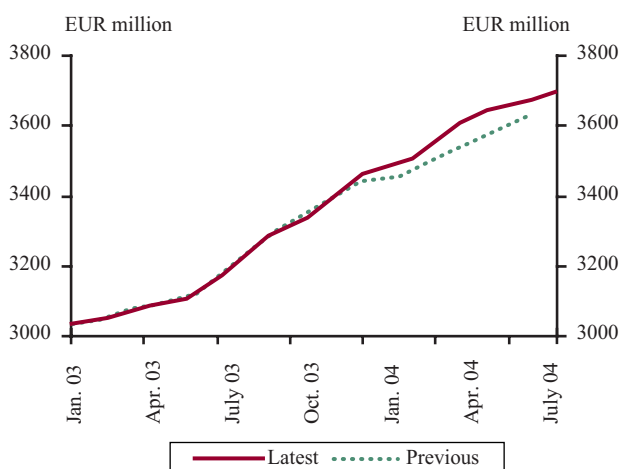
As mentioned in our previous Report, data on external trade are subject to greater uncertainty, owing to the introduction of the new statistical reporting system.

In the August Report, we referred to downward backward-looking revisions in the case of exports of goods, with the growth trajectory of goods exports perceived as increasingly flat. Recent revisions tend to be more upward; as a result, data attest to more dynamic growth in exports.

**Chart 2.8**

#### The trend of goods exports and its revision

At current prices, in EUR



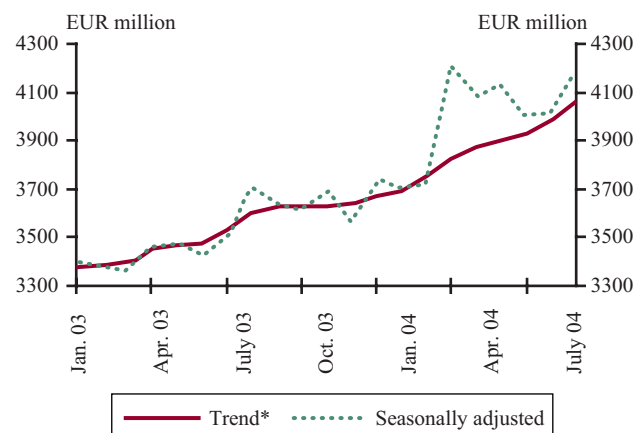
As regards imports of goods, in addition to data revisions, other problems – originating from EU accession – render interpretation of the data a sensitive issue. Purchases drawn forward due to Hungary's EU accession as detailed in the August Report also had to be taken into consideration, and a further accounting problem arose, attributable to the 'sudden' release of goods imported from the EU and stored in public warehouses prior to accession. According to a CSO estimate, this latter amounts to close to EUR 1 billion, and by its nature it is not seen as a lasting trend, but a one-off effect. It may have greatly contributed to the fact that the increase in imports in the middle of this year appeared much higher than justified by the business cycle.

In order to see the underlying direction of the process, actual import data must be corrected with both purchases drawn forward, and goods released from public warehouses. Without the necessary corrections one could have the impression that imports of goods have

**Chart 2.9**

#### Imports of goods

At current prices



\*The seasonally adjusted time series is based on original data published by the CSO. To estimate the trend, corrections were made for purchases drawn forward and goods released from public warehouses. As regards the former, EUR 350 million of imports in March and April were reallocated to the remaining part of the year. As regards the latter, based on the CSO's estimates, an amount of close to EUR 1 billion has been removed from the May-September import data (this amount will be permanently eliminated from the trend).

been stagnating after a dynamic increase in Q1, whereas the adjusted series reflects a rise in imports in line with the rest of business cycle indicators.

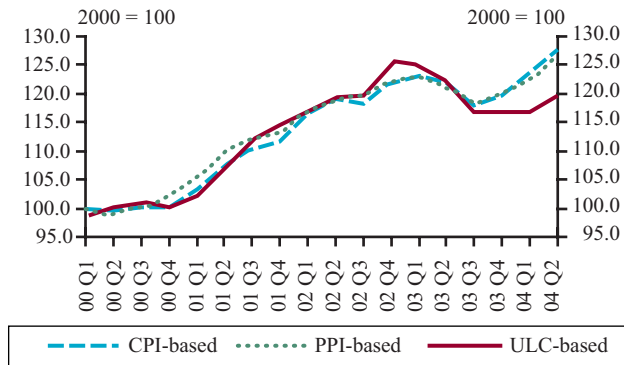
Export and import data under the system of national accounts (comprising trade in goods and services) for Q2 clearly point to import growth exceeding export growth. As the corporate business cycle was slightly more lacklustre in Q2, the sharp rise in imports may be imputed to an increase in household consumption and livelier government fixed investment activity, in conjunction with transitory effects.

### 2.1.6 COMPETITIVENESS

Major real effective exchange rate indices appreciated across the board in Q2, attributable mostly to the appreciation of the forint's exchange rate vis-à-vis the euro. In the case of price-based real effective exchange rates indices, appreciation goes further back in time. This stemmed from a rise in domestic consumer and producer prices exceeding those abroad. The ULC-based real effective exchange rate index in manufacturing was, however, broadly flat in the preceding quarters, as moderate nominal appreciation was associated with a decline in domestic ULCs. In Q2, not only did the nominal exchange rate of the forint appreciate more dynamically, the domestic ULCs rose as well.

Chart 2.10

## Real effective exchange rate indices\*



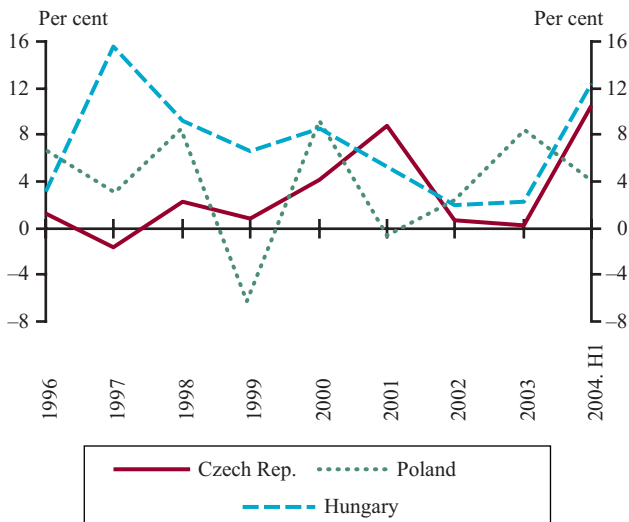
\* CPI: consumer price index, PPI: producer price index, ULC: the manufacturing unit labour cost index. Consistent with general practice, lower values in the chart denote stronger real exchange rates.

Although some of the real effective exchange rate indices could easily suggest a weakening competitiveness position, Hungary's market share in EU-15 slightly increased. Final data are only available for Q1, but judging from the import statistics of some of Hungary's major trading partners (especially Germany), it is safe to say that Hungary's share in the entire EU-15 market has grown.

We come to similar findings based on the developments in the OECD's export performance indicators which allow us to look at regional developments.<sup>3</sup> Due

Chart 2.11

## Export performance\*



\* Annual export growth relative to the growth of the country-specific export market. Source: OECD. Data for 2004 H1 are MNB's own estimates based on national statistics and OECD data.

to the differences in the country structure of export markets as well as differences in export price deflators and exchange rate developments, when expressed in euros at current prices the export growth of the Czech Republic and Poland is higher than that of Hungary, but (relative) competitiveness is better measured by the export performance indicator. Since Hungary's export market size has grown less rapidly as that of the Czech Republic and Poland since 1999,<sup>4</sup> its export performance was better than theirs in some of those years. And, according to the most recent data, Hungary's export performance was also the strongest in the first half of 2004.

## 2.1.7 ECONOMIC GROWTH

In 2004 H1, GDP was 4.1 per cent higher than a year earlier. Despite less favourable data for Q2, this strong GDP growth was primarily attributable to a rise in gross capital formation. Household consumption also contributed considerably to GDP growth, though to a lesser extent than in 2003. Net exports continued to make a negative contribution, although to a lesser degree than last year.

Chart 2.12

## Gross Domestic Product\*

Annualised quarterly growth rates



\* Data are corrected for calendar and seasonal effects by the MNB.

In interpreting the 4.1 per cent outturn for growth, it is important to remember that based on our calculations so far calendar effects<sup>5</sup> in 2004 may reflect a higher rate of GDP growth than what could be inferred from actual trends in the business cycle, with a difference even amounting to up to an annual 0.2–0.3 per cent. These effects may have been reflected already in H1 data.

In a regional comparison, the growth of Hungary's output in the first half was slightly higher than in the Czech

<sup>3</sup> The OECD measure is calculated as the change in the ratio of the volume of export to the export market size. The OECD's definition of export market size is conceptually the same as the MNB's own export market size indicator, mentioned at the analysis of foreign demand. The country structure, however, is different: while the weights in our indicator are based on the most up-to-date export structure, OECD uses weights based on the export structure for a wider selection of countries for 2000.

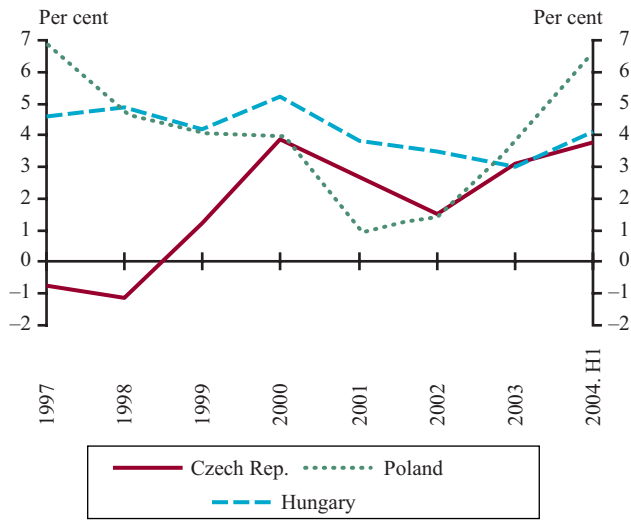
<sup>4</sup> In the export structure of the Czech Republic and Poland some Eastern European countries (most notably Russia and Slovakia) that exhibit faster import growth have a larger share than in Hungary's export structure.

<sup>5</sup> For a detailed treatment of this issue, see Chapter 4.6 in the August Report.

**Chart 2.13**

**GDP growth in the region**

Annual growth



Republic. Poland, however, where both domestic demand and net exports were more robust, outperformed both countries (the higher export growth may be related to the stronger export market growth of Poland).

## 2.2 LABOUR MARKET

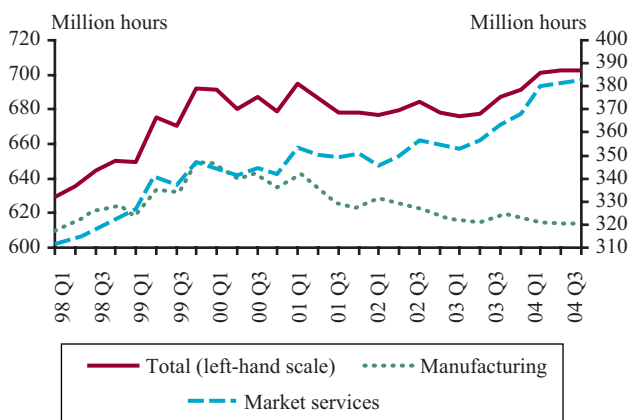
The August Report identified mounting labour market tightness as an upside risk to our inflation projection. We perceived an acceleration in wage inflation and an increasing amount of data on skilled labour shortage to be a sign of labour market tightness. However, based on data for Q2 and Q3, labour market tightness seems to have eased somewhat with wage inflation (although high, but back on a declining trend again) and the dynamics of labour demand (total hours worked) slowing. An easing of labour market tightness, if it endures, would be in line with the more reluctant business activity in the corporate sector. On the other hand, labour supply constraints may be still present in the economy and the risk of labour market mismatches has not necessarily declined in the long run.

### 2.2.1 LABOUR INPUT

Based on total hours worked, it is safe to assume that labour demand in the private sector, which had been strong since mid-2003, slowed down last quarter. The underlying reasons for this include a consistent decline in manufacturing labour input, and an increase in labour demand in the market services sector which was lower than labour demand witnessed in the preceding period. Weaker labour demand in the private sector may be related to a downturn in economic activity.

Chart 2.14

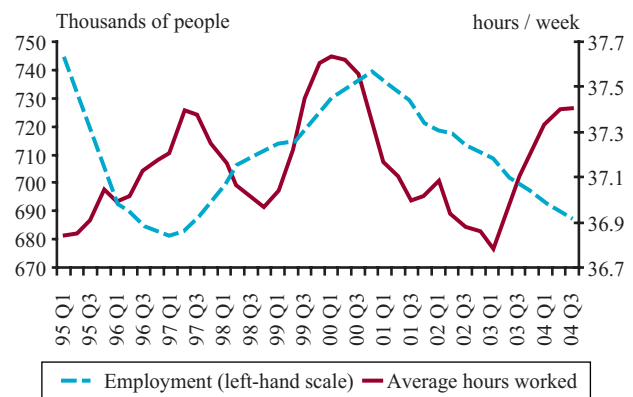
#### Total hours worked



Flagging manufacturing labour demand is the result of two contrasting impacts. On the one hand, manufacturing employment declined, while on the other labour intensity increased. As we have pointed out in our previous reports, substitution of labour with capital may also play a part in labour intensity and employment moving in opposite directions for over a year now. There is, however, uncertainty regarding the extent to which these trends are linked to substitution between the factors of production and to the current phase of the business cycle.

Chart 2.15

#### Average hours worked by blue-collar workers and employment in manufacturing



Historically speaking, labour intensity and employment diverged for a longer period of time between 1995 and 1996. This could easily suggest that employment is following a pattern similar to the one seen during the previous recovery, and that the time lag in its growth is not attributable to changes in the structure of production.<sup>6</sup> Nevertheless, we believe that structural and business cycle-related shocks have mingled strongly in the Hungarian economy over the past decade. Thus, it is highly probable that an important structural transformation occurred during the previous upswings. Likewise, the current steady decline in manufacturing employment can also be ascribed to restructuring, the latter being also responsible for the ongoing phasing-out of activities in the textile industry since 2003. By contrast,

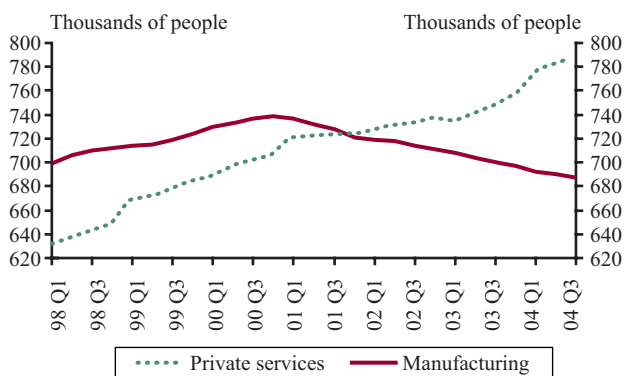
<sup>6</sup> See Chapter 4.5 in the August Report.

employment in machinery and equipment, the most sensitive sector to the external business cycle, has been slowly picking up. Overall, both past and current business cycle-related effects are hard to separate from one another.

Weakening labour demand in the market services sector can be ascribed to a slowdown in employment. We remarked in our previous Reports that it was difficult to explain what reserves of labour supply had allowed for employment in the market services sector to rise rather rapidly since early 2003. Taking into consideration the difficulty involved in the interchangeability of skills, we thought that strong labour demand in the sector was, sooner or later, to face labour supply constraints. Consequently, the slowdown in employment is consistent with our expectations. Within the market services sector, labour demand weakened in the hotels and restaurants as well as the transportation sectors, whereas it strengthened rapidly in the trade and real estate, economic services sectors.

**Chart 2.16**

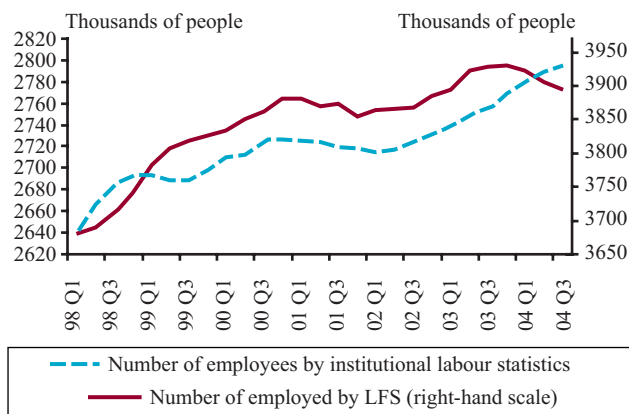
**Employment in manufacturing and the market services sector**



However, a significant uncertainty is contained in the employment statistics. Institutional statistics, covering full-time employees at companies employing over five persons and other organisations, suggest a further, albeit slower, increase in employment. By contrast, the household labour force survey (LFS) indicates a decline in employment this year. The scope of the LFS is wider than that of institutional statistics, including self-employed and part-time workers as well. As, based on direct statistics, neither the number of self-employed nor the number of part-time workers decreased in Q2 and Q3, we cannot presently explain the difference between the LFS and the institutional statistics.

**Chart 2.17**

**Employment: differences between institutional and LFS statistics**

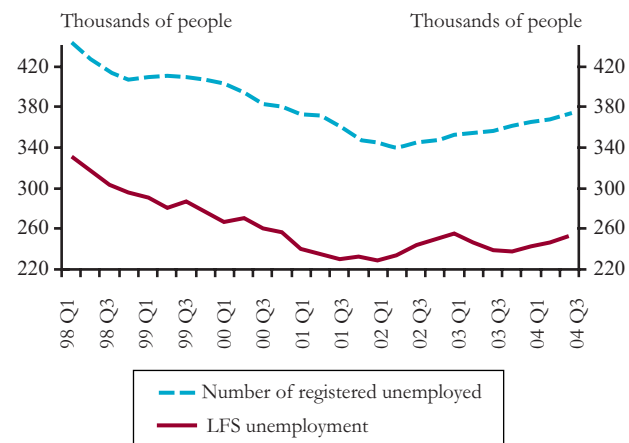


**2.2.2 LABOUR MARKET RESERVES AND TIGHTNESS**

Unemployment, which represents the most important labour reserve for the economy, increased further in 2004 Q3, indicating an easing of labour market tightness. Rising unemployment is corroborated by the number of registered unemployed and LFS data. It is mainly moderate labour demand in the private sector that was responsible for growing unemployment.

**Chart 2.18**

**Changes in the number of the LFS and the registered unemployed**



The LFS statistics points to a rise in the number of the economically inactive. Some findings of labour market research reveal that the attachment of the unemployed and certain groups of the economically inactive to the

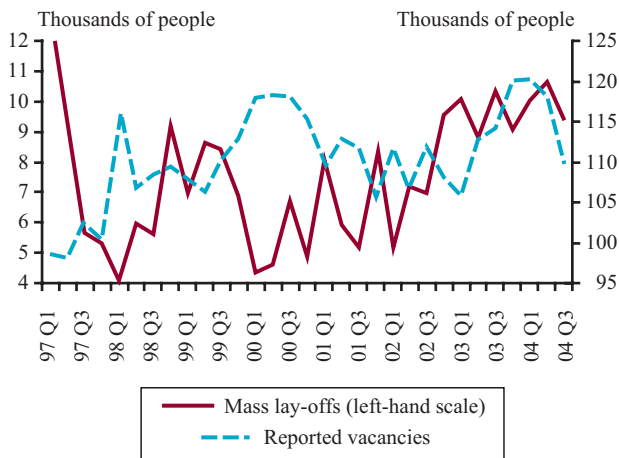


labour market is rather similar. Thus, an increase in the number of the economically inactive may also suggest some easing of labour market tightness. However, the assessment of the present trend is ambiguous.<sup>7</sup> Overall, only a smaller number of those that exited employment seem to have become unemployed due to sluggish labour demand. An overwhelming majority have become economically inactive.

Furthermore, in Q3 a high level of mass lay-offs remained, but vacancies dropped significantly. This is again considered as a sign of weaker labour demand.

**Chart 2.19**

**Number of announced mass lay-offs and reported vacancies**



**2.2.3 WAGE INFLATION**

Data for Q2 and Q3 show that, although the level of wage inflation is still high, it has started to decline again, following a pick-up from early 2003. This decline in wage inflation is consistent with our assumptions about an easing of labour market tightness. Both manufacturing and market services recorded a drop in wage inflation.

