MAGYAR NEMZETI BANK

QUARTERLY REPORT ON INFLATION

FEBRUARY 2005

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Overview

Favourable international financial environment

In the period since the previous *Report*, investment environment, both globally and regionally, has continued to be extremely favourable, despite minor volatility.

Risk assessment of forint-denominated investments has not improved

Although the international investment climate has remained favourable, the outlook for the equilibrium position of the Hungarian economy and, consequently, market assessments of risks related to forint-denominated investments, have not improved. Foreign investors' demand for forint assets has fallen off last three months, though since February the forint is strengthening again.

Stable exchange rate and declining yields – but significant long-term uncertainties remain

The exchange rate of the forint has continued to be broadly stable, government securities yields have fallen. Market participants' expectations of a continued cautious monetary policy stance and foreign currency borrowing by the domestic private sector may have been in the background of relative exchange rate stability. The improving inflation environment and the stable exchange rate have contributed to the decline in short-term yields. However, longer-term developments and the convergence programme with the adoption of the euro as its main objective have continued to be surrounded by significant uncertainties.

Our forecast is conditional on assumptions

In line with earlier practice, the forecast in this *Report* has been prepared on the assumption of no change in monetary policy, i.e. assuming unchanged exchange rates and interest rates. With regard to fiscal policy, we have prepared our forecast taking into account the approved government budget for 2005; the figures for 2006 reflects the assumption that the 0.6 per cent reduction in the deficit will be met.

In 2004, consumer prices were fuelled mainly by the increase in indirect taxes

The consumer price index rose by over two percentage points in 2004 relative to the previous year. However, the annual average figures mask uneven within-year movements in inflation outturns. In 2003 H2, the rate of inflation gathered momentum and inflationary pressure was mounting in the economy, followed by sharp price rises in early 2004, induced by the increase in indirect taxes. However, the consumer price index began falling rapidly from mid-2004; and the trend inflation indices were standing at levels preceding the announcement of indirect tax hikes.

The increase in indirect taxes did not have a lasting impact on inflation expectations

The rapid decline in inflation which began from the middle of the year was associated with a fall in firms' and households' inflation expectations. Consequently, it is difficult to determine whether the decline in inflation expectations was the cause or effect of the slowdown in inflation. On balance, however, it seems that the increase in indirect taxes did not have a lasting upward influence on inflation expectations.

Increasing import competition due to stable and strong exchange rate helped

The rapid fall in inflation in the second half of 2004 might be explained by the stable and stronger than 2003H2 exchange rate, which increased market competition in tradable sector. It seems however that, in addition to this effect, EU accession has also intensified import competition. These effects were most prominent among tradable goods, food and beverages. On the other hand falling inflation expectations point to the second round disinflationary effect of

disinflation	monetary policy.
Labour market tightness began easing in H2	Disinflation outlook is supported by easing labour market tightness in 2004 H2. In 2004 staring with an increase, demand for labour in the total economy stagnated and then declined. Simultaneously with this, unemployment began rising. The easing of labour market tightness led to a slowing in the rate of wage inflation. The downturn in inflation expectations may also have contributed to this slowdown in wage inflation.
Assessment of demand-pull inflationary pressure remains unclear	The role of the demand side of the product market is less obvious. Household consumption growth slowed considerably relative to 2003, which, in turn, may have mitigated inflationary pressures in the domestic market. However, vigorous investment and the rising rate of export growth stimulated business activity, which was clearly reflected in the pick-up in GDP growth. Consequently, whereas in 2004 the aggregate output gap widened relative to the previous year, a change in its composition contributed to disinflation.
GDP is expected to stabilise between 3.5–4 per cent in 2005–2006	In our assessment, GDP is likely to have expanded by around 4 per cent in 2004, explained by the robust increase in investment and the prolonged slowdown in consumption. On the production side, accelerating rate of output growth in industry and the favourable crop results in agriculture contributed to the high outturn for the index. Over the forecast horizon, the rate of GDP growth is likely to slow steadily to below 4 per cent, close to the longer-term rate of economic growth.
Slowing growth in domestic absorption and improving net exports	Declines in household consumption and fixed investment activity are expected to a cause a slight slowdown in the rate of economic growth. Slowing consumption growth might be explained by slower than earlier years' real incomes growth, and decreasing propensity to consume.
	The slowdown in whole-economy investment is expected to be driven mainly by the decline in household real property investment. As noted in earlier issues of the *Report*, the tightening of conditions for access to subsidised housing loans towards end-2003 might exert its full impact on investment activity in 2005. However, investment in the corporate sector, where the investment rate continues to suggest robust capacity improvements, is expected to slow only slightly.
	Slowing domestic absorption, and the fall in the rate of investment growth in particular, foreshadows rising net exports over the period ahead.
Swift disinflation expected	On the forecast horizon, disinflation might strengthen, if our basic, especially the constant exchange rate assumptions hold. In the current forecast, the consumer price index is around 3.6 per cent towards end-2005 and around 3.4 per cent at end-2006.
In 2005 the unwinding of effect of indirect tax hikes causes quick decline in the CPI	The major part of the fall in inflation in 2005 is likely to result from the unwinding of the effects of indirect tax increases in the previous year; however, macroeconomic processes and other factors also point to a further slowdown in inflation. Given a stable exchange rate at the 2005 January level, we expect strong market competition and stagnating prices in several product categories in the tradable sector. In the nontradables sectors, a slowdown in wage inflation and in the rate of growth of unit labour costs, coupled with the slowdown in household consumption on the demand side, may support disinflation. Here we expect smaller decrease in price dynamics. The assumed fall in oil prices may also be a factor contributing to disinflation. However, above-inflation rises in

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On the longer term other factors help disinflation

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administered prices may slow the disinflation process in 2005.

Disinflation continues in 2006; however, the slowdown in price rises is likely to affect mainly product categories falling outside the core measure of inflation. By contrast, the current projection is for core inflation to pick up slightly, resulting in major part from the base effect and the assumed hike in excise duties. Disinflation is slowed as the adjustment to the exchange rate appreciation from 2003 to 2004 will soon be completed. The overall pace strength of domestic demand will also hamper disinflation to a certain extent, though household consumption will grow at a slow rate.

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Fan chart of the inflation projection