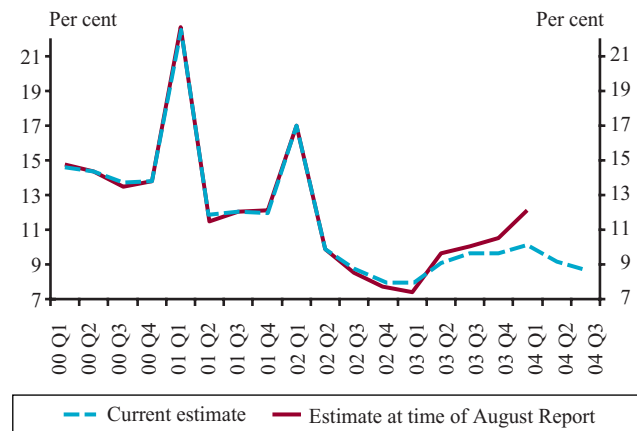
Although there was no revision of CSO data, seasonally adjusted data responded to the inclusion of new data points sensitively, markedly dampening the perception of the increase in early 2004.

On the other hand, corporate expectations of wage inflation in TÁRKI's survey suggest only a moderate decrease in wage inflation. Expected and perceived wage inflation has moved in close conjunction (within the 1 basis point range) over the past 3 quarters. The nearly identical level of the expected and perceived

**Chart 2.20**

**Changes in estimate for private sector wage inflation relative to the previous Report**

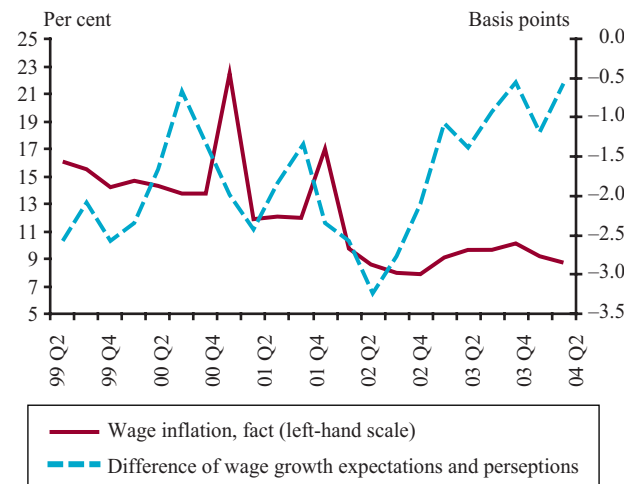
Annualised quarter-on-quarter indices



wage inflation shows that expectations have become stuck, on the basis of which we could anticipate only a slow decline.

**Chart 2.21**

**Wage inflation expectations in the TÁRKI survey and CSO wage inflation**



The slowdown in manufacturing wage inflation in previous quarters is in keeping with decelerating productivity growth, attributable to a downturn in manufacturing business activity. However, wage adjustment has not been perfect and the rise in labour costs in Q2 and Q3, which exceeded productivity growth, was unable to accommodate a further reduction in the wage share (i.e. an increase in the profit on labour). Differences between the sectors where activities are being phased out and those directly affected by the business cycle are reflected also in wages in the various manufacturing

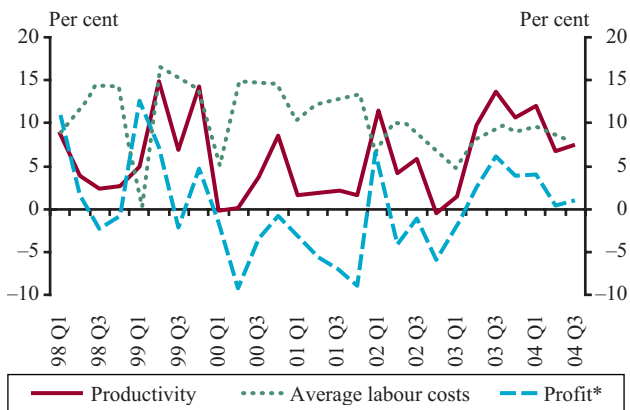
<sup>7</sup> According to Q2 and Q3 data within the economically inactive, the number of such groups (e.g. those drawing social aid after they no longer qualify for unemployment benefits and those drawing childcare benefits) that are more strongly attached to the labour market has fallen, which, in turn, suggests some depletion of labour reserves. For the attachment of the unemployed and the different groups of the economically inactive to the labour market, see e.g. Galasi, P. (2003), 'Unemployment indicators and the attachment of the unemployed to the labour market', In: Budapesti Munkagazdaságtani Füzetek 2003/2.

branches. Wage increase is the most robust in machinery and equipment, while that in the textile industry falls behind the manufacturing average.

**Chart 2.22**

**Productivity, wages and profits in manufacturing\***

Annualised quarter-on-quarter growth rates



\* The inverse of real ULC was used to approximate changes in profit. In effect, the category shown in the chart denotes a term covering a concept narrower than that of the profit rate. The reason for this is that it does not include cost components other than labour cost.

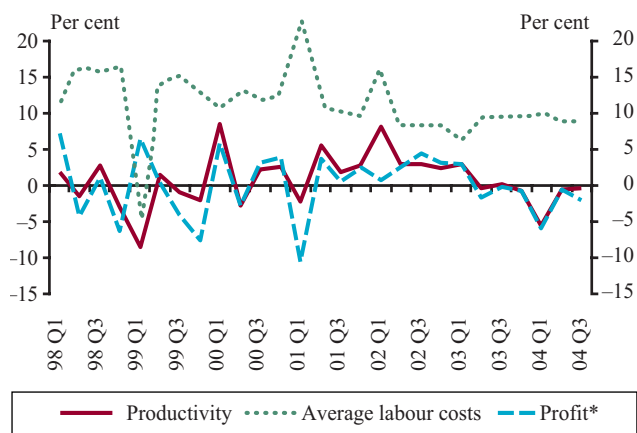
In preparing our August Report, we assumed that the deterioration in profitability in market services, underway since early 2003, was unsustainable in the long run, and expected firms to adjust. Data for previous quarters suggest that the adjustment began mainly through restraining employment growth and to a lesser extent by holding wage growth under control. Recent data reveal that—as a result of moderate employment growth—the decline in productivity growth since early 2004 has come to a halt, despite the slowdown in output growth.

Overall, as a result of both employment and wage adjustment, the growth rate of nominal ULCs has slowed significantly in the private sector. At the same time, the decrease in real ULC since late 2002 has come to an end, which may signal the fragility of the developments.

**Chart 2.23**

**Productivity, wages and profits in market services\***

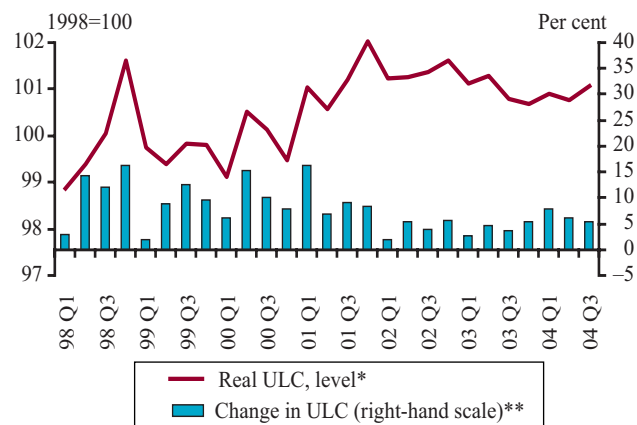
Annualised quarter-on-quarter growth rates



\* The inverse of real ULC was used to approximate changes in profit. In effect, the category shown in the chart denotes a term covering a concept narrower than that of the profit rate. The reason for this is that it does not include cost components other than labour cost. Deflated by constant tax non-tradables prices.

**Chart 2.24**

**Productivity and real labour costs in the private sector**



\* Deflated by constant tax consumer prices.  
 \*\* Annualized quarter on quarter growth rate.

## 2.3 INFLATION DEVELOPMENTS

In 2004 Q3, CPI and core inflation stood at 7.0 and 5.9 per cent respectively, representing a decline of 0.3 percentage point in both indices relative to the previous quarter. In addition, the constant tax price index (CTI), which filters out the change in indirect taxes, dropped by 0.2 percentage point to 4.9 per cent. Broadly speaking, trend inflation and the rate of price increase of goods characterised by erratic price changes also fell. Both base effects and actual developments contributed to the reduction in indices capturing annual price changes.

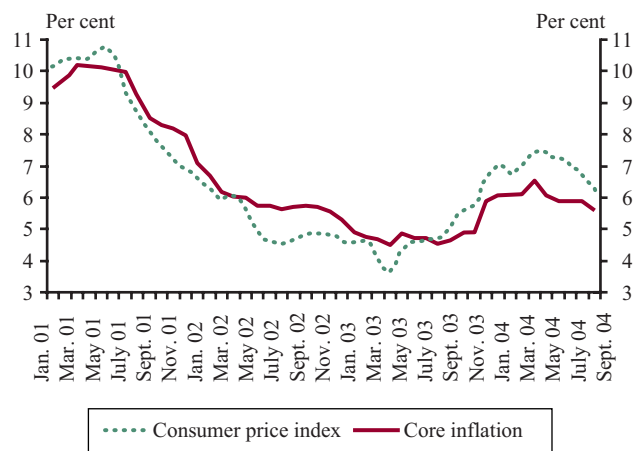
As a result, recent months have witnessed steady disinflation, with the consumer price index falling from its 7.6 per cent peak in May to 6.3 per cent in October.

We employ several indicators that can capture lasting trends in inflation. In addition to taking the CSO's core inflation and the constant tax consumer price index into consideration, we also provide estimates for developments in core inflation excluding the prices of tobacco products and another estimate excluding indirect taxes.

**Chart 2.25**

### CPI and core inflation

Annual changes



Essentially, each indicator attests a slowdown in inflation in 2004 Q2 and Q3.<sup>8</sup>

**Table 2.1**

### CPI and its major components

	2004 Q1	2004 Q2	2004 Q3
Core inflation	6.0	6.2	5.9
Unprocessed foods	4.9	8.0	11.9
Motor fuels and market-priced energy	1.0	7.8	7.6
Regulated prices	11.7	10.1	8.3
<b>CPI</b>	<b>6.8</b>	<b>7.3</b>	<b>7.0</b>

**Table 2.2**

### Impact of indirect taxes on inflation

Annual percentage changes

	Effect of changes in indirect taxes on price indices							
	Included				Not included (constant tax price index)			
	2003 Q4	2004 Q1	2004 Q2	2004 Q3	2003 Q4	2004 Q1	2004 Q2	2004 Q3
CPI	5.4	6.8	7.3	7.0	4.9*	5.0	5.1	4.9
Core inflation	4.8	6.0	6.2	5.9	4.3*	4.9*	4.4*	4.2*

\* MNB estimate.

<sup>8</sup> Nevertheless, we would like to point out that such net-type indicators are unsuitable for the elimination of indirect effects stemming from increases in indirect taxes. This means that, unless economic participants pass increases in indirect taxes on to consumers in their entirety, net prices will (albeit only in the short run) fall, which—ceteris paribus—would not be the case if indirect taxes had not been raised. It follows then that net prices are expected to fall after rises in indirect taxes, which, however, does not necessarily constitute part of longer-term trends in inflation.

The decline in trend inflation in the past two quarters was the result of contrasting trends on the supply and demand sides.

As regards the labour market, overall average and unit labour costs have been at a high level throughout the private sector over the past six months, albeit indications of a slowdown have also been observed. Furthermore, imported inflation, which we approximate with euro area tradables inflation, excluding energy prices, was broadly flat. In fact, translated into forint, import prices actually even dropped as a result of the appreciation of the exchange rate. However, the rise in oil prices since May adds to costs, which hitherto has only been reflected in market energy prices. In brief, inflation has been affected in a contradictory way by the supply side: the stable, strong forint exchange rate significantly reduced the inflationary pressure of increasing labour costs and world oil prices.

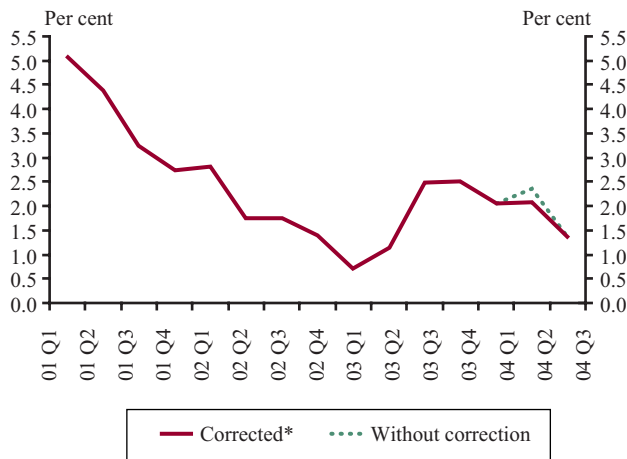
By contrast, demand has been able to put a brake on inflation more effectively over the past six months, as the growth rate of household consumption, representing the bulk of aggregate demand, has been slow. These supply and demand factors affected the individual economic sectors differently.

Tradables inflation decreased considerably in Q3. This may be attributable primarily to the forint's exchange rate, which has been appreciating since early 2004, dampening import prices directly. Furthermore, domestic producers of tradables competing with imported goods has also allowed for moderating prices. The price development of tradables has responded strongly to movements in the forint exchange rate: on the one hand, sharp tradable inflation followed the

**Chart 2.26**

**Tradables inflation**

*Seasonally adjusted, annualised quarter-on-quarter growth rates*



\* Excluding the primary direct effect of the motor car registration tax increase in May 2004 (MNB estimate).

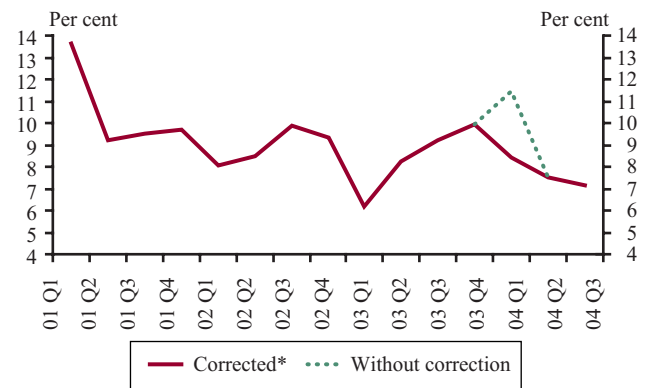
exchange rate depreciation last year. On the other hand, the exchange rate appreciation this year quickly stimulated disinflation. The latter aspect is partly masked by second-quarter data, as the increase in the registration tax of motor cars in May counter-balanced the exchange rate appreciation. Finally, increasingly intense competition, further stimulated by Hungary's EU accession, must have contributed to tradables disinflation.

Non-tradables inflation remained broadly flat in Q3; nevertheless, it remained well below the level of 2003 H2. This is somewhat surprising, as in late 2003 and early 2004 the sector was exposed to several supply shocks (e.g. a rise in the producer prices of energy and indirect taxes and the introduction of energy and eco-taxes, etc.), representing an upside risk to inflation. There may be other reasons for a lower increase in prices than these factors would justify. One is that, as we pointed out when net-type indicators were discussed, in order to retain their market shares, service providers in certain highly competitive markets do not fully pass on the effect of increases in indirect taxes to consumers (at least in the short run), i.e. they are likely to reduce their prices. The other reason is that household consumption has been slowing since year-end 2002, which may, in general, set a limit to efforts in the non-tradables sector, which is most sensitive to changes in demand, to fully incorporate increases in costs into prices.

**Chart 2.27**

**Non-tradables inflation**

*Seasonally adjusted, annualised quarter-on-quarter growth rates*



\* With the primary impact of VAT increases filtered out. MNB estimate.

Although inflation in processed foods rose until mid-2004 following the increases in indirect taxes in early 2004, this trend seems to have reversed in Q3. There are two underlying reasons for this. One is that, after Hungary's EU accession, in the market of certain foodstuffs (chiefly milk and dairy products) imported goods appeared, the prices of which were much lower than

those of domestic products. This forced domestic producers to reduce their prices. A fall in the price of wheat, and hence flour, since the early summer of 2004 has resulted in a substantial reduction in various bakery products (e.g. bread, baked goods, pasta, etc.).

In early 2004, there was a marked increase in the excise duty on tobacco products. Producers passed on the effect of this to consumers in two parts: one early this year, the other in late summer. Since higher-priced products will only appear in shops when existing commercial stocks are depleted, the increase will feed through to prices only gradually from one month to the next. We estimate that, prior to end-Q3, approximately 80 per cent of the increase in producer prices was reflected in data.

Although, in addition to trend inflation, goods characterised by volatile price changes also reduced inflation in Q3, the related trends ran broadly counter to each other.

Unprocessed food, particularly pork, the price of which rose in conjunction with prices abroad, boosted inflation. It should be noted, however, that, consistent with global market trends, at end-Q3 there seemed to be a break in the sharp rise in prices that occurred in this range of products.

Although vehicle fuel and market energy yearly price indices stopped rising in Q3, high prices for oil and gas kept their prices high as well. Rising global market energy prices were partially offset by the euro appreciating vis-à-vis the dollar, the forint appreciating vis-à-vis the euro and a temporary reduction in the excise duty on vehicle fuels.

Regulated price inflation fell markedly in Q3. This, however, was attributable to base effects rather than actual measures (i.e. no measures similar to the rise in the price of gas in mid-2003 or that of electricity in September were taken).

### 2.3.1 INFLATION EXPECTATIONS

With the CPI declining in Q3, economic participants' perceived inflation and inflation expectations also receded.

#### Firms

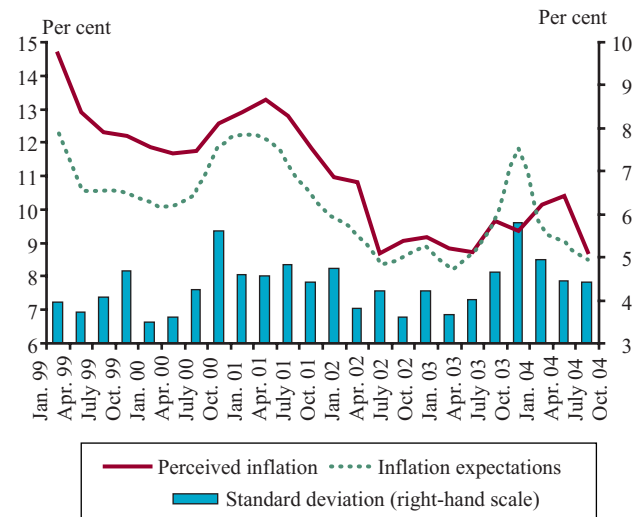
Consistent with the actual trends in inflation, the rate of inflation as perceived by corporate executives included in the TÁRKI's survey started to decline in 2004 Q3 after an unbroken rise lasting approximately

one year. This was also true in respect of their inflation expectations, which, however, represented the continuation of a gradual slowdown in a sudden rise in such expectations following the rises in indirect taxes early this year.

Chart 2.28

### Inflation perception, expectations and their variation by corporate executives in the TÁRKI survey

For the previous and the next 12 months



\* A trimmed average of corporate executives' responses. In calculating an arithmetic average, we ignored the responses that were smaller than three times the amount of the interquartile in the case of the lower quartile, and the ones that were larger than three times the amount of the interquartile in the case of the higher quartile. In consequence, we ignored, on average, 1.2 per cent of the responses concerning inflation expectations and 0.8 per cent of the ones related to perceived inflation. Standard deviation of expectations is calculated from the complete sample (including all responses).

Not only the temporal shifts in, but also the distribution of expectations can provide important information when inflation expectations are evaluated. The TÁRKI survey reveals that since mid-2003, increased inflation expectations were associated with a rise in their heterogeneity. At the same time, however, both inflation expectations and their range fell in the past three quarters, i.e. expectations of falling inflation reflect higher-than-earlier consistency in the opinions of respondent corporate executives.

Corporate managers' declining inflation expectations are further corroborated by the fact that they expect a slowdown not only in inflation, but also in the sales prices set by their own firms. Nevertheless, they did not report any decline in sales prices in past periods.<sup>9</sup>

<sup>9</sup> It should be noted that TÁRKI business executives' expected and perceived nominal wage increases only partially corroborate the perception of general disinflation. While perceived nominal wage increase slightly diminished compared to the preceding quarter, expectations of future wage increases grew slightly. See Chart 2.21.

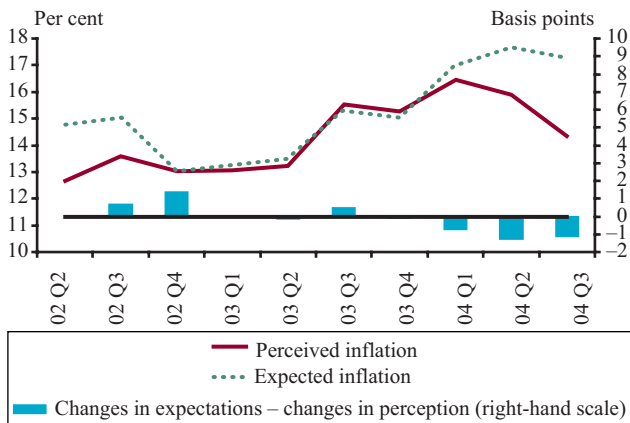
**Households**

TÁRKI's survey of households' expectations yielded similar results: both perceived and expected inflation declined. This is consistent with responses concerning perceived and expected inflation in GKI's household confidence survey. The GKI monthly data indicate no significant shifts within the past quarter though.

**Chart 2.29**

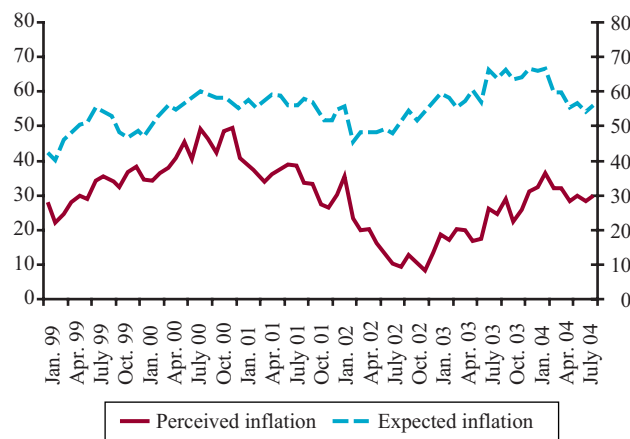
**Households' perceived and expected inflation based on the TÁRKI survey**

*For the previous and the next 12 months*



**Chart 2.30**

**Responses to inflation-related questions in GKI's survey of households**



**Analysts**

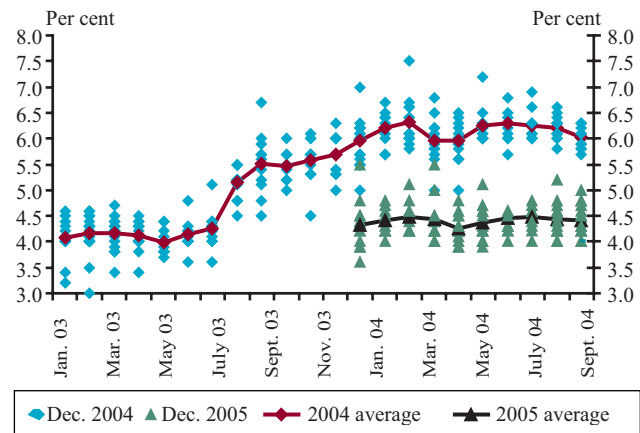
Owing partly to actual data on inflation in Q3, which were lower than expected by the market, both market analysts and research institutes revised down their respective short-term inflation projections according to the October Reuters poll. Thus, in September, inflation projected for December 2004 fell by 0.3 basis point to 6 per cent relative to end-Q2. However, there were no material changes in analysts' medium-term inflation expectations for December 2005.

Overall, we conclude that both households' and business executives' inflation expectations declined last quarter. Although the rise in inflation early this year, fundamentally attributable to increases in indirect taxes, also fuelled inflation expectations, lower inflation data for Q3 reduced both perceived and expected inflation. This seems to substantiate the hypothesis that a transient rise in inflation early in the year did not permanently raise inflation expectations. The stable and stronger-than-earlier forint exchange rate may have indirectly played a significant role here.

**Chart 2.31**

**Analysts' relevant inflation projections for end-2004 and 2005, on the basis of the October Reuters survey**

*Percentage changes on a year earlier*



## **3 INFLATION OUTLOOK**





### 3.1 OVERVIEW OF PROJECTIONS

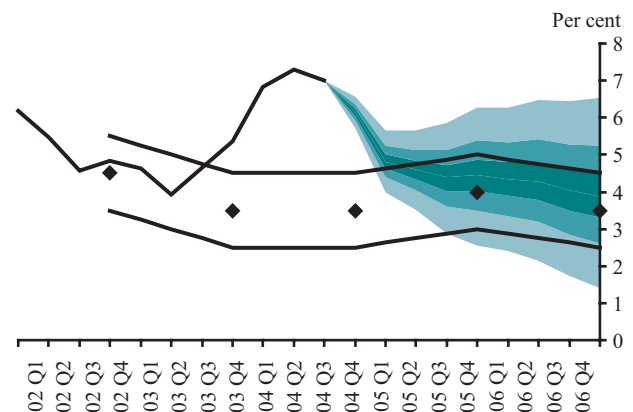
Assuming no change in the October monetary conditions and that all other assumptions of the main scenario apply, a gradual slowdown in inflation is expected over the forecast period. In the current forecast, disinflation is particularly strong in early 2005 and then slows down gradually thereafter. On the whole, the consumer price index is expected to fall to slightly below 6 per cent at end-2004 and further decrease to around 4-5 per cent at end-2005. This issue of the Report includes forecasts for 2006. According to our calculations, further disinflation is expected in 2006, with the consumer price index falling to around 4 per cent towards the end of the year.<sup>10</sup>

Next year, the effects of macroeconomic factors contributing to disinflation, the slower increase in wage costs, the strong exchange rate and more subdued consumption growth, are expected to be offset in part by certain inflationary shocks, such as rising energy prices. Disinflation may be more solidly based in 2006, when the decline in unit labour cost growth, the assumption of a relatively strong forint exchange rate and the anticipated lower path of oil prices will all exert their effects.

In terms of the uncertainties surrounding our inflation projection, developments in oil prices, external demand, and fiscal policy are considered to be the main sources of risk in 2005. To give an impression of the dimensions of uncertainty, the expected probability of an inflation higher than the upper bound of the target band is nearly 30 per cent. In comparison with the

**Chart 3.1**

**The fan chart of inflation\***



\* The fan chart represents the uncertainty around the central scenario.<sup>11</sup> Overall, the coloured area represents a 90-per-cent probability. The darkest central band contains the central scenario (as the mode) with a 30-per-cent probability. The end-year points denote the announced inflation targets, while the two lines denote a tolerance interval of  $\pm 1$  per cent assigned to the targets.

August Report, the upside risks to inflation have slightly diminished.

For 2006 the uncertainty surrounding our projections increases. There is a significant probability (almost 40 per cent) that inflation will remain above the  $3.5 \pm 1$  per cent target band. This due to the risks associated with fiscal policy, household consumption and oil prices.

<sup>10</sup> For further details of the technical features of our projection not detailed in this issue of the Report, including assumptions and the changes compared to the August report, see chapter 4.2.

<sup>11</sup> Since our November Report the fan chart contains only forecast errors, averaging from the introduction of inflation targeting regime, i.e. published inflation forecasts. As forecast errors since 2001 became smaller than the errors prior to 2001, the range of the fan chart has diminished. For general methodological details of the fan chart see Chapter 6.7. in our May Report.

## 3.2 EXPECTED INFLATION AND ITS DETERMINANTS IN THE MAIN SCENARIO

3

In line with earlier practice, the projection is conditional. In line with our projection rules, the Report assumes that the average October 2004 EUR/HUF and EUR/USD exchange rates and average short-term interest rate remain unchanged over the entire forecast period. Based on early November futures quotes, oil prices are assumed to decline from the current high levels.

**Table 3.1**

**Summary table of major assumptions determining the central scenario**

	2004	2005	2006
EUR/HUF exchange rate (HUF)*	252.0	246.8	246.8
USD/EUR exchange rate (cent)*	123.2	125.0	125.0
Brent oil price (US dollar/barrel)**	38.7	43.9	40.6

\* Annual average on the basis of the fixed October average.

\*\* Calculated on the basis of early November futures rates for oil (IPE stock exchange).

With respect to fiscal policy, we provide our own forecast for 2004–2005 in light of the actual budgetary trends and the proposed budget bill for 2005. With regard to 2006, however, we presume that the Government will decrease the deficit by 0.6 per cent of GDP relative to the previous year, as announced since the acceptance of the Convergence Programme.<sup>12</sup>

### 3.2.1 EXPECTED TRENDS IN THE BUSINESS CYCLE

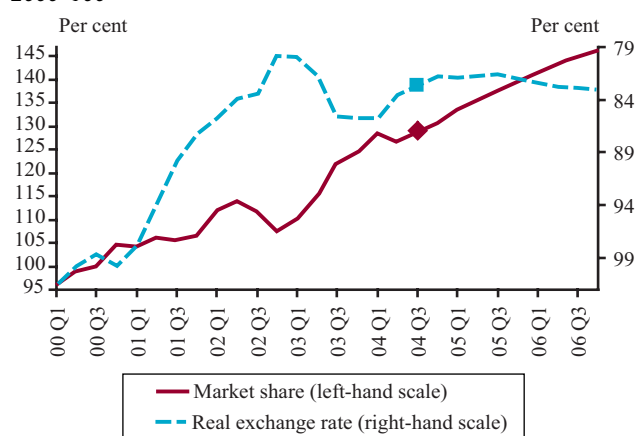
The expansion of Hungary's export markets is expected continue, as seen in the recent past. The current high price of oil, associated with the fact that external trade remains the driving force behind growth in the euro area and that the expansion of the domestic market continues to be very moderate, may well be a factor of risk as far as growth is concerned.

The upswing in external economic activity provides a conducive environment for Hungarian exports, which – if coupled with a stable real exchange rate as expected – may boost market share in line with the trend seen in recent years and trigger a rise in exports in excess of 10 per cent in the coming years.

**Chart 3.2**

**Market share and the real exchange rate**

2000=100\*

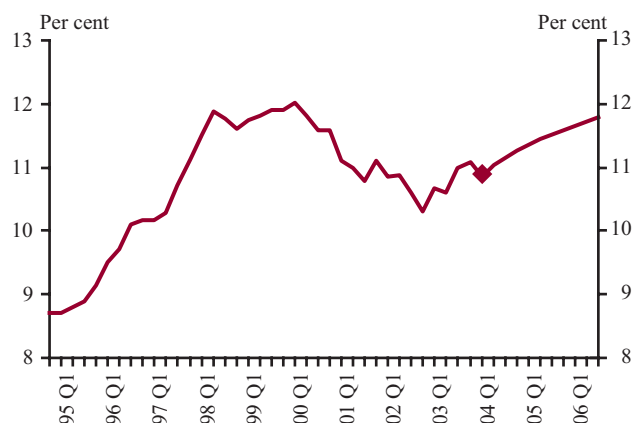


\* Market share = goods export/weighted import demand, real exchange rate: based on manufacturing unit labour cost; inverted scale, upward movements indicate appreciation.

Further increase in productive capacities will be required in order for Hungarian exports of goods to expand dynamically; however, major capacity enlargements are not anticipated at this juncture. Although in our forecast the corporate investment to capital stock

**Chart 3.3**

**Corporate sector investment ratio**



\* Corporate investment/corporate capital stock, at constant prices, own estimate.

<sup>12</sup> For more details on the forecast of general government finances, see Chapter 4.2.

ratio increases slightly compared to the past period, we do not expect the robust investment behaviour of the late 1990s to be repeated.

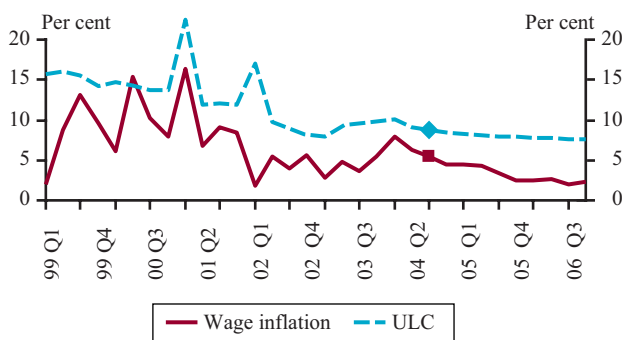
Labour market data indicate a certain degree of easing from earlier tightness (growth of labour demand and wage inflation are slowing down). Private sector wage inflation is projected to slow down and employment to increase gradually over the forecast period. On the labour demand side, more sluggish growth in employment relative to earlier periods is due mainly to a slower increase in domestic demand, and particularly to declining household consumption. In the current forecast, due to fiscal consolidation, the rate at which public sector employment falls is similar to that at which private sector employment grows, and thus whole-economy employment is likely to stagnate. At the same time, on the labour supply side, activities are expected to pick up gradually. Consequently, the number of unemployed is likely to increase slightly.

Unit wage costs growth is expected to decline steadily, accompanied by a slowdown in wage inflation and stable productivity growth. Accordingly, wage inflation is projected to be 9-10 per cent this year, and around 7-8 per cent in 2005 and 2006 in the private sector.

**Chart 3.4**

#### Wage inflation and unit wage costs in the private sector

Annualised quarter-on-quarter growth rates



The increase in government sector wages is expected to be lower than that in the private sector. Thus, we expect a gradual slowdown in wage inflation at the whole economy level, growing around 7-8 per cent, below the rate of increase in private sector wages. A comparison of the expansion of whole-economy productivity with real wage increase shows that the wage share in the total economy falls gradually in the current forecast.

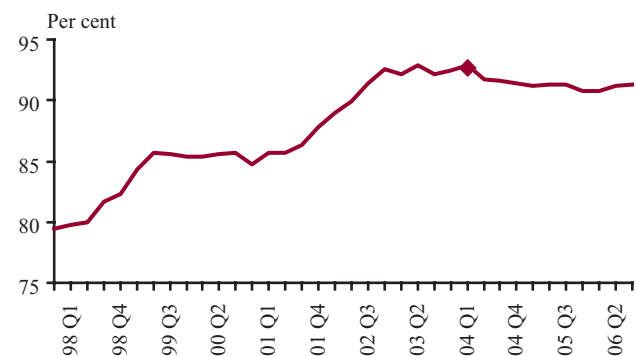
The modest increase in real wages relative to recent years means that, on the average during the coming years, household real income is likely to increase at a rate below that of economic growth. However according to our calculation, in 2004 real income, containing

also non-wage elements, will grow well faster than the rate of real wages.<sup>13</sup>

The rapid rate of other income growth this year may explain the fact that households' propensity to consume (consumption to disposable income) stabilises at rate above 90 per cent. In 2005-06, this rate is expected to decline gradually, according to our assessment. However, while the increase seen in recent years may have been dramatic in terms of its magnitude, it may partly be considered as a permanent change.

**Chart 3.5**

#### Propensity to consume



\* Consumption expenditure/disposable income, up to Q2-2002 CSO data, since then MNB estimates.

In the current forecast, the impact of general government on business activities is contractionary in 2004 and expansionary in 2005. However, based on the normative fiscal path, a contractionary impact on demand is assumed for 2006.

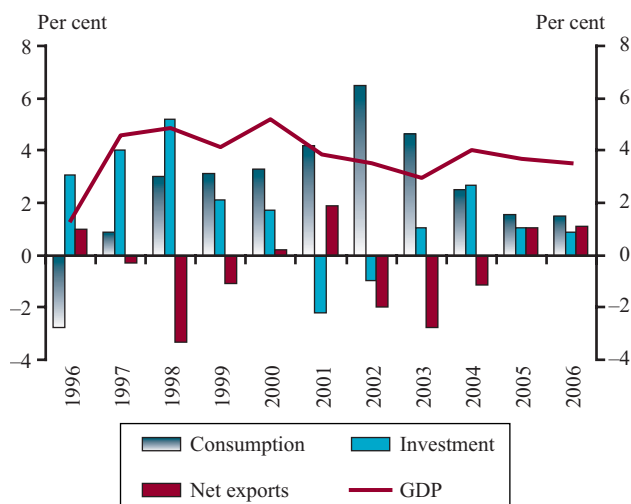
In view of the processes described above, the central projection is for economic growth of 4 per cent this year. The sharp upturn in growth relative to last year is fundamentally explained by buoyant investment activities. As discussed earlier, a though slowing but dynamic increase in corporate investment is forecasted for the period ahead. Simultaneously with this, household investment activity is only expected to slow down towards year-end. As a result of all these impacts, this year probably will witness an increase of nearly 10 per cent in gross fixed capital formation, compared with last year's increase of more than 3 per cent. This higher rate of investment growth will, in turn, boost whole-economy import demand considerably, causing net exports to make a slightly negative contribution to growth this year, despite the robust expansion of exports.

For the coming years, a gradual slowdown in economic growth is expected, approximating the rate of potential growth estimated to be between 3-4 per cent. Slowing investment and consumption will play a pivotal role in

<sup>13</sup> It is important to note however that CSO actual data concerning households income-balance are only available up to 2002, the 2003 and 2004 H1 are estimates based on partial information. For a detailed analysis see Chapter 4. 5.

Chart 3.6

## Economic growth and its components\*



\* Contributions to annual growth of each component in percentage points.

this decline. With the slowdown in domestic absorption, however, whole-economy import demand is also likely to fall, allowing external trade to make a positive contribution to growth.

In the current forecast, the potential rate of economic growth is estimated to be between 3–4 per cent.<sup>14</sup> With the growth rates assumed in the main scenario, the output gap is expected to widen from the current level which is close to zero. This in itself may exert inflationary pressure. It must be noted, however, that the margin of error in our estimate of the exact rate of potential growth is relatively high, therefore, the extent to which the output gap may widen is surrounded by considerable uncertainty.

## 3.2.2 DETAILS OF THE MAIN SCENARIO INFLATION FORECAST

If the assumptions of the main scenario described above hold, consumer price inflation will slow to 5.9, 4.4 and 3.9 per cent by the end of 2004, 2005, and 2006, respectively. The projected slowdown towards end-2004 will be governed essentially by the technical effect of the inclusion of the robust price rises affecting regulated products and unprocessed foods into the base at end-2003.<sup>15</sup>

In 2005 Q1, both the CPI and core inflation are expected to decelerate considerably, as the impact of increases in indirect taxes drops out from the base. The drop-off

Table 3.2

## Key projections in the main scenario

	2003	2004	2005	2006
<b>Economic growth</b>				
Household consumption	7.6	3.3	1.8	1.9
Gross fixed capital formation	3.4	9.2	4.2	3.6
Domestic absorption	5.5	4.8	2.5	2.3
Exports	7.6	14.5	11.3	11.0
Imports	10.4	14.8	9.3	9.2
GDP	3.0	4.0	3.7	3.5
<b>General government</b>				
Demand impact*	-0.5	-0.7	+0.3	-0.7****
<b>Households</b>				
Real disposable income of households**	4.3	3.9	3.2	2.3
<b>Labour market</b>				
Whole-economy wage inflation	10.9	8.3	7.9	7.3
Whole-economy employment	1.2	-0.4	-0.1	0.5
Unit labour cost (private sector)***	4.4	5.9	4.4	2.7

\* Change in the SNA primary balance, adjusted with the changes in payments to private pension funds.

\*\* In earlier issues of the Report, household real income was approximated by the addition of the net wage bill and social transfers in cash. From this Report, the primary focus will be on household disposable income.

\*\*\* Weighted average of manufacturing and market services.

\*\*\*\* Assumptions based on the Government's convergence plan.

<sup>14</sup> See Chapter 3.2 in the August Report on this issue.

<sup>15</sup> The October 2004 CPI data was published at the time of finalising of the inflation projection. The 6.3 per cent increase in the CPI was in line with our short-term expectations and thus corroborates our forecast.

**Table 3.3****CPI and its major constituents in the main scenario**

Year-on-year change, per cent

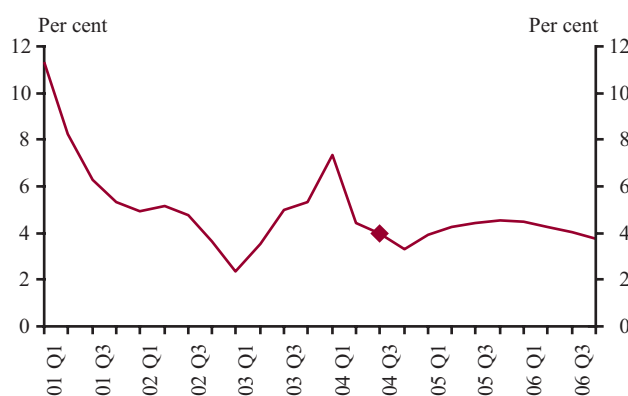
	2004			2005					2006				
	Actual	Forecast											
	Q3	Q4	Dec	Q1	Q2	Q3	Q4	Dec	Q1	Q2	Q3	Q4	Dec
CPI	7.0	6.1	5.9	4.8	4.6	4.4	4.4	4.4	4.3	4.3	4.0	3.9	3.9
Core inflation*	5.9	5.5	5.4	4.7	4.2	4.1	4.2	4.3	4.5	4.5	4.4	4.2	4.2
Unprocessed food	11.9	2.4	1.2	-0.3	-1.6	-4.3	0.2	1.1	2.1	3.3	3.6	3.0	2.9
Motor fuels and market-priced energy	7.6	11.2	10.5	10.6	9.1	6.3	3.0	1.3	1.0	0.0	0.1	0.5	0.8
Regulated prices	8.3	7.5	7.5	4.9	6.2	7.3	7.2	7.1	5.4	5.1	4.0	4.0	4.0

\* For reasons of methodology, the indicator, may, in the short term, be different from the one published by the CSO. Over the longer term, however, both follow identical trends.<sup>16</sup>

in inflation from 2005 Q2 probably will be fuelled primarily by the decline in the prices of products not covered by core inflation. In the main scenario, disinflation will also be facilitated by a decline in oil prices, as they directly reduce the motor fuel price index. Unprocessed foods will also exert downward pressure on inflation. As for regulated prices, above-average price increases are anticipated.

Core inflation is expected to stagnate or pick-up slightly in 2005, after the removal of the impact of indirect tax hikes from the base, with disinflation then resuming in 2006. These changes are a combined result of a number of factors. The recently high price of oil will probably gradually feed through to firms' production costs on the expenditure side. The related expected energy price increases will add further inflationary pressure on the cost side. However, over the entire forecast period disinflation is likely to be supported by the forecast slower growth rates of unit wage costs and household consumption, and the assumed strong forint exchange rate. In the long run, our oil price assumption also fosters the likelihood of a moderation in core inflation, as the drop in oil prices over the entire horizon will also lower energy costs in the longer term.

In our assessment, while inflationary effects are slightly stronger in terms of trend inflation in 2005, disinflationary factors may become dominant from 2006 H2. The trend inflation indicator is forecast to pick up temporarily up to early 2006, before starting to slow down markedly.

**Chart 3.7****Expected developments in trend-inflation\***

\* Estimate based on CSO core inflation, by filtering out alcohol and tobacco product groups - annualised quarterly growth rates.

The above discussion is illustrated using the constant tax inflation indicator. After a slight increase in 2005, a considerable slowdown is expected in the CTI in 2006.

**Table 3.4****Developments in CPI and constant tax consumer price index in the main scenario\***

	2004 Q4	2005 Q4	2006 Q4
CPI	6.1	4.4	3.9
Constant tax consumer price index	4.1	4.4	3.7

\* Percentage changes on a year earlier.

<sup>16</sup> The reason for this technical discrepancy is that the core inflation calculated by CSO cannot be accurately reproduced from the published set of CPI groups, as on the basis of detailed data, CSO publishes several groups in a breakdown of core inflation items and other sub-categories that are excluded from core inflation (e.g. pharmaceuticals). For this reason in our scenario an approximation is used which, in the long run, closes the gap between the core inflation values published by the MNB and CSO. More specifically, the core inflation forecast by the MNB covers 67.6 per cent, whereas the one published by CSO 65.8 per cent of the consumer basket. This, however, leaves the MNB's forecast for the total CPI unaffected, the only implication being the reclassification of the categories the MNB uses in its analysis (e.g. regulated prices and core inflation).



## **4 SPECIAL TOPICS**





## 4.1 BACKGROUND INFORMATION ON THE PROJECTIONS

### 4.1.1 CHANGES IN THE NOVEMBER PROJECTION RELATIVE TO AUGUST 2004

**Table 4.1**

#### Changes in the central scenario relative to August 2004

Percentage changes on a year earlier, unless otherwise indicated

	2003	2004		2005		2006
	Actual	Projection				
		August 2004	Current	August 2004	Current	Current
<b>Consumer price index (CPI)</b>						
December	5.7	6.1	<b>5.9</b>	4.4	<b>4.4</b>	<b>3.9</b>
Annual average	4.7	6.9	<b>6.8</b>	4.5	<b>4.5</b>	<b>4.2</b>
<b>Economic growth</b>						
External demand (GDP-based)	0.5	1.9	<b>1.9</b>	2.2	<b>2.1</b>	<b>2.2</b>
Household consumption	7.6	2.2	<b>3.3</b>	2.5	<b>1.8</b>	<b>1.9</b>
<i>Memo: Household consumption expenditure</i>	8.1	2.9	<b>3.6</b>	3.0	<b>2.3</b>	<b>2.1</b>
Fixed capital formation	3.4	11.4	<b>9.2</b>	3.9	<b>4.2</b>	<b>3.6</b>
<i>Domestic absorption</i>	5.4	4.4	<b>4.8</b>	2.8	<b>2.5</b>	<b>2.3</b>
Exports	7.6	12.2	<b>14.5</b>	9.5	<b>11.3</b>	<b>11.0</b>
Imports	10.4	12.3	<b>14.8</b>	8.2	<b>9.3</b>	<b>9.2</b>
GDP	3.0	3.8	<b>4.0</b>	3.6	<b>3.7</b>	<b>3.5</b>
<b>Current account deficit</b>						
As a percentage of GDP	9.0	8.8	<b>9.0</b>	8.0	<b>8.6</b>	<b>7.9</b>
EUR billion	6.6	7.2	<b>7.3</b>	7.0	<b>7.7</b>	<b>7.5</b>
<b>General government</b>						
ESA-deficit	6.2	5.4	<b>5.6</b>	4.9 <sup>6</sup>	<b>5.5</b>	<b>4.9</b>
Demand impact <sup>1</sup>	(-0.5)	(-1.7)	<b>(-0.7)</b>	(-0.3) <sup>6</sup>	<b>(+0.3)</b>	<b>(-0.7)<sup>6</sup></b>
<b>Labour market</b>						
National economy total wage inflation <sup>2</sup>	10.9	9.5	<b>8.3</b>	8.5	<b>7.9</b>	<b>7.3</b>
National economy total employment	1.2	0.5	<b>-0.4</b>	0.2	<b>-0.1</b>	<b>0.5</b>
Private sector wage inflation <sup>3</sup>	8.7	10.2	<b>9.4</b>	9.2	<b>8.3</b>	<b>7.8</b>
Private sector unit labour cost <sup>3</sup>	4.4	5.9	<b>5.9</b>	4.8	<b>4.4</b>	<b>2.7</b>
Private sector employment <sup>4</sup>	0.7	1.1	<b>0.0</b>	0.4	<b>0.8</b>	<b>0.8</b>
Household real income <sup>5</sup>	4.3	4.1	<b>3.9</b>	5.4	<b>3.2</b>	<b>2.3</b>

<sup>1</sup> Change in the SNA primary balance, adjusted for changes in payments to private pension funds. Negative values denote tightening.

<sup>2</sup> For the annual average wage inflation in the general government, the thirteenth-month salary for 2004, to be disbursed in January 2005, is included in the 2004 wages.

<sup>3</sup> Weighted average of manufacturing and market services.

<sup>4</sup> CSO Labour Force Survey.

<sup>5</sup> In earlier issues of the Report, household real income was approximated by the addition of the net wage bill and social transfers in cash. From this Report, the primary focus will be on household disposable income.

<sup>6</sup> Assumption based on the Convergence Programme.

The projection for end-2004 consumer prices has been revised down slightly, mainly as an effect of the actual data being more favourable than expected. By contrast, the forecast for December 2005 has remained unchanged, reflecting an interaction between broadly

equal, but contradictory exogenous effects and less volatile real economic trends. Regarding the equilibrium position of the economy, our forecast shows higher deficit now for the budget and also for the current account.

<sup>17</sup> Unless otherwise indicated, our forecasts are based on information available up to 16 November.

### Changes in the main scenario

As exchange rate volatility has been low in the past three months, fluctuations in the exchange rates used in our scenario (EUR/HUF, EUR/USD) have no direct significant influence on the deviation of the current forecast compared to the August Report.

For oil, however, futures prices suggest a considerable shift in the presumed developments in oil prices. We decided against taking the average futures price of oil in October as our basis, as – given the price developments in November – we arrived at the conclusion that the very sharp increases in October broadly reflected transitory effects. As a consequence, we decided to take as a basis the average futures price of the 10 trading days preceding the finalisation of our projection.

Also, it should be noted that, as a characteristic feature of most commodities which are traded on futures markets, the changes triggered in futures prices by fluctuations in the spot price are far more powerful in the short than in the long term. In this particular case, in technical terms such changes may even have a negative (i.e. inflation reducing) primary effect on the annual indices over the longer term, despite the increase in their expected level.

The 2005 budget bill, submitted to Parliament provides for no rise in the excise duty on alcoholic drinks and tobacco next year. As the Banks' earlier projections assumed a gradual rise in the excise duty within the framework of tax harmonisation, this proposal has led us to revise the projection towards lower inflation. However, the assumed effects on regulated prices (energy and public transport prices) of the significant rises in oil prices had an opposite effect on the inflation projection.

### Changes to the real economic projection

The rate of GDP growth 2004 Q2 was in line with the implicit estimations underlying the projection published in the August Report. The structure of growth, however,

revealed that a number of effects considered in our projections only as risks actually materialised. Whereas household consumer demand rose faster than expected, the correction to the salient outturn for 2004 Q1 corporate capital expenditure exceeded our expectations.

As wage inflation data are slightly more favourable than anticipated, our assessment of the corporate sector's short-term wage-setting behaviour has been altered. However, in addition to the revision applied to the assessment of short-term trends due to seasonal adjustment, some relaxation of the assumption related to scarce labour market reserves justifies our forecast of slower wage growth in the long term.

Taken together, our projection for 2004 GDP growth has been revised up slightly as a result of the above-mentioned factors (i.e. a faster increase in household consumption, coupled with slower corporate investment). Our projection for 2005 GDP growth has been raised as a consequence of an expected stronger improvement in net exports.

### Changes to the inflation projection

Inflation in the central projection for December 2004 has been lowered by 0.2 percentage points relative to August, while the projection for end-2005 has been left unchanged. The short-term scenario has been lowered because of slightly better-than-expected 2004 Q3 data, while the longer-term projection has remained unchanged as a result of offsetting effects.

The third-quarter outturn for core inflation was slightly below our expectation, particularly as a consequence of the benign September data. This difference is thought to have been caused by the stronger-than-expected disinflation trend underway since mid-2004, affecting all goods and services used in the measurement of core inflation. In addition to this factor, lower-than-anticipated unprocessed food prices also contributed to the

**Table 4.2**

### Changes in the major assumptions of the central scenario relative to August

	August 2004 projection		Current projection			Change (percentage)	
	2004	2005	2004	2005	2006	2004	2005
EUR/HUF exchange rate (HUF)* (Our assumption **)	253.0 (249.8)	249.8 (249.8)	252.0 (246.8)	246.8 (246.8)	246.8 (246.8)	-0.4 -1.2	-1.2
EUR/USD exchange rate (cent)* (Our assumption ***)	122.7 (122.7)	122.7 (122.7)	123.2 (125.0)	125.0 (125.0)	125.0 (125.0)	0.3 1.8	1.8
Brent oil (US dollar / barrel) Memo: Price of Brent oil (HUF per barrel)	36.1 7429	36.2 7364	38.7 7890	43.9 8676	40.6 8014	7.2 6.2	21.3 17.8

\* Annual average exchange rate. Calculated by using actual data up to 2004 Q3 and assumed October values for later periods.

\*\* Average of the daily closing rates of the last full month immediately preceding the publication of this Report (i.e. in this case October 2004) over the forecast horizon.

\*\*\* Calculated using actual data up to Q3 2004 and assumed early average November futures price path for later periods.

favourable outcome for consumer price inflation. Although the first-round effects of high global oil prices are expected to pass through to domestic inflation over the near term, even these influences, increasing inflation directly, are unlikely to offset the decline caused by the low September outturn during the remainder of the year.

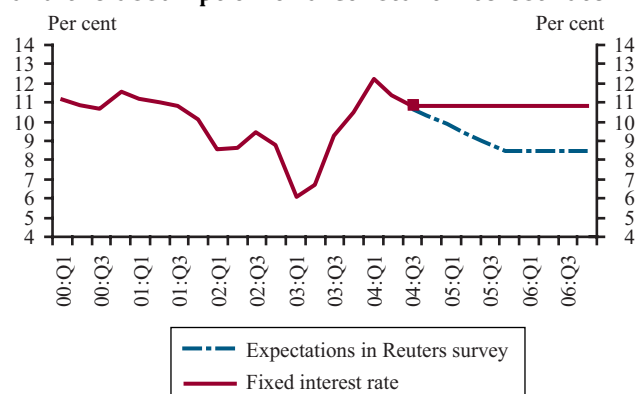
The oil price increases assumed in our central scenario fundamentally affect our projection for 2005. On an annual average, our projection for consumer prices rises should have been raised by 0.5 per cent from the projection published in the previous Report, due to the indirect effects of oil price increases on regulated prices and core inflation. As, however, the 2005 budget bill proposes no rise in the excise duty on alcoholic drinks and tobacco, and inflationary pressure has declined as a result of lower unit wage costs and lower consumption, the price raising effect of this factor has been almost completely offset. Over the longer term, our assumption of a slightly stronger EUR/HUF exchange rate is also a factor contributing to the decline in inflation.

#### 4.1.2 IMPACT OF ALTERNATIVE INTEREST RATE AND EXCHANGE RATE ASSUMPTIONS ON OUR PROJECTION

Alternative interest rate and exchange rate paths, different from our technical assumption, and their possible effects on the inflation projection were discussed in the August Report for the first time. This issue of the Report presents a similar analysis. Our alternative interest rate and exchange rate assumptions have been derived on the basis of the arithmetic average of responses by macroanalysts polled by Reuters in October. (As no survey has been conducted on 2006 to date, we have used the average of forecasts for year-end 2005 in order to estimate the path for 2006.)

**Chart 4.1**

#### Interest rate path based on the Reuters survey and the assumption of a constant interest rate

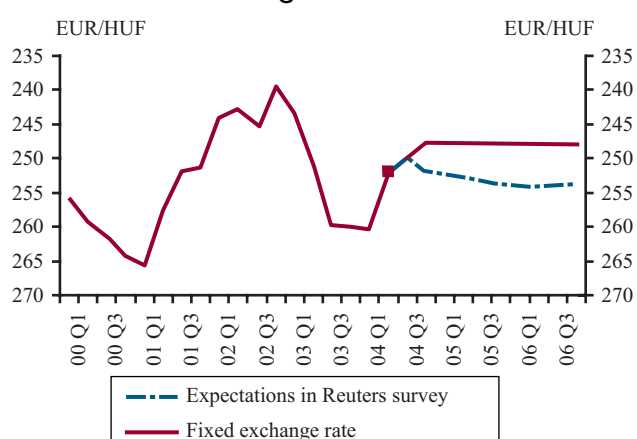


<sup>18</sup> Please, note that the MNB projections cannot fully be compared to the projections of other institutions. Our projections are conditional, whereas other institutions usually present unconditional projections. In addition to the difference between the assessment of current and expected trends, the divergence between the MNB and other institutions may also stem from the disparity of our central scenario from other institutions' projections on variables exogenous from our perspective.

In analysts' consensus forecast, the exchange rate is weaker by more than 2 per cent in 2005 relative to our technical assumption. In addition, analysts questioned by Reuters expect the official interest rate to be nearly 2.5 percentage points lower at year-end 2005 than its current level.

**Chart 4.2**

#### Exchange rate path based on the Reuters survey and the assumption of a constant exchange rate\*



\* Inverted scale.

The combination of these two factors, both pointing to a higher inflation forecast, would raise our forecast of average inflation in 2005 by approximately 0.2 percentage points compared with the central projection.

#### 4.1.3 PROJECTIONS BY THE MNB VERSUS OTHER INSTITUTIONS<sup>18</sup>

Comparing the current projection with those of other institutions and market analysts, it can be seen that our forecast of the cyclical position of the economy and the underlying trends in inflation are essentially in line with the opinions expressed by other analysts and researchers. By contrast, we forecast higher budget and current account deficits relative to average market expectations.

As the September 2004 data have turned out to be more favourable than either the MNB or the market analysts expected, we have lowered our projection of December 2004 consumer prices, as suggested by market consensus, although more slightly. Consequently, our short-term projection is exactly on the average of market forecasts. Our longer-term projection was centrally positioned in the range of market projections already in August. As no change has been made to our projection for end-2005 and the market consensus has not changed much either our current projection corresponds to the market average.

With regard to the growth of Hungary's export markets, international forecasters are more optimistic than the MNB. It should be noted, though, that these institutes update their forecasts only twice a year, which entail slower reaction to the latest information. There is, however, virtually no difference between forecasts for the 2004 and 2005 growth rate of Hungary's main trading partners' GDP. There is a small difference in the figures for 2006, in that the OECD is more optimistic than either the European Commission or the MNB.

Our expectations for GDP growth in 2004 are slightly higher than the market consensus, but our projection of 2005 GDP growth is among the lower ones reviewed.

Our current account deficit projections for both years remain higher than the market consensus; however, it is important to note that market analysts and researchers have revised their forecasts on the period far more than we have, and by now some projections have become even more pessimistic than ours in terms of both 2004 and 2005.

The November Report contains, for the first time, the staff's projection of the 2005 general government deficit. Our projection exceeds the market consensus for 2005. Although our projections for 2004 are also higher than the market average, it should also be noted that market analysts' projections have in the past converged with ours as they have raised the projected deficit as the end of the year draws nearer.

**Table 4.3****MNB's main scenario in comparison to other projections\***

	2004	2005	2006
<b>Consumer price index (CPI) (December on December, percentage)</b>			
MNB	5.9	4.4	3.9
Reuters survey (October 2004) <sup>1</sup>	5.7-6.0-6.3	4.0-4.4-5.0	-
<b>Consumer price index (average annual increase, percentage)</b>			
MNB	6.8	4.5	4.2
Consensus Economics (September 2004) <sup>1</sup>	6.5-6.9-7.0	4.0-4.6-5.0	-
European Commission (October 2004)	6.9	4.6	4.2
IMF (September 2004)	6.9	4.4	-
OECD (October 2004)	7.1	4.9	4.5
Reuters survey (October 2004) <sup>1</sup>	6.5-6.8-6.9	4.3-4.7-5.3	-
World Bank (July 2004)	6.5	4.9	-
<b>GDP (annual growth, percentage)</b>			
MNB	4.0	3.7	3.5
Consensus Economics (September 2004) <sup>1</sup>	3.0-3.8-4.1	2.5-3.8-4.5	-
European Commission (October 2004)	3.9	3.7	3.8
IMF (September 2004)	3.5	3.7	-
OECD (October 2004)	3.8	3.6	3.4
Reuters survey (October 2004) <sup>1</sup>	3.7-3.9-4.1	3.3-4.0-4.4	-
World Bank (July 2004)	3.2	3.7	-
<b>Current account deficit (EUR billion)</b>			
MNB	7.3	7.7	7.5
Consensus Economics (September 2004) <sup>1,2</sup>	4.1-6.5-8.4	3.3-6.2-7.8	-
Reuters survey (October 2004) <sup>1</sup>	6.6-7.0-7.4	6.0-6.8-7.8	-
<b>Current account deficit (as a percentage of GDP)</b>			
MNB	9.0	8.6	7.9
European Commission (October 2004)	8.7	8.5	8.5
IMF (September 2004) <sup>2</sup>	8.8	8.2	-
OECD (October 2004)	9.0	8.3	7.8
World Bank (July 2004)	8.2	8.0	-
<b>General government deficit (according to the ESA-95, as a percentage of GDP)</b>			
MNB	5.6	5.5	4.9 <sup>3</sup>
Consensus Economics (September 2004) <sup>1</sup>	4.5-5.2-5.6	3.5-4.7-5.5	-
European Commission (October 2004)	5.5	5.2	4.7
OECD (October 2004)	5.6	5.1	4.7
Reuters survey (October 2004) <sup>1</sup>	5.0-5.4-5.9	4.5-4.9-6.2	-
World Bank (July 2004)	5.2	4.6	-
<b>Change in Hungary's export market</b>			
MNB	5.1	5.8	6.3
European Commission (October 2004)	6.3	6.6	6.5
OECD (October 2004)	6.2	7.1	7.6
IMF (September 2004)	6.4	5.8	-
<b>Change in GDP of Hungary's foreign trade partners</b>			
MNB	1.9	2.1	2.2
European Commission (October 2004)	2.2	2.0	2.1
OECD (October 2004)	2.0	2.1	2.5
IMF (September 2004)	2.1	2.0	-

\* MNB projections are conditional; and thus cannot be directly compared to others' projections.

<sup>1</sup> For the Reuters and the Consensus Economics Surveys we show the range of forecasts by indicating the minimum and maximum values in addition to the averages.

<sup>2</sup> As in 'Eastern Europe Consensus Forecasts' by Consensus Economics Inc. (London) the current account projections are given in USD, they have been converted at the annual average of a conditional EUR/USD exchange rate applied in this Report.

<sup>3</sup> Assumption based on the Convergence Programme.

Sources: Consensus Economics Inc. (London) Eastern Europe Consensus Forecasts (September 20, 2004); European Commission Economic Forecasts, Autumn 2004; IMF World Economic Outlook (September 2004); OECD Economic Outlook (October 2004); Reuters survey October 2004; World Bank EU-8 Quarterly Economic Report (July 2004).

## 4.2 DEVELOPMENTS IN GENERAL GOVERNMENT DEFICIT INDICATORS

The central projection indicates that unless further measures are taken to reduce the deficit neither the 2004 nor the 2005 deficit targets are likely to be met. Conditional to our assumptions, the ESA deficit is likely to stand at 5.6 per cent of GDP this year and at 5.5 per cent next year.

In spite of the very short horizon, the 2004 central projection implies significant uncertainty. Some potential, not yet fully detailed government measures amounting to 0.4 per cent of GDP may cause deviations from our 2004 central projection. The deficit may be lower than our central projection if steps taken to tighten control over VAT refunds are implemented in the case of a wide range of tax-payers and if such measures put a brake on refunds well beyond the legal deadlines. On the other hand, a higher ESA deficit may materialise if no government measures are taken to change the expenditure side before the end of this year in order to respond to apparently higher spending by budgetary units. In both cases, temporary measures increase uncertainties of the central projections by switching between certain components of the deficit between this year and next year without any changes in the underlying developments. If the uncertainties of these measures are taken into account, more accurate information about the ESA deficit will be

available from next March because the 'fiscal year in accrual accounting' will be completed in late February.

Our 2005 projection is based on the amended tax legislation approved by Parliament on 8 November and the tax legislation adopted already and budget bills submitted to Parliament. Although the budget bill may undergo considerable modification before it is passed, the following analysis is based on the conditions prevailing at the time of submission.<sup>19</sup>

As there is no approved budget or draft budget for 2006, the central projection is based on the assumption that, as announced by the Government, the ESA deficit will decline by 0.6 per cent compared to the deficit in our central projection in 2005.

It should be noted that, in contrast with previous announcements, the 2003 general government deficit on an ESA basis has been raised to -6.2 per cent. That is a 0.3 percentage point increase from the outturn available at the time of the August Report. There are fundamentally two reasons underlying this difference. First, the deficit of the local government sub-sector considerably exceeded preliminary data. Second, settlement of the Russian debt raised the ESA deficit significantly.

**Table 4.4**

### Fiscal indicators

*As a percentage of GDP*

	2003 Actual/ estimated	2004 Central projection	2005 Assumption	2006
<b>1) GFS deficit</b>	-5.9	-7.0	-5.4	-4.7
2) ESA adjustments	-0.3	+1.4	-0.1	-0.2
<b>3) ESA deficit(1+2)</b>	-6.2	-5.6	-5.5	-4.9
4) Adjustment for temporary items	-0.9	-1.0	-0.4	-0.3
5) Quasi-fiscal expenditure	-1.1	-1.3	-2.2	-2.0
<b>6) Augmented (SNA) deficit (3+4+5)</b>	-8.2	-7.9	-8.1	-7.2
7) Augmented (SNA) primary balance	-4.4	-3.8	-4.1	-3.4
<b>8) Fiscal demand impact*</b>	-0.5	-0.7	+0.3	-0.7

\* *Changes in the augmented (SNA) primary balance, adjusted for changes in payments to private pension funds. Negative values denote contraction in fiscal demand.*

<sup>19</sup> This chapter is based on information available up to 11 November 2004.

Assumptions were made on the accrual-based adjustment between the ESA and GFS balances in 2004 and 2005. As a baseline, the adjustments announced by the Ministry of Finance were applied for both years (+1.4 per cent of GDP in 2004 and -0.1 per cent in 2005). For the purposes of the 2006 conditional projection, an estimate was made on the basis of past adjustments (-0.2 per cent). The adjustment improves the 2004 ESA balance to a particularly great degree. This entails certain methodological risks, which will only be discovered during the course of next year.

#### 4.2.1 DETAILS OF THE FISCAL BALANCE EXPECTED FOR 2004

Our central projection of the cash-based (GFS) balance of general government assumes a 0.4 per cent higher deficit as a percentage of GDP than in the August Report. The underlying reasons for this higher deficit include lower-than-expected primary revenue and developments in primary expenditure in 2004 Q3.

Our central projection actually forecasts the deficit levels that follow from macro-economic and fiscal developments. Consequently, the expected effects of certain not yet detailed discretionary measures to be undertaken by the Government can only partially be incorporated in our central projection. Such measures include the order to tighten controls over VAT refunds related to the imports of corporations.<sup>20</sup>

The full effect of this measure may amount to 0.5 percentage point of GDP, i.e. under an extreme scenario, the slowdown or the temporary suspension of VAT refunding may improve the 2004 GFS-based deficit by this amount. Only as much of the impact as apparent on the basis of the data made available before 11 November by the Treasury has been included in our central projection (0.1 per cent of GDP). We should mention the fact that this measure will not leave the 2005 cash-based deficit unaffected, as the VAT refunds carried forward to next year will reduce the net 2005 cash-based VAT revenues by an identical amount. This measure modifies the accrual-based 2004 deficit-account only if the 45-day period of VAT refunds is not restored by end of February 2005.

On the revenue side of the central budget, we expect lower net cash-based revenues than forecast in the August Report. In 2004 Q3, net VAT revenues fell short of our expectations: in addition to a slower-than-expected increase in gross VAT revenues, VAT refunds rose faster than expected, though a slowdown in VAT refunds was already apparent in September and October 2004.

Most of the revenue shortfalls resulting from the modification of our forecast on VAT revenues in the central projection are offset by a rise in the payment obligations of business organisations of the government sector and public corporations, as a result of new government measures adopted after August 2004.

On the expenditure side, we apply the Ministry's projections for each expenditure estimate over which the fiscal authorities retain certain control. As there is no essential change in our approach, our forecast of expenditures within this scope relies on the projections of the Ministry of Finance updated in October 2004.

However, on the basis of data from the first three quarters of 2004, we conclude that in 2004 tension has arisen on the expenditure side in excess of 0.5 per cent of GDP of the budget chapters and budgetary units. As it is not clear when and to what extent additional expenditures appear in the deficit, most of them are included among risks. (The annual estimates have been repeatedly exceeded in the past too, see box text.) 2004 Q3 developments in the expenditure estimates suggest that the effects of the spring measures will be felt with a delay, and that effective expenditure cuts must be implemented in Q4, if at all. Overall, within the primary expenditure of the central budget, our current central projection forecasts actual expenditure to be 0.2 per cent higher relative to GDP than in the August Report.

As a result of changes in the macro-economic and fiscal developments, we have revised up our projection for the deficit of social security funds in the social security sub-sector relative to the August Report. In particular, total receipts of social security contributions are expected to be lower than the projection by the Ministry of Finance updated in September 2004.

We have prepared no independent estimate for the accrual-based adjustment between the GFS and the ESA deficits, owing to the high degree of uncertainty characterising the year of Hungary's EU accession. We accept the difference between the accrual-based (GFS) deficit forecast by the Ministry of Finance and the ESA deficit targeted by the Ministry of Finance (GFS) deficit, 1.4 per cent of GDP, as the expected accrual-based adjustment. It should be noted, however, that regarding the 2003 ESA deficit, compared to preliminary data, the CSO modified accrual-based adjustment between the cash- and accrual-based deficits, and this risk also applies to adjustments to accounts in 2004 (see the following section).

Our projection for **the 2004 fiscal demand impact** has been considerably revised relative to the August Report,

<sup>20</sup> On 19 October 2004, the Ministry of Finance announced that the Minister had ordered the tax authority to 'perform an item-by-item check of each VAT return submitted by tax-payers with a European Union tax ID before VAT is refunded, with the help of control information received from the Member States of the community'. For the full text of the announcement, please see the website of the Ministry of Finance.

in which we assumed that the government would lower aggregate demand by 1.7 per cent of GDP. In our current estimate, the contraction of government demand may amount to around 0.7 per cent of GDP in 2004. This means that the fiscal path we are currently estimating for 2004 is 1 per cent of GDP looser than the projection published in the August Report. Changes in our estimate (the indicator of the fiscal demand impact has been revised down from -1.7 per cent to -0.7 per cent) are attributable to several underlying effects. The 2003 fiscal demand impact also changed considerably: first, we allowed for contraction amounting to 0.1 per cent of GDP, which we then modified to 0.5 per cent. The reason for this is that, relying on the data made available in the meantime, we provided a more precise estimate for 2003 quasi-fiscal expenditure. Thus, the base effect added 0.4 percentage point to the revision of our 2004 projection. Our projection for the 2004 GFS deficit is for a deficit that is 0.4 per cent higher than anticipated in the August Report. In the primary balance this entails a 0.3 per cent deterioration, i.e. the change in our cash-based government deficit projection eases fiscal demand to this extent. Increase in quasi-fiscal activities, especially the advance payment of the agricultural subsidies related to both EU and national funds, further eases fiscal demand, while quasi-fiscal investment activity will be more moderate than we had assumed. Thus, overall, net quasi-fiscal expenditure that we have taken into consideration may increase demand by 0.3 per cent of GDP in the economy.

#### 4.2.2 UNCERTAINTY OF THE 2004 FORECAST

In this section, we present all of the risk factors which are attributable to autonomous macroeconomic and fis-

cal developments, but which our central projection cannot allow for when we calculate the main scenario. The following table reveals that an asymmetric risk domain can be assigned to the 5.6 per cent GDP-proportionate ESA deficit assumed in our central projection. Based on our forecast, the Government's modified projection for the 2004 GFS and ESA deficits can be achieved only if spending by budgetary units and chapters is kept under full control for the rest of the year and, in comparison to the delays seen as of 11 November 2004, the tax authority further improves the net VAT revenues of the budget by delaying VAT refunds. With regard to the methodological bridge between the 2004 GFS and the ESA accounts, we anticipate an upward one-way risk approximating 0.5 per cent of GDP to the ESA deficit.

In comparison to our central projection, the tightening of tax controls related to imports may improve the 2004 GFS-based balance by 0.4 percentage points of GDP. The effects of this measure could already be seen in early November: VAT refunds slowed down considerably. This measure will actually decrease the ESA deficit only if its effects last until late February, which can first be assessed only in March<sup>21</sup>.

As indicated in our central projection, during the year spending by the budget chapters and budgetary units invariably exceeded the Ministry of Finance's annual expenditure appropriation on a time-proportionate basis. According to our estimates, expenditure overruns by budgetary units generated a budget factor exceeding HUF 100 billion during the year. In our opinion, it will be more difficult to hold expenditure overruns in check by discretionary measures than it used to be, because overspending follows from the fact that a con-

**Table 4.5**

#### Factors of uncertainty in the GFS and ESA deficit projection for 2004

As a per cent of GDP

Central projection of GFS deficit: -7.0 per cent			
Slowdown in VAT refunds due to stricter checks by the APEH	0.4	Higher expenditure overruns incurred by budgetary units and local governments	-0.4
Delay in implementation of investment projects	0.1	Higher-than-expected increase in some items of open-end expenditure	-0.1
Extra revenues in corporate tax	0.1	Lower-than-expected direct tax revenues	-0.1
Higher surplus in extra-budgetary funds than expected in the central projection (Research Fund)	0.1		
<b>GFS deficit under a best case scenario</b>	<b>-6.3</b>	<b>GFS deficit under a worst case scenario</b>	<b>-7.6</b>
GFS – ESA bridge assumption: +1.4			
		Uncertainty surrounding the methodological bridge between the GFS and ESA deficits	-0.5
<b>ESA-deficit under a best case scenario</b>	<b>-4.9</b>	<b>ESA deficit under a worst case scenario</b>	<b>-6.7</b>

<sup>21</sup> According to the adapted cash-adjusted method of the accrual accounting the revenues paid in January and the refunds paid in January-February are adjusted backwards to the previous year. This is in line with the principles of the Eurostat. This means that at the time of the first announcement of the preliminary ESA deficit, which is expected to take place in January, the VAT figures of January-February will not be available. This uncertainty will disappear only later, when the CSO reports preliminary ESA figures for 2004 (probably in March 2005). Thus, the first announcement of the 2004 deficit probably in January will not be necessarily fully informative.



siderable portion of the carry-over funds from previous years is actually encumbered by payment commitments. Therefore, unless further measures aimed at

reducing expenditure are taken, budgetary units are likely to generate excess expenditure amounting to 0.4 per cent of GDP in 2004 or 2005.

#### Box 4.1

##### Past experience with expenditure overruns by budgetary units

In the 1980s, budgetary units were relieved of the previous tightly restrictive budgetary system. The Government wished to alleviate the permanent funding shortages by allowing greater institutional independence. Increased institutional independence served the purpose of pushing institutions to rely on less central funds in performing their tasks. This resulted in loose fiscal discipline.

Expenditure of budgetary units and chapters (ministries and institutions under their control) has exceeded the estimates approved by Parliament every single year. The planning circulars issued year after year kept highlighting the tasks and the institutional systems of the individual chapters from the point of view of effi-

#### Chart 4.3

##### Expenditure overruns by budgetary units and budget chapters: difference between original budget versus closing accounts



ciency and economy, and the establishment of the required legislative framework in order to align duties with the available funds. As no decisions were in effect made, the problems arising from the lack of a solid

foundation in the budget entailed the need for across-the-board adjustments and reduced the efficiency of implementation.

The limits were exceeded primarily in the cases of open-ended estimates (transfers to non-profit organisations, increased normative subsidy to church institutions, social and educational contributions in kind, compensations, etc.). The reasons for significant excess expenditure included a major interim pay rise to civil servants in 2001 and a 50 per cent increase in public servants' wages in 2002 Q4, covered by the Government from extra revenues at that time. Simultaneously, the already substantially increased carry-over funds in investment and subsidy estimates continued to accumulate.

Excess spending was covered from additional revenues, central reserves and previously accumulated carry-over funds. Budgetary units' significantly increased expenditure led to a larger-than-planned deficit.

In order to keep the budget within the estimates, the Government decided to take measures to cut expenditure and freeze carry-overs in the course of 2004. It remains to be seen, however, whether these decisions can be carried out—whether or not this move was successful will only be seen in December 2004.

The risk posed by the bridge between the GFS and ESA deficits is that it is still uncertain how CSO and EUROSTAT will handle factoring related to agricultural subsidies. Moreover, it is also uncertain whether the accrual-basis adjustment of the 13th-month salary payable in the public sector will actually be equal to the amount anticipated by the Ministry of Finance. Overall, such methodology-related risk is estimated to amount to 0.5 per cent of GDP, which means that under an unfavourable scenario, correction of the 2004 cash-based deficit will be a mere 1 per cent of GDP. As the 2004 ESA deficit will be announced officially in the autumn of 2005, following a so-called fiscal notification of the preliminary data, these uncertainties will only be treated in the longer run.

### 4.2.3 FISCAL BALANCE EXPECTED FOR 2005

As there is no approved budget for 2005, our central projection is even more conditional than usual. It is based on the modified tax bills approved in November and the assumption that the budget bill submitted to the Parliament will be passed with its original contents. The central projection is governed by the principle that we accept the projections of the Ministry of Finance for each expenditure appropriation item over which fiscal authorities have some control.

Announced simultaneously with the submission of the budget bill, the net HUF 100 billion expenditure reserve set aside is taken into account in our projection as definitively frozen, of which, however, only approximately HUF 80 billion is considered as effective. It follows from our rule-based projection that blocking the portion of personal income tax revenue due to local governments and assigned to them by the central government cannot be considered as effective because local governments do not necessarily adjust to shrinking central subsidies.

Under our main scenario, unless further government measures are taken, in 2005 the general government cash-based deficit is likely to exceed the amount specified in the budget bill by near 0.8 per cent of GDP.

**Table 4.6**

#### Differences between our projection and the budget bill

*Cash-based, as a per cent of GDP*

	Difference from the draft budget (per cent)
<b>I. Revenues (1+2+3)</b>	<b>-0.44</b>
1) Direct taxes	-0.37
2) Indirect taxes	-0.17
3) Other revenues	+0.10
<b>II. Primary expenditure (4+5)</b>	<b>+0.03</b>
4) Primary expenditures	-0.33
5) Expenditure reserves (freezes)	+0.36
<b>Primary balance (I+II)</b>	<b>-0.41</b>
6) Interest balance	-0.29
7) Technical effects of differences in the GDP projection	-0.05
<b>Differences total (I+II+6+7)</b>	<b>-0.75</b>

Regarding direct taxes, social security revenues in particular are assumed to be lower than targeted in the budget bill. The difference is due primarily to the fact that considerably lower revenues are expected to be raised in this tax category in 2004 already.

In respect of indirect taxes, our projection for VAT revenues is 0.2 percentage point of GDP lower than specified in the submitted draft budget. One fundamental reason for this is the change in the estimate of the base

period VAT revenues: we expect lower net VAT revenues in 2004 than forecast by the Ministry of Finance at the time of preparing the draft budget.

On the expenditure side, expenditure overruns by local governments (e.g. capital expenditure and purchase of goods and services) and the social security sub-sector (e.g. old-age pensions and pharmaceuticals) are expected. In the case of old-age pensions, the difference stems from the fact that our macro-economic projection assumes higher wage growth than the Ministry of Finance. In consequence, our index for the rise in old-age pensions in 2005 is 1.5 percentage points higher than that specified in the budget bill.

We have accepted all of the items of the expenditure reserve set aside by the government which refer to the freezing some of the expenditure-side appropriations. We considered some 80 per cent of the measure as effective, and included this in the main scenario as a deficit reducing factor.

Our net interest expenditure projection is significantly higher than what is set forth in the draft Budget Act (by some 0.3 per cent of GDP). In compliance with our forecasting rules, unchanged monetary policy is assumed over the entire forecast horizon. Accordingly, our interest projection is based on the forward yield curve effective at the time of closing our projection calculations, with the financing plan of ÁKK (the Government Debt Management Agency) taken into consideration.

In summary, using a different decomposition, the central government deficit anticipated in our main scenario exceeds the draft budget projection by 0.25 per cent of GDP. Our central projection for the deficit of the social security sub-sector is 0.3 per cent higher as a proportion of GDP than specified in the budget bill. Our annual central scenario projects a deficit generated by local governments and extra-budgetary funds exceeding that specified in the budget bill by 0.2 per cent of GDP.

The expenditure tension of central budgetary units is discussed in detail in the section on 2004. Since at the moment it is not clear which fiscal year's (2004 or 2005) account will be debited by the amount of the accumulated potential of expenditure overruns, this item is not included in our central scenario; rather, this item is one of the uncertainties (pointing towards a higher 2005 deficit) surrounding our 2005 projection.

Based on the projection the MNB provides for macro-economic growth, GDP at current prices in 2005 is expected to be approximately HUF 230 billion lower than assumed by the Ministry of Finance at the time of drafting the budget. As a result of this difference, the nominal cash-based deficit forecast in the budget bill generates a higher, -4.7 per cent deficit rate in its own right.

Our estimate for the **fiscal demand impact** indicates 0.3 per cent of GDP demand expansion effect. The reason for the considerable relaxation in fiscal demand is that the overwhelming majority of government fixed investment implemented under PPP (Public-Private Partnerships) schemes are recorded in ESA and GFS deficit categories only in part or not at all. The total amount of investment expenditure implemented under PPP schemes is likely to be close to HUF 300 billion in 2005, i.e. 1.4 per cent of GDP next year. (As our earlier projections already contained some estimation of public investment, the effects of the increase in PPP-type investment lead to only minor revision in our demand impact forecast.)

#### **An alternative presentation of our projection for 2005: a comparison of previously identified determinations and measures incorporated in tax and budget bills**

The normative assumption for 2005 was augmented by a risk-based projection in the August Report, as there was no specific budget proposal or bill at that time. On the basis of trends and well-known determinations and

the assumption of unchanged fiscal policy we identified a risk that the deficit may be higher by more than 1 per cent of GDP compared to 2004.

The effects of several deficit-increasing determinations were offset by the approved changes in the tax bills in November and the proposed measures incorporated into the budget bill. Hence, our central projection contains an improvement in the balance for 2005.

Table 4.7 shows how the effects of determinations were corrected by the government. The table gives a summary of the most important measures: some previous decisions were annulled (delaying the reduction of the lump-sum health contribution and the implementation of some NATO requirements), introduction of new measures (limits on the PIT tax benefits) and outsourcing public investment (mainly road construction) into PPP schemes (see the macro-economic considerations of PPPs in Chapter 4.4). These measures offset the effect of the higher base year deficit, which would have increased the deficit in itself.

**Table 4.7**

#### **Major measures of the government compared to the previous determinations in order to decrease deficit in 2005\***

	<b>Determinations were known in August</b>	<b>Effects of measures on determinations and deficit**</b>
<b>Revenues</b>		
Drop in lump-sum health contributions	Significant shortfall in tax revenues	<b>Change in tax bill: higher revenues (+)</b>
Shortfall in customs revenues	Reduction in tax revenues	Unchanged
VAT revenues	Above neutral	<b>Change in tax bill: higher revenues (+)</b>
Excise duties	Neutral	<b>Change in tax bill: lower revenues (-)</b>
Social security contributions	Slightly above neutral	Unchanged
Corporate taxes	Neutral	Unchanged
Personal income tax	Neutral	<b>Change in tax bill: lower revenues (-)</b>
Other taxes payable	Neutral	<b>Change in tax bill: higher revenues (+)</b>
Own revenues by local governments	Neutral	Unchanged
<b>Expenditures</b>		
NATO liabilities	Higher than neutral	<b>Budget proposal: lower expenditures (+)</b>
Increase in the 13th-month pension	Higher than neutral	Unchanged
Effects of EU-funds	Higher than neutral	Unchanged
Investment cycle of local governments	Neutral	Unchanged
The effects of 13th-month wage payment on wage-related expenditure	Higher than neutral	Unchanged
Subsidies to budgetary units	Neutral	<b>Budget proposal: lower expenditures (+)</b>
Motorway construction	Known determinations	<b>Budget proposal: lower on-budget expenditures (due to PPP) (+)</b>
Pensions (rises in survivor's pension)	Neutral	Unchanged
Expenditure related to pharmaceuticals	Lower than neutral	Unchanged
Expenditure freeze	n/a	<b>Budget proposal: lower expenditures (+)</b>
<b>Base (2004 deficit)</b>	n/a	Towards higher deficit (-)
<b>Combined impact on deficit in 2005 compared to 2004:</b>	<b>Deficit increases</b>	<b>Deficit drops slightly</b>

Based on the information available on 11 November.

\* Neutral: remains stable (i.e. equal to previous year's figure) as a percentage of GDP.

\*\* Bold: differences between previous determinations and new measures incorporated into tax and budget bills, their effects on the budget balance are between brackets ("+" indicates a deficit reduction).

In the risk-based projection published in August 2004, a reduction in lump-sum health contributions was taken into account, as usual, from the beginning of 2005, similarly to changes in other tax categories. Now the reduction is planned to start late in 2005.

In terms of personal income tax the current central projection is based on a quantification of the approved amendments of the tax legislation, implying a drop in tax revenues compared to the neutral case.

With regard to excise duties, we assumed valorisation of tax items. In the case of tobacco, we considered the rise in excise duties in line with the 2005 inflation projection. The tax legislation adopted contains no such increase in excise duty next year, implying lower revenue.

For other taxes we assumed a GDP-proportionate increase in revenues in our August projection, whereas our current scenario quantifies the effects of approved amendments in the tax legislation, therefore a higher than GDP-proportionate increase is expected in the case of some of these taxes.

On the expenditure side, the risk-based August projection reckoned with a GDP-proportionate increase in the transfers paid to budgetary units, because at that time the draft budget had not been disclosed.

Based on the agreement concluded with NATO, our risk-based August projection assumed a rise in defence expenditure in excess of the rate of GDP-growth, as Hungary failed to meet the long-term obligations in 2003. On a rule basis, our August projection assumed that the payment liability undertaken to NATO as a percentage of the prevalent GDP would be fully met. The November 2004 central projection specifies this expenditure item in line with the submitted draft budget. According to the opinion of the State Audit Office, disclosed in October 2004, the level of defence spending remains considerably below the obligation undertaken in the agreement concluded with NATO.<sup>22</sup>

#### 4.2.4 UNCERTAINTY OF THE 2005 FORECAST

Our risk assessment for 2005 contains more uncertainties than usual. One is that the bills submitted to Parliament are still subject to change before they are passed, which is an important risk factor. Another is that the 2004 base is still unknown, and the uncertainties surrounding our 2004 projections are rather significant in terms of both revenues and expenditure. Third, risks to 2005 macro-economic developments carry further uncertainty. Of the risks likely to materialise in 2005,

major ones include those surrounding expenditure. Overall, there is a significant risk towards a higher-than-forecast 5.5 per cent of GDP ESA deficit in 2005.

Although we see no quantifiable risk to the adjustment to methodological bridge between GFS and ESA deficits as forecast by the Ministry of Finance, it should be noted that in the case of quasi-fiscal expenditure, the risk of recording it above the line (i.e. as a deficit-generating transaction) still applies. Such risks are especially significant if certain capital expenditure items are not spent in a PPP scheme, and government spending takes the form of deferred payment. This is a risk towards a higher deficit, though it will be uncovered only in the longer run due to the characteristics of ESA statistics.

The deviations in 2005 macro-economic developments from the central projection alone indicate a symmetric distribution of uncertainty around next year's fiscal balance. In our estimate, the changes in macro-economic developments may modify the 2005 general government deficit by 0.2 per cent of GDP in comparison to our central projection.

The 2004 developments in VAT revenues pose considerable risks to the projection of the net VAT revenues in 2005. VAT revenues, after dropping in 2004 due to Hungary's accession to the European Union, must also return to normal on a cash basis in 2005 so that the revenues assumed in our central scenario can materialise. Even if the one-off technical effects of accession are disregarded, net 2004 VAT revenues fell short of our expectations. In our central scenario, we assume that – apart from those caused by accession effects – at least half the amount of the 2004 shortfall in VAT revenues will not be repeated in 2005. As our projection for the 2005 VAT revenues is included as a central projection, the distribution of risks is symmetrical.

Tightening VAT refund control in 2004 increases the risk of meeting the 2005 net VAT revenue target as the refunds will be carried forward from 2004 to the debit of the 2005 net VAT revenues. If next year more stringent checks by the tax authority result in a more lasting extension of the 45-day VAT refund period (and this procedure will not be completed in February 2005), this will entail a rise in the ESA deficit.

The risk posed by expenditure overruns by budgetary units also depends, for the most part, on actual 2004 expenditures. In order to achieve the 2004 deficit target, fiscal authorities have some leeway to take discretionary measures to stop overspending in the central budget through assigning higher amounts of carry-over funds to lower 2004 expenditure. Under such a sce-

<sup>22</sup> According to the State Audit Office the difference in defence expenditure amounts to approximately HUF 100 billion, see p. 62 in the Appendix to the State Audit Office's Report on the On-Site Inspection of the 2005 Draft Budget of the Republic of Hungary.

nario, the fiscal authorities would deliberately carry the negative effects of this year's developments forward to the next. In this case, the risk of exceeding the 2005 expenditure appropriations by at least 0.4 per cent of GDP would significantly increase.

Local governments' expenditure overruns can be attributed to the effects of the election cycle. Usually, in the year before local elections, their investment activity increases, engendering a risk of higher local government deficit in 2005.

Overall, there is a significant risk of a higher-than-projected deficit in 2005.

#### 4.2.5 FISCAL BALANCE EXPECTED FOR 2006 AND RELATED UNCERTAINTY

As there is no approved budget or detailed budget bill for 2006, we have prepared a normative (conditional) and a risk-based projection for 2006 as in the previous Report for 2005. The purpose of the risk-based projection is to use current determinants in outlining an alternative path that shows developments in the general government balance over a 2-year horizon without further fiscal policy measures (especially the 2006 budget) taken. The conditional projection constitutes the central projection in the Report, while the difference between our risk-based projection and the normative path represents the risk to reduction in the deficit (0.6 per cent of GDP) along the targeted normative path.

The normative path is based on the assumption that, in line with the government's announcements of the fiscal path, the ESA deficit will decline by 0.6 percentage points per year in 2006.<sup>23</sup>

Already legislated items, other determinations and past trends, detailed below, imply a rise of roughly 1 per cent in the deficit in 2006. The difference between the scenario and the government plan of a 0.6 per cent deficit reduction indicates that further measures amounting to 1.5 per cent of GDP will probably be needed to improve the fiscal balance in 2006.

Our risk-based scenario assumes complete termination of lump sum health contributions from early 2006, and payment of the full 13th-month pension.

In the case of non-tax revenues we assume a decrease as a percentage of GDP. Extra revenue from the disposal of real assets owned by the Treasury and the state, and payments from some state-owned enterprises is not assumed to be achieved again, because the stock of real assets which can be sold at a market price is significantly diminished and further receipts from those state-owned enterprises would result in insufficient funds for undertaking necessary investment.

In terms of the GFS balance, the assumed risk-based path reckons with an increase in fixed investment amounting to 0.4 per cent of GDP, owing to an agreement concluded with the European Union on the additionality of investment expenditure.<sup>24</sup> Under our calculations, the fixed investment recognised in the 2005 budget balance does not guarantee the implementation of the above-mentioned agreement, and therefore extra investment expenditure amounting to 0.4 per cent of GDP will need to be appropriated on the expenditure side of the 2006 budget. In view of the overall effects of the 2005 measures (and especially in the case of public wage expenditure), subsidies paid to budget institutions will increase slower than the GDP-proportionate level in 2006.

**Table 4.8**

#### Expected developments in fiscal indicators in 2006

*As a per cent of GDP*

Deficit indicator	1	2	1-2
	Risk-based projection	Central projection (assumption)	Risk
GFS deficit	-6.2	-4.7	-1.5
ESA deficit	-6.4	-4.9	
Augmented (SNA) deficit	-8.7	-7.2	

<sup>23</sup> The normative (conditional) 2006 path is calculated with a demand impact of -0.7 per cent, since the decline in the interest balance contributes to reduction in deficit in a similar amount as does the technical adjustment between the GFS and ESA deficit settlements (i.e. the ESA deficit would exceed the GFS balance by -0.2 per cent as a technical assumption).

<sup>24</sup> Pursuant to the agreement, in the specified sectors (environment protection, transport etc.) Hungary must achieve the minimum level required as expenditures relative to GDP on the average of three years. The purpose of the agreement is to ensure that, rather than relying on EU funds or reducing their expenditure to perform budget adjustment, the new member states actually use up the available extra EU resources as additional sources for programmes.

Table 4.9

## Major factors in the development of a risk-based factor for 2006

	Assumption applied in the risk scenario	Impact on budget item (relative to GDP)*
<b>Revenues</b>		
Reduction lump sum health contributions	Tax cancelled as of early 2006	Lower than neutral
Shortfall in customs revenues	Increases in line with the tax base	Neutral
VAT revenues	Increases in line with the tax base (consumption)	Lower than neutral
Excise duties	Increases in line with the tax base	Neutral
Social security contributions	Increases in line with the tax base	Neutral
Corporate taxes	Increases in line with the tax base	Neutral
Personal income tax	Increases in line with the tax base (household income)	Lower than neutral
Other tax revenues	Long-term average	Neutral
Other non-tax revenues	Returns to long-term average	Lower than neutral
Own revenues by local governments	As per cycle	Lower than neutral
<b>Expenditure</b>		
NATO obligations	As per obligation	Considerably higher than neutral
Increase in 13th-month pension	An additional week's pension	Higher than neutral
Pension indexation	According to the Swiss index	Lower than neutral
Effects of EU-funds	Expected on the basis of agreement	Higher than neutral
Investment cycle of local governments	As per cycle	Higher than neutral
Transfers to budgetary units	Adjusted GDP-proportionate increase	Lower than neutral
Public fixed investment	Effects of obligations undertaken in an agreement with the EU	Considerably higher than neutral
Expenditure related to pharmaceuticals	As per 2004 contract	Lower than neutral
<b>Combined impact on deficit in 2005 compared to 2004:</b>		<b>Increase in the deficit</b>

\* Neutral: remains stable (i.e. equal to the previous year's figure) as a percentage of GDP.

### 4.3 DEVELOPMENTS IN EXTERNAL BALANCE

The current account deficit reached EUR 2.1 billion in Q2, while the surplus in the capital account balance amounted to EUR 80 million. Thus, compared to the preceding quarter, whole-economy external financing requirement grew by 0.5 percentage point to 10.3 per cent as a proportion of GDP. This is slightly higher than assumed in the previous Report.

The increased borrowing requirement is attributable primarily to a rise in the financing requirement of consolidated general government and related quasi-fiscal activities. Based on available data for the first nine months, contrary to our earlier expectations, the general government borrowing requirement in a broader sense is unlikely to decline. Accordingly, it is unlikely to contribute to reduction in the external financing requirement.

Households' net financial savings rose faster than expected in Q2, with its seasonally adjusted value, following a historical trough last year, approximating 2 per cent of GDP in 2004 H1. Following tightening of the subsidised housing finance scheme at year-end 2003, in line with our expectations, the number of new housing loan agreements dropped further in Q2. In contrast to a slower lending in subsidised housing loans, the portfolio of foreign currency loans is growing vigorously. In addition to the higher-than-expected financial savings of households, the expansion in consumption also exceeded what had been projected, suggesting a rise in the sector's disposable income.

The corporate sector's borrowing requirement was effected by a number of specific factors related to

Hungary's EU accession in Q2. The postponement of the deadline for the payment of VAT on imports as a one-off transfer added to sectoral income. At the same time, however, stockbuilding prior to accession led to an unjustified level of capital formation expenditure. With one-off effects excluded, owing to increased corporate fixed investment activity, the sector's borrowing requirement seems to be rising at a faster-than-expected rate in 2004, compared to low levels in the preceding two years.

#### Developments from 2004 to 2006

Under our projection, in 2004 whole-economy borrowing requirement will only slightly exceed earlier expectations. The GDP-proportionate current account deficit is likely to stand at last year's approximately 9 per cent, representing a deficit of EUR 7.3 billion. In 2005, the GDP-proportionate external borrowing requirement may decrease by 0.8 percentage point to 7.7 per cent. As no loss of VAT on imports, equal to 1 per cent of GDP, will materialise in 2005, the general government borrowing requirement will fall by 0.5 percentage point despite a 0.5-percentage point expansion in demand. Owing to the expected slowdown in GDP-proportionate corporate capital formation, the corporate sector's borrowing requirement is not expected to increase. Households' net financial savings, by contrast, may continue to rise. The external financing requirement may further decline in 2006. However, a pre-condition for this is that the general government borrowing requirement should decrease according to the government plans. Due to the determinations in government bud-

**Table 4.10**

#### Current account and net lending of the economic sectors

*As a per cent of GDP*

	2001	2002	2003	2004	2005	2006
	Estimate			Projection		
I. General government	-5.0	-9.2	-8.5	-8.5	-8.0	-7.3
II. Private sector (=I+2)	-0.7	2.3	-0.5	0.1	0.3	0.6
1. Household sector	5.1	2.7	0.2	2.1	2.6	2.9
2. Corporate sector	-5.8	-0.4	-0.7	-2.0	-2.3	-2.3
<b>Financing requirement (=I+II)</b>	<b>-5.6</b>	<b>-6.9</b>	<b>-9.0</b>	<b>-8.5</b>	<b>-7.7</b>	<b>-6.8</b>
<b>Current account balance</b>	<b>-6.3</b>	<b>-7.2</b>	<b>-9.0</b>	<b>-9.0</b>	<b>-8.6</b>	<b>-7.9</b>
- EUR billions	3.6	5.0	6.6	7.3	7.7	7.5

get, further considerable measures are needed to reduce the government deficit, therefore the risk of development of higher-than-expected deficit is significant.

#### 4.3.1 FINANCING THE CURRENT ACCOUNT DEFICIT

In 2004 Q2, the whole-economy external financial requirement of EUR 2 billion was met almost entirely through borrowing abroad by the private sector and, within this, predominantly by the banking sector. Strong borrowing abroad by the banking sector was associated with a sharp increase in foreign currency lending to the domestic corporate and household sectors.

Following a jump in Q1, the stock of Hungarian government securities held by non-residents fell by nearly EUR 500 million in Q2. This loss was partially offset by non-residents' purchases of approximately EUR 300 million worth of mortgage bonds.

Compared to the previous quarter, FDI slightly declined. The main underlying reason for this is the seasonality of the statistical reporting of re-invested earnings. In consequence, the proportion of net FDI in financing the current account shrank from 25 per cent

in Q1 to 13 per cent. Even so, 18 per cent in H1 still exceeds the value in the corresponding period in 2003. The ratio of net FDI inflows to the current account deficit is likely to rise in H2 as well. Thus, the nearly 30 per cent weight of non-debt generating financing, including share purchases, in H1 is expected to grow further.

Chart 4.4

#### Composition of the financing

Per cent of GDP

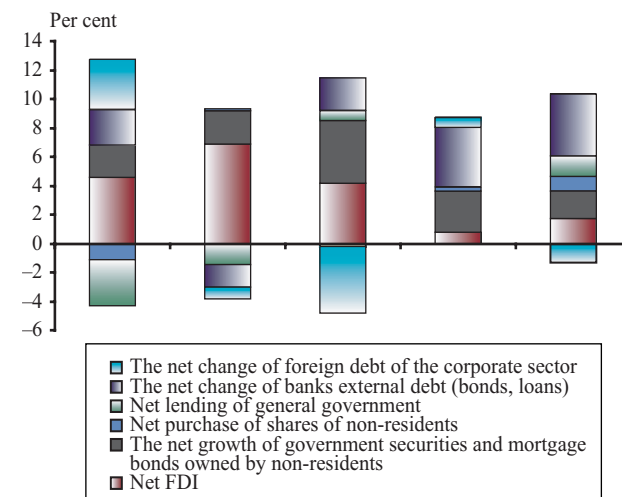


Table 4.11

#### External financing requirement

EUR billions

	2003				2003	2004	2004
	Q1	Q2	Q3	Q4	Year	Q1	Q2
	Quarters					Quarters	
<b>1. External financing requirement</b>	<b>-1,650</b>	<b>-1,806</b>	<b>-1,407</b>	<b>-1,745</b>	<b>-6,608</b>	<b>-1,768</b>	<b>-2,039</b>
1.1 Current account balance	-1,559	-1,815	-1,419	-1,783	-6,575	-1,705	-2,120
1.2 Capital account balance	-91	9	12	38	-32	-63	81
<b>2. Financing</b>	<b>4,336</b>	<b>194</b>	<b>1,605</b>	<b>1,005</b>	<b>7,140</b>	<b>1,635</b>	<b>2,441</b>
2.1 Direct investment	-194	266	20	470	562	417	275
2.1.1 Direct investment abroad	-481	-158	-68	-750	-1,457	-252	9
2.1.2 Direct investment in Hungary	286	423	89	1,220	2,018	669	266
2.2 Borrowing by consolidated general government	1,559	-289	1,236	-271	2,234	969	60
2.2.1 Borrowing from MNB	-116	-541	-771	-421	-1,849	-738	-25
2.2.2 Borrowing by Government (excluding securities issue)	947	-12	1,146	280	2,361	923	658
2.2.3 Purchases of government securities by non-residents	728	264	861	-130	1,722	784	-573
2.3 Net borrowing by private sector	2,927	126	251	777	4,082	106	2,010
2.3.1 Borrowing by credit institutions	2,647	-86	320	484	3,365	252	1,971
2.3.2 Portfolio investment (shares)	208	39	148	-173	223	326	98
2.3.3 Net borrowing by firms abroad	73	173	-217	465	494	-473	-58
2.4 Net errors and omissions	45	92	98	29	263	143	96
<b>3. Change in international reserves (1+2)</b>	<b>2,686</b>	<b>-1,611</b>	<b>198</b>	<b>-740</b>	<b>532</b>	<b>-133</b>	<b>402</b>



## 4.4 PPP PROJECTS FROM A MACRO-ECONOMIC PERSPECTIVE

Under the 2005 budget bill, fixed investment worth approximately HUF 300 billion would be implemented 'with the involvement of private capital', under what is called a PPP scheme, and another HUF 138 billion in government revenue would be raised through the transfer of assets into PPPs. Thus, at first sight, it seems that the adoption of PPP schemes will earn the budget approximately HUF 428 billion, more than 2 per cent of GDP, in 2005.<sup>25</sup> What follows provides an overview of a framework of analysis and also the macro-economic consequences of applying such schemes.

What is called public-private partnership (PPP) schemes may be implemented in different forms, depending on whether (1) the private sector actually performs the particular fixed investment or simply takes over an existing asset, (2) they take the form of operating leases or concessions, or the private sector also acquires ownership title, and whether, in the latter case, the asset remains in private ownership upon termination of the contract or it is transferred to general government at residual value.

The starting point of an economic analysis of PPP is the manner and extent of risk transfer distribution between the general government and the private sector, as it provides a basis for deciding whether the relevant investment is public or private in the economic sense. In practice, a risk distribution analysis relies for the most part on the principles of business accounting. The reason for this is that measuring the risk borne by the private sector is of special consequence in business accounting, thus its requirements for similar transactions (e.g. lease agreements) may provide a suitable term of reference for assessing whether risk is transferred in effect or only formally.<sup>26</sup> With respect to the budget classification applied in the United States, the Congressional Budget Office (CBO) singles out six considerations to be used as criteria for recognising PPP projects in the private

sector.<sup>27</sup> In the case of fixed investment, risks are actually transferred to the private sector if

- the fixed asset serves general purposes (i.e. it is not specified by general government),
- the fixed asset has a market also in the private sector,
- during the term of the contract, the private partner has ownership title to the asset, which is not transferred to the government subsequently either,
- the contract does not stipulate a bargain-price purchase option,
- the contractual term does not exceed 75 per cent of the estimated economic life of the asset;
- the present value of the minimum rent payable during the contractual term may not exceed 90 per cent of the fair market value at the beginning of the contractual term.

The Eurostat requirements applicable to the EU Member States use different considerations to establish whether PPP projects should be recognised within general government or not. The currently effective Eurostat regulation, which specifies earlier considerations, examines whether

- the private sector bears the construction risk, and
- at least one of either availability or demand risk.<sup>28</sup>

If neither is the case, the PPP is considered to be a financial lease, i.e. a below-the-line transaction; thus irrespective of its legal framework, the project must be re-included in general government accounting. According to the

<sup>25</sup> For further details, see the general supporting argument in the budget bill, pp. 62-63, and the two tables in the annex attached thereto and from among the supporting arguments for the individual chapters see the one on the major central budget revenues and, within that, page 7 of the textual supporting argument. These documents are available at the Ministry of Finance website.

<sup>26</sup> For example, approaches by the International Accounting Standards Board (IASB) and the Financial Accounting Standards Board (FASB).

<sup>27</sup> The Budgetary Treatment of Leases and Public/Private Ventures, Congressional Budget Office, 2003.

<sup>28</sup> Constructing risk covers notably events, such late delivery, additional costs and external negative effects. Availability risk covers problems of performance, such as problems with the quality, volume and safety standards in the provision of services. Demand risk covers variability of demand irrespective of the behaviour of the private partner. See 18/2004 Eurostat decision.

<sup>29</sup> See: IMF: Public investment and Fiscal Policy, March 2004.

IMF view, this recent Eurostat decision gives considerably cause for concern, because it is likely result in most PPP projects being classified as private investment.<sup>29</sup>

From the **perspective of fiscal consolidation**, one of the most conspicuous differences between a PPP scheme and traditional public fixed investment is that the former considerably changes the time profile of expenditures recorded in general government. In the case of traditional public fixed investment, expenditure arises at the beginning of the term (first fixed investment and then operational and interest expenses), whereas under a PPP scheme the entire expenditure is spread over time. In consequence, though in the initial phase it results in savings in the budget, later it incurs continuous additional expenditure.

What are the consequences of replacing traditional public fixed investment with PPP schemes? First, in the year of switching to the new scheme, government expenditure is abruptly cut, as no substantial initial fixed investment expenditure arises. Later on, however, this may give rise to several problems. One is that the future budget becomes less flexible. The government used to reduce the deficit primarily by putting a brake on fixed investment; however, under PPP schemes such expenditure is determined in advance.

Second, if fixed investment is outsourced to PPP schemes, the constraints of the government budget become less effective, because fixed investment expansion envisaged by the government can be implemented at a seemingly minimum explicit fiscal cost in the short term. This raises considerable concerns in terms of control, because the current deficit can be temporarily reduced by building up a liability portfolio relatively rapidly, thereby imposing debts payable in the future.<sup>30</sup>

A related concern is when fiscal policy uses the one-off deficit-reducing effect of channelling fixed investment into PPP schemes to increase other expenditure and/or to cut taxes, as the adoption of PPP schemes result in only temporary and arguable savings. Despite the reduction in the current deficit, the aggregate net present value of future deficits hardly changes. On the contrary: they are more likely to increase.

Developments in the net present value depend on several factors. With the involvement of the private sector through PPP schemes efficiency may increase, the gains of which, similarly to risks, may be shared by the private

partner and general government (as well as the parties using the service). Savings earned from a permanent rise in efficiency should, however, be able to cover certain additional costs, e.g. the higher burden of private financing. The latter stems from the fact that the government invariably has access to loans under more favourable conditions than private corporations do. Compared to traditional public fixed investment, overall, investment, operation and financing costs may be either more or less favourable under a PPP scheme. Practical evidence can be quoted for both, although certain general conclusions have already been drawn on the types of projects that can be more efficient under a PPP framework.<sup>31</sup> If, for instance, the underlying reason for preference for PPP schemes involves short-term considerations, namely the intention to temporarily reduce the deficit and then risk transfer may be, in part, formal, and the issue of efficiency is no longer a major consideration. Thus, the total cost is likely to be higher, rather than lower.

**From a macro-economic perspective**, when PPP schemes are adopted, in addition to the above-discussed aspects of the costs of the entire period, a shorter-term macro-economic effect can also be examined. While the adoption of PPP schemes reduces the headline deficit, these projects fundamentally exert the same effects on external equilibrium, economic growth and inflation as traditional public fixed investment does: they boost domestic demand and deteriorate the external equilibrium irrespective of the framework of implementation. In other words, external equilibrium cannot be improved by reducing general government expenditure through a simultaneous increase in PPP fixed investment. Furthermore, as mentioned above in connection with the issue of control, it is conceivable that during a gradual adoption of PPP schemes fiscal policy uses the arguable 'savings' in public expenditure to increase other current expenditure items and/or to reduce revenues. If this is the case, owing to domestic demand thus further boosted, the adoption of PPP schemes may have a negative rather than neutral effect on external equilibrium (relative to traditional public fixed investment).

In conclusion, it is safe to assume that, in the short term, PPP schemes exert the same effects on external equilibrium and demand as traditional public fixed investment does. A temporary decrease in deficit, attributable the outsourcing of fixed investment, does not improve macro-economic stability in the short term, as no actual adjustment is performed.

<sup>30</sup> The State Audit Office examined the PPP schemes scheduled for 2005 from several aspects. See *Vélemény a Magyar Köztársaság 2005. évi költségvetési javaslatáról* (Opinion on the 2005 budget bill of the Republic of Hungary), ÁSz, October 2004, Chapter 4.4 ([www.asz.gov.hu](http://www.asz.gov.hu)).

<sup>31</sup> See IMF, Public-Private Partnerships, March 2004 ([www.imf.org](http://www.imf.org)).

## 4.5 ISSUES IN HOUSEHOLDS' BEHAVIOUR IN 2004 H1

In the first eight months of 2004 gross average wages increased by nearly 7.0 per cent (year-on-year), which, in view of the 7.1 per cent average inflation rate of the period, represents a flat growth rate of gross real wages for this year in practical terms. In 2004 H1, however, household consumption expenditure exceeded the year-on-year figures by more than 4.4 per cent in real terms, while since early 2004 financial savings, almost entirely ebbed away last year, have started to grow considerably and persistently (in 2004 H1 the net financial savings of the sector was nearly HUF 180 billion). Having accepted the fact that the level of housing investment was determined by last year's developments,<sup>32</sup> household income and expenditure developments this year present a number of problems for analysts.

Accordingly, this analysis aims to find answers to two questions: what is the reason for the accelerating growth of household consumption which regained momentum in H1 (i.e. can last year's slowdown in consumption turn around permanently) and to what extent were income developments consistent with decisions on household consumption and savings in 2004 H1.

### One-off effects in household consumption expenditure

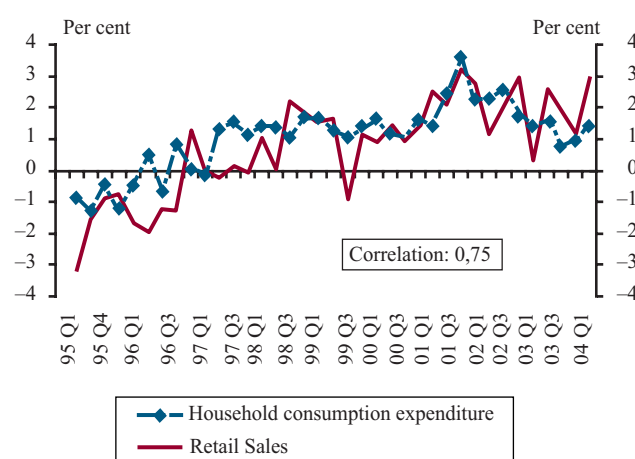
Developments in household consumption expenditure, simply on account of the methodology of statistical calculation, is closely correlated with changes in retail sales. Based on this correlation, we found it useful to examine the time series of retail sales activity categories from the point of view whether they showed a phase-out (e.g. a sharp increase in volatility) this year significantly different from previous years.

Our findings drew our attention to the time series of motor vehicles and vehicle parts, representing an item with one of the largest weight in retail sales, with nearly 17 per cent based on 2003 figures. As the largest

**Chart 4.5**

### Household consumption expenditure and retail sales

Seasonally adjusted quarter-on-quarter growth rate



part, more than three quarters, of this category is made up of car sales, we then examined the sales figures of car importers (see Chart 3). Sales of car importers grew 0.2 per cent (nearly 1.7 per cent taking account of relative prices) in the first three quarters of 2004. This growth, however, was extremely unevenly distributed over the three quarters. The strong decline in the first quarter was followed by an upturn of extraordinarily brisk pace even by historical standards in the second quarter, which, in turn, was followed by a considerable fall. Although the decline in household real income growth and the gradual saturation of the car market would lead to the slowdown of growth in car sales in any case, the volatility we encountered could only be due to one-off distorting effects. In our view this distortion was mainly caused by the introduction and the modification of the registration tax this year and the uncertainty surrounding EU accession in May.

As far as new car sales are concerned, the introduction of the registration tax this February led to the easing of

<sup>32</sup> We assume (and this has been confirmed by our past experience) that this year's household investment may correlate closely with the number of residential construction permits issued last year. Since both the level and the growth rate of the number of residential construction permits issued last year increased exceptionally rapidly, we estimate buoyant household investment for this year as well. Coincident indicators received before the date of this Report (the number of new homes, the retail turnover of furniture, building materials and other household article sales, the size of foreign currency housing loans) have also reinforced our projections.

tax burdens practically in every category, while in the case of used cars it prompted an increase in prices due to taxes. Thus, the greater-than-expected decline in car sales in early 2004 could mainly be attributed to supply factors. According to expert information these include the growing waiting time due to traders' insufficient stocks and registration problems related to the release of cars into traffic.

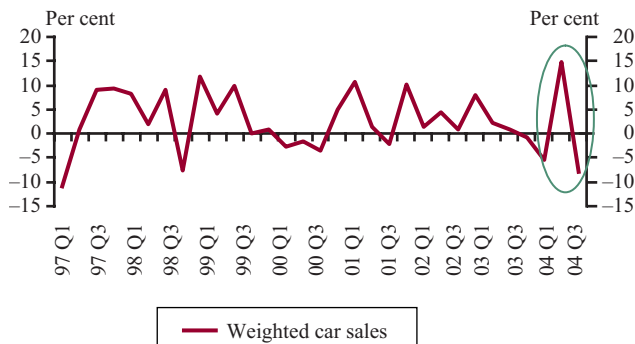
The amendments to the registration tax table entering into force in mid-May 2004 led to an increase in prices typically in all categories with an exceptionally sharp rise in prices of large-value cars. Thus, especially in April, the growth of motor vehicle sales was exceptionally high. This was partly due to the spillover effect of sales from the first quarter and partly to the upturn in buying mood attributable to the expectations of price increases. Since retail trade supply adapted more slowly to rising demand, May and June were still characterised by buoyant growth as waiting times remained long.

The third quarter saw a significant slowdown with the strong negative index indicating purchases brought forward again to the second quarter. In our estimate distortions arising from regulation changes amounted to nearly HUF -11 to -13 billion in 2004 Q1, HUF 16 to 20 billion in Q2 and HUF -5 to -7 billion in Q3.

**Chart 4.6**

**Sales by motor vehicle importers\***

Seasonally adjusted quarter-on-quarter growth rate



\* Weights are expressed as the relative prices of different categories (low, middle, high) compared to those of the low categories.

Source: (volume) Association of Hungarian Motor Vehicle Importers, (price index) MNB estimate.

The tightening of the Sulinet scheme (government subsidies for information technology sales) as of 1 July could also have caused a further significant distortion. Due to the spending of earlier subsidies, turnover in June was more than three times higher than the average

sales figure registered in the first five months of 2004. In our estimate the timing of consumers' decisions reflecting the change in government subsidies for computer purchases led to sales amounting to HUF +2-3 billion in 2004 Q2 and nearly HUF (-2) billion in Q3.

**Table 4.12**

**Our estimates for distortion effects on household consumption growth**

	2004 Q1	2004 Q2	2004 Q3
Regulation changes relating to car sales	HUF -11 to -13 billion	HUF 16 to 20 billion	HUF -5 to -7 billion
Changes to the terms of the Sulinet scheme		HUF 2 to 3 billion	HUF -2 billion
Total	HUF -11 to -13 billion	HUF 18 to 23 billion	HUF -7 to -9 billion

The table below summarises the main distorting elements affecting consumption growth:

The Q2 distortion level is nearly 1 per cent of the consumption expenditure of the sector at current prices, while Q1 consumption figures could have exceeded this amount by half of this figure without the distortions. It must be noted, however, that consumption growth, which already began decelerating in 2003, would have come to a halt this year in any case even without these distortions (the current spectacular upturn in the growth rate would have been flat in the quarter). Nevertheless, the increase in consumption in Q1 would have been significantly higher than the level expected by experts<sup>33</sup> and the extent justified by wage developments.

**Sources and use of household income in 2004 H1**

Net household wages in real terms are estimated to have increased by nearly 0.4 per cent (year-on-year), while the growth rate of social cash transfers to households was 9.4 per cent in real terms. Thus, the growth rate of these two income items in H1 (3.7 per cent) is significantly below the average annual growth rate of 9.5 per cent measured in the last three years.

Considering these income developments it should be noted that the consumption expenditure of the sector itself grew by more than 4.4 per cent over this period. If, however, we take into account that households' net financial savings reached nearly HUF 180 billion in Q1 and Q2 (the same figure was HUF 130 billion in 2002 and HUF -80 billion in 2003) and that capital expenditure presumably continued to increase rapidly,<sup>34</sup> a definite difference can be seen between the expenditure and the income side developments affecting households' behaviour.

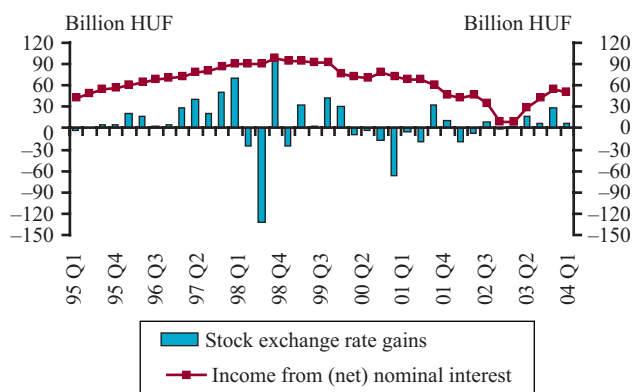
<sup>33</sup> The average annual growth rate of household consumption expenditure in 2004 measured by the surveys of Consensus Economics in 2004 H1 amounted to between 2.7 and 2.9 per cent.

<sup>34</sup> Owing to a strong pick-up in subsidised lending in 2003, the number of new home completions in the first nine months this year was 45 per cent higher than a year earlier. Although this increase was, in part, the result of base effects (e.g. unfavourable weather conditions in 2003 H1), owner occupation in 2004 may be close to 20 per cent higher than the historically already high value (the highest in the period after the political regime change) in 2003.

In our view, the tension between the revenue and expenditure sides of the balance sheet of households' income can only be eased by the faster-than-expected growth rate of households' 'other' income. This income category accounts for nearly 30 per cent of households' disposable income comprising mainly property income (interest, dividends, rent) and households' profits from self-employed business activities (mixed income).

**Chart 4.7**

**Households' income from interests and exchange rate gains at the stock exchange\***



Sources: Financial accounts, MNB estimate.

\* The stock exchange rate gains are the difference between stock changes and net transactions. Nominal interest income and expenditure include the compensation for inflation.

In our estimate, affected by the increase of the real interest rates in 2003 H2, households' net interest revenues exceeded the year-on-year amount by nearly HUF 90 billion in 2004 H1. At the same time, due to the positive developments at the Budapest Stock Exchange this year, exchange rate gains on the sector's investments in shares exceeded HUF 35 billion (HUF 1.6 billion year-on-year). Thus households' income from interests and exchange rate gains at the stock exchange could exceed the year-on-year amount by nearly HUF 125 billion.

The increase in property income noted above may have been further expanded by so-called "mixed" income through self-employment. Based on 2002 figures, more than 14 per cent of this income was generated in construction, which, taking into account the buoyant activity in the housing market still continuing this year, suggests a significant household value added even for 2004 H1. Within the category of other income, the sector of real estate, renting and business activities with a similar weight of nearly 25 per cent incorporating intellectual activities with large value added but with relatively low expenditure (business and legal advisory services, sale of real estate, information technology, etc.) may also have contributed positively to the developments of mixed income in 2004.

Significant favourable effects are also likely to have affected households' other income through the government budget this year. With Hungary's accession to the EU, Hungarian agricultural producers will be entitled to land-based agricultural EU subsidies, to be supplemented by the Hungarian government, from 2005. Agricultural producers have had access to part of these subsidy funds already this year. With eligibility criteria remaining unchanged in 2004, tax refunds on subsidised housing loans extended last year, with their amount practically doubling compared to a year earlier, were a source of additional household income. (It should be noted that only part of such refunds is likely to have influenced households' decisions on consumption and savings in 2004, as interim tax payments during the reference period can be credited to such refunds.)

The introduction of EVA (a simplified business tax regime) in 2003 is also likely to have caused a positive

**Table 4.13**

**Size of quantifiable effects on other households income**

HUF billions

	2003	2004
Nominal (net) interest income*	88.8	212.3
EU agricultural subsidies **	-	74.6
Tax refunds on housing loans	17.3	31.2
Total	106.1	318.1

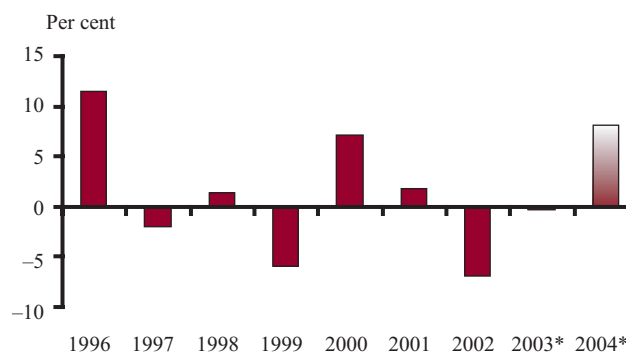
\* An MNB estimate; interest income and expenses also comprise interest compensation for inflation.

\*\* In calculating the distribution of agricultural subsidies we relied on the distribution data based on the forms of farming included in CSO's most recent statistics on cultivated arable land (sole proprietors 58.2 per cent).

**Chart 4.8**

**Households' other income**

Annual growth in real terms



\* Data for 2003 and 2004 are estimations of MNB. Previous data are computed by subtracting the sum of social transfers and net wage bill from households disposable income published by CSO.

income shock, with part of the indirect tax revenues materialising as household and private sector income. Our assumption is based on data suggesting an increasingly large gap between VAT revenues (adjusted with EVA) and the rate of consumption growth.

Summing up the above effects on income and uses, households' decisions on consumption and savings in 2004 can be financed only through an increase in other income that exceeds the historical average markedly. Quantifiable income, which we deem to be the most important, may easily exceed last year's income from a similar source by approximately HUF

212 billion. Given the favourable developments in the securities market and income materialising in an increasingly simple business tax regime (see EVA) as additional factors, this is likely to have led to a more active consumption and saving behaviour than previously expected.

Chart 4.8 shows our estimate for aggregate other income. Finally, it should also be added that, against a backdrop of higher-than-expected income, the sector's propensity to consume, following a peak in early 2003, has hardly become more subdued, and is still very high in comparison with other EU Member States.

## 4.6 HOW DOES MACROECONOMIC NEWS AFFECT MONEY MARKETS?

Money markets are continuously affected by impacts from a number of sources. The exchange rate of the forint and yields on Hungarian government securities are shaped by the combined effect of news on the Hungarian economy, international money and capital market developments and regional influences. Economic analysts often attempt to explain or forecast money market developments based on macroeconomic events as investors playing a role in defining exchange rates attribute great importance to the state of the economy in a given country when making investment decisions. Improving or deteriorating fundamentals can significantly contribute to the strengthening or weakening of investors' confidence in a country's currency, government securities and other investment opportunities. It is essentially this confidence that determines the price (the exchange rate and interest rate) at which investors are willing to invest in a country. Investors pay close attention to figures on the state of the economy and a new piece of information may prompt them to revise their former view, and to reallocate their portfolio, thus also affecting the value of the domestic currency and yields on government securities.

Our recent study<sup>35</sup> examined the effects of the publication of the most significant economic data (the con-

sumer price index, the industrial producer price index, the growth rate of domestic gross product (GDP), the current account balance, industrial output growth, the unemployment rate and the public sector deficit) on the market. In addition to these seven categories of data, the effects of the publication of the Report on Inflation published by the MNB and Reuters poll of analysts were also included in our study. Where possible we looked for a correlation between the deviation from analysts' expectations (i.e. the surprise value) and the effect of the news on money markets. The results were further refined by the use of exchange rate figures of larger (two minute) frequency and by the elimination of outliers.

Our findings derived from Hungarian data confirm international experience. The size of the announced data has only a limited effect on money markets: it is the deviation of figures from expectations, i.e. the surprise value of information, that has a major impact on the markets. The reason for this is that the expectations of new data and the information derived from them are continuously built in market prices and exchange rates. Thus, at the time of the next release of data it is the unexpected part of the data (the surprise) that has an effect on the exchange rate and yields. The impact of new pieces of information could only be shown clearly when the brevi-

**Table 4.14**

### Characteristics of the data under review

Announcement	Number of announced data in the period	Frequency of announcement	Release time	Published by
Consumer price index	31	Monthly	9:00	CSO
Industrial producer price index	30	Monthly	9:00	CSO
GDP	10	Quarterly	9:00	CSO
Current account balance	30	Monthly	8:30	MNB
Industrial output	31	Monthly	9:00	CSO
Unemployment rate	31	Monthly	9:00	CSO
Public sector deficit	31	Monthly	Varied	Min. of Finance
Report on Inflation	10	Quarterly	14:00	MNB
Reuters regular poll	31	Monthly	Varied	Reuters
Reuters one-off poll	15	Varied	Varied	Reuters

<sup>35</sup> Norbert Kiss M.: The Effects of Macroeconomic News on Money Markets, MNB Occasional Papers 30 (2004).

ty of the period chosen allowed for the elimination of other effects and no other events influenced the change, in part also related to the brevity of the period. Based on our experience the economic data under review can be divided into well-defined categories.

#### Data having the largest impact on money markets: inflation, GDP, current account balance

The first category includes the consumer price index, the growth rate of gross domestic product (GDP) and the current account balance, all having a clear impact on money markets. In most cases, announcement of these data caused a significantly larger shift in the exchange rate of the forint and yields on government securities than the shifts recorded on non-announcement days. While money markets are clearly more sensitive to these announcements, the change in exchange rates and yields correlate mainly with the unexpected part of the data. This means that as far as money market developments are concerned, it is the deviation of the data from analysts' published expectations that is of key importance, as opposed to the absolute size of the data. In the case of these three categories of data, both the direction and the extent of the deviation from expectations have a clear impact on the direction and the extent of exchange rate and yield movements.

In the case of the exchange rate, the effect of the new piece of information can only be detected over a short period of time, mainly in the few hours following the announcement. When examining this effect over a one-day time horizon, the correlation was not clearly detectable from a statistical point of view. The effect ceased: the exchange rate returned to the level justified by the general state of the economy, the extent of the external and internal imbalances and the regional and international market trends of the period. When we eliminated those days from our sample on which the exchange rate was affected by important events in addition to an announcement of data, the correlation was clear even if daily changes were taken into account.

Our findings suggest that in a significant part of the period under review (especially in the course of 2002) markets considered the MNB's attempts to maintain strong exchange rate levels in order to achieve low inflation credible. It is very likely, that exchange rate expectations were orientated by this market view and as a result economic data only had a short impact on the exchange rate of the forint.

The publication of new data regarding the state of the economy had a more permanent effect on the yield on long-term government securities with maturities of over one year, which are of key importance from the point of view of the budget's interest expense. The correlation was also shown in the case of changes over one

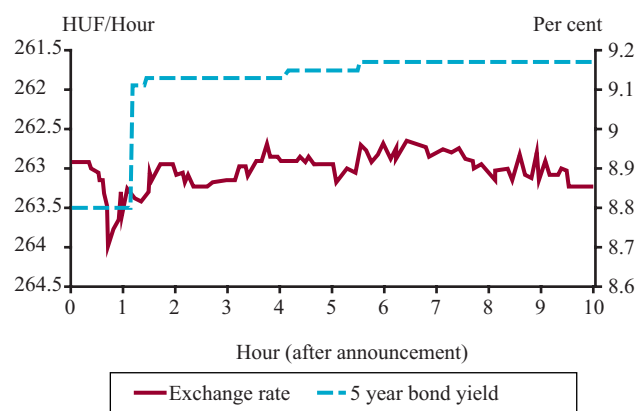
day. The close correlation was not significantly modified by the elimination of outliers from the sample either. The impact on the yields on long-term government securities is stronger than the average value: while the correlation with the unexpected part of the data was closer, the same extent of surprise caused a greater change in the yields on long-term securities than in the yields on short-term government securities.

The difference between the effects of a new piece of information on the exchange rate of the forint and on the yields on long-term government securities is well illustrated by the developments following the publication of the current account balance of October 2003 on 12 December 2003. With announcement of the significantly worse-than-expected figures, the exchange rate of the forint started to fall sharply, but was adjusted in a few hours' time and reached a similar level as it had been at before the announcement. In the case of 5-year yields this effect was slower, but more permanent: higher yields were sustained and even increased further over the period of one day.

Chart 4.9

#### Exchange rate and 5-year yield movements over one day on 12 December 2003

Current account balance figures: EUR -469, market expectation: EUR -300



Despite the evident impact the announcement of new data has, it seems that the publication of a certain figure in itself only has a temporary and restricted effect on the exchange rate and on yields. A permanent shift only takes place if the market's assessment of the general state of the economy changes due to several categories of data reinforcing each other and the new situation prompts market participants to revise their expectations regarding the central bank's reactions.

#### Data not having an evident impact on money markets: industrial output and public sector deficit

The second group includes industrial output and public sector deficit. Here we found no statistically evident correlation with the surprise element of the new piece



of information. This could be due to the fact that pieces of information on budget developments are published continuously and frequently between the date of analysts' surveys and the publication of data (e.g. the monthly projections of the Ministry of Finance and frequent pieces of news on different government measures regarding the budget). Thus, the effect of the new piece of information cannot be felt in a concentrated manner at the time of the publication. As far as industrial output is concerned, analysts' forecasts deviate from the actual results in most cases. It is therefore possible that expectations play no special role, and as a result, there is no correlation.

In the case of other categories of data (the industrial producer price index, the unemployment rate, etc.) the announcement of the data itself did not have a clear

impact on the exchange rate and yields and as we had no analysts' expectations for these categories, it was not possible to examine the deviations from expectations.

On the whole we may conclude that the state of the Hungarian economy and the international and regional market developments are equally reflected by changes in the forint exchange rate and in the market of government securities yields. Recently, data regarding the economic growth rate, inflation and the current account balance have had a significant effect on money and foreign currency markets. While the impact of economic figures on the exchange rate has proven to be temporary in most cases, long-term yields on government securities have permanently increased due to the uncertainty surrounding economic imbalances.

## 4.7 INTEREST RATE PASS-THROUGH IN HUNGARY

### 4.7.1 HOW DO BANKS' INTEREST RATES REACT TO MARKET YIELD MOVEMENTS?

The extent to which a central bank can influence yields and interest rates (most notably commercial banks' interest rates playing a decisive role in financial intermediation) relevant for market participants is key to the operation of the interest rate channel, one of the most important channels of the monetary transmission process.

The interest rate channel has an effect on investment and consumption through three mechanisms. First, the reaction of corporations and households to interest rate movements is dependent on the extent of the substitution effect (i.e. changes in the opportunity costs of other savings and expenditure items) caused by interest rate movements in real terms. Second, changes in the interest rate influence the interest expenses and revenues of market participants, i.e. their net financial income (income effect). And finally, interest rate movements have an impact on the market value of real and financial assets, and through this, on market participants' assets (asset effect). The degree of the income and substitution effects is largely dependent on how quickly and to what extent banks' interest rates react to the changes in the central bank base rate.

This question is examined in our recent paper (MNB Working Papers 2004/8 Csilla Horváth – Judit Krekó – Anna Naszódi: Interest rate pass-through in Hungary) analysing the speed and extent at which short-term market yields passed through to commercial banks' forint loan and deposit interest rates in the period between 1997 and 2004. Since the results suggest that, owing to the arbitrage opportunities between central bank and market assets, the transmission between the central bank interest rate and short-term market yields is fast and effective, our findings regarding inter-bank interest rates are also relevant in the case of central bank measures.

Based on our econometric analysis, we found that there was a clear difference between the pricing of corporate and household interest rates: the extent of long-term adjustment to corporate loans and deposits was greater and the speed of adjustment was faster than in the case of the household sector. A complete and straightforward pass-through only takes place in the case of short-term corporate loans, while as far as other instruments are concerned, the adjustment is far from complete even in the long term. As regards the speed of adjustment, the consumer loan rates incorporating an extraordinarily high spread, however, show strikingly incomplete repricing behaviour. This indicates that households' demand for loans is not sensitive to interest rates.

Regarding short-term corporate loans, analyses of European countries show that long-term adjustment is nearly 100 per cent or even greater in most cases, although studies on France, Austria and Germany stated that short-term loan interest rates are far from complete even in the long term. In the case of short-term adjustment, the changes in forint loan rates can be regarded quite rapid. According to the most recent studies prepared by the ECB on the whole of the euro area,<sup>36</sup> the adjustment was maximum 50 per cent in the first phase, while our analysis put this figure around 60–80 per cent.

Regarding deposit rates and household loan rates the number of studies is much lower, but the findings often showed that in the case of these rates the adjustment was only 40-70 per cent even in the long term (e.g. de Bondt, 2002). Despite this, forint-denominated consumer loans seem sticky even by international standards.

We examined potential non-linearities of banks' pricing behaviour with the help of TAR (threshold) models based on aggregate and individual bank data. Our aim was to establish whether the reaction of banks' rates

<sup>36</sup> De Bondt (2002): Retail bank interest rate pass-through: new evidence at the euro area level, ECB Working Paper No. 136.

varied according to the different size, sign or volatility of yield movements. The results suggest that the adjustment of bank rates depends on the extent of the deviation from the equilibrium value and on the extent of the yield movement. We found the adjustment to be significantly faster for changes above a threshold level, which could be explained by the presence of menu costs.

The sign of yield shocks also turned out to be influential to the speed of adjustment. In line with international experience, we found that corporate loan rates were characterised by downward rigidity. Loan rates are expected to be rigid downward, while deposit rates tend to be rigid upward, in accordance with the profit maximisation behaviour of banks, trying to make use of the rigidity of the demand for loans and the supply of deposits. Taking into account, however, the sharp competition in the corporate loan segment among banks, our findings are somewhat surprisingly similar to our other finding that household deposits react to a rise in yields faster than to their fall. Our results could be explained by the fact that on average the extent of the rise in yields was larger than the fall in yields. We attempted to measure how the volatility of yields affected the interest rate pass-through. In our estimates, however, we could not separate the effect of a higher yield volatility on expectations from the effect of larger yield movements implying faster adjustment. Our results showed that one or both of the parameters determining the speed of adjustment grew significantly when the yield volatility exceeded a certain level. In our view this could be explained by the fact that in periods of higher yield volatility the size of the yield shocks was much larger and this effect was stronger than the effect of higher interest rate uncertainty slowing down repricing. Nevertheless, in periods of volatility (mainly in 2003), the faster adjustment of bank rates could not counterbalance the effect of higher yield shocks reflected by the higher volatility of spreads.

#### 4.7.2 FUTURE TRENDS

As noted above, competition in the corporate sector is relatively strong. The adjustment of loan rates was relatively fast and sizeable suggesting a low spread between the average loan rates and the market yields. As far as corporate loan rates are concerned, we cannot foresee a dramatic increase, while in the case of corporate deposit rates, and in particular in the household sector, a stronger adjustment can be expected.

On the deposit side, the transmission process could be improved if structural excess liquidity was absorbed as in this case banks would rely on deposit funds to an even greater extent than at present. Regarding household loans, we assume a decline in the exceptionally high level of the consumer loan spread in line with a greater impact of market rates on the pricing of these loans. As the majority of real estate loans are comprised of subsidised loans and, until very recently, fixed interest rate loans, changes in the central bank rates had no effect on this sector whatsoever. Due to the December 2003 reform of the subsidy system the maximum amount of client loans was defined as a percentage of market yields of similar maturity as opposed to a fix amount used in the past. As a result, the pass-through is expected to have a greater effect on subsidised housing loans. It should be noted, however, that foreign currency market-based loans account for an increasingly large share in the housing loan market having an impact in the opposite direction.

The lengthening of loan maturities in line with the decline in inflation and interest rate uncertainty may also weaken the interest rate transmission between the central bank base rate attached to short-term instruments and the average loan rates.

## 4.8 WHY ARE CASH FLOW-BASED INTEREST EXPENDITURES OF THE GOVERNMENT BUDGET FOR 2004 EXPECTED TO EXCEED THE AMOUNT LAID DOWN IN THE BUDGET ACT?

The interest payments on the government debt over a given period are based on the interest burden of the fixed-rate debt issued earlier, and of the debt to be issued in the period under review. While the first part of the interest payments is exactly known, the second depends on the following:

- Debt redemption and the deficit. Among the elements of the gross financing requirement the amount of the redemption and renewable debt is known, while the amount of the deficit to be financed is uncertain. If the deficit exceeds the planned level, the debt and its interest burden will also be higher than projected.
- The composition of gross financing according to the expected foreign currency and maturity structure.
- Yield movements. The interest burden of a newly issued fixed-rate debt will be determined by the market at the auctions. Interest rate payments on variable rate bonds are also influenced by yield movements.

According to the appropriation laid down in the 2004 Budget Act, the cash flow-based interest expenses will amount to HUF 753 billion with a GDP ratio of 3.7 per cent. Based on the current projections of the central bank, however, the amount of cash flow-based expenses is expected to reach HUF 884 billion with a GDP ratio of 4.3 per cent. Hence, the expected value of the interest expenditures will therefore exceed the appro-

priation of the Budget Act by 0.6 per cent of GDP. The difference is exceptionally high if we take into account that a significant part of the interest payments for 2004 was already known at the time of the planning.<sup>37</sup> The deviation from the estimate is mainly due to interest payments on treasury bills and bonds. In the case of treasury bills the expected interest expenses exceed the estimate by 0.25 per cent of GDP, while in the case of bonds this percentage is 0.3 per cent.

The reasons for the difference between the appropriation and the actual forecast can be divided into two groups. The first group includes planning errors where the assumptions regarding the above factors were not plausible and the estimated developments were not in line with the expected path on the basis of all the available information at the time of the planning. The second group covers reasons explaining that economic developments deviated from the best estimate incorporating all the available information at the time of the planning.

In the first group, the projection was based on a significantly lower primary deficit estimate for 2003 than could have been expected at the time of the planning. Another planning error was that the forecast assumed a lower yield curve than the market yield curve at the time. The latter incorporates all the information and expectations of the market and thus the projection on expected yields is only prudent if it is based on the market yield curve.

**Table 4.15**

**The budget estimate for the cash flow-based interest revenue and expenses of the government budget for 2004 and the current projections of the central bank**

	Interest revenue		Interest expenditure		Interest balance	
	Billion HUF	In percent of GDP (%)	Billion HUF	In percent of GDP (%)	Billion HUF	In percent of GDP (%)
Budget Act 2004. (Appropriation)	63	0.3	753	3.7	690	3.4
Forecast of the MNB	65	0.3	884	4.3	819	4.0
Difference	2	0.0	131	0.6	129	0.6

<sup>37</sup> The closer the planning period to the time of the planning, the higher the weight of the already defined and known interest expenses within the total amount of interest expenses. The 2003 budget was planned in August and September 2003. Based on our calculations, the interest burden for 2004 on the above mentioned instruments, already known as facts at the time of the planning, was HUF 540 billion on 31 August 2003. The relative deviation from the planned amount is therefore even larger, as 'uncertain' interest expenses amounted to HUF 344 billion as opposed to HUF 213 billion.

The second group explaining deviation includes the fact that the ratio of foreign currency financing grew significantly faster than planned earlier. In addition, yields have risen and have been higher in 2004 so far, than could have been expected based on the market yield curve at the time of the planning, making the financing of the deficit and the due debt more expensive.

Based on the budget's financing plan for 2004 and the actual and planned financing structure and assuming different yield curves, we may attempt to define to what extent the factors above explain the difference between the statutory and the expected value of net interest expenses.

The September 2003 modification of the 2003 and 2004 financing plans and the market yield curve of 29 August 2003, reflecting the yield expectations of market participants, are in line with interest expenses of HUF 803 billion. The Act, therefore, due to underestimation of the expected yields, projected the GFS-based net interest expenses at HUF 53 billion (GDP ratio of 0.26 percent) less than it should have taking into account the market yield curve containing all pieces of information. The projection is not very sensitive to which yield curve of the planning period is used. If the projection was to be based on the lowest yield curve for the period of August and September (26 September) or on the highest (4 August), this would decrease the estimated interest expenses by only HUF 5 billion and HUF 3 billion, respectively.

This calculation, however, does not reflect the fact that the deficit without interest expenses was higher than estimated for 2003, although this could have been foreseen in the light of earlier fiscal developments. It neither includes the fact that the deficit is expected to exceed the original estimate in 2004 as well. Excess debts financing a higher deficit than estimated for 2003 and 2004 increased interest expenses for 2004 by nearly HUF 25 billion. According to our calculations, therefore, based on the actual deficit, the original financing structure and the market yield curve of 29 August 2003, HUF 828 billion should have been estimated for interest

expenses. Out of the budget's interest expenses exceeding the estimate, HUF 78 billion (60 per cent of the total deviation) could be explained by the underestimation of the deficit and yields.

Compared to the financing plan used for the interest balance of the government budget, the Government Debt Management Agency has issued EUR 1 billion more foreign currency bonds this year. 2004 foreign currency bonds no longer pay interest this year. If these funds were to be deducted in HUF by the Government Debt Management Agency, this would have increased interest expenses by nearly HUF 15 billion (with a GDP ratio of 0.07 per cent) assuming an average forint financing structure.

In 2004, due to the broken equilibrium of economic developments and the increase in risks related to the euro adoption rate, yields of all maturities have been significantly higher, than could have been expected on the basis of the market yield curve in the planning period of the 2004 budget. According to our calculations, the effect of rising market yields on the interest balance is around HUF 67 billion, assuming the originally planned financing structure.

Based on the above calculations, therefore, the major part of the deviations of the expected cash flow-based interest expenses from the estimate can be attributed to the expected yield movements and the underestimation of the deficit amounting to a 0.38 percentage point from the total GDP ratio of 0.63 percentage points. The rise in market yield added another 0.32 percentage point to the expected amount of interest expenses, while it was decreased by 0.07 percentage points due to the increase in the weight of foreign currency financing.

When planning the budget for 2005, the Ministry of Finance used its own yield curve forecast, similarly to last year. Based on our calculations this method once again predicts that interest expenses will be nearly HUF 60-70 billion lower, than would have been projected as the expected value of interest expenses based on the market yield curve.

**Table 4.16**

**Factors affecting net interest expenses of the government budget**

	The components of the difference between the appropriation and the actual forecast:		
	HUF billions	In percent of GDP (%)	Contribution to the difference (per cent)
<b>Interest expenditure appropriation</b>	<b>753</b>	<b>3.67</b>	
Underestimation of yields	53	0.26	41
Higher deficit	25	0.12	19
Higher foreign currency debt issuance	-15	-0.07	-12
Rising yields	67	0.32	51
<b>Expected interest expenditure</b>	<b>885</b>	<b>4.31</b>	

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Quarterly Report on Inflation  
November 2004

Print: D-Plus  
H-1033 Budapest, Szentendrei út 89-93.

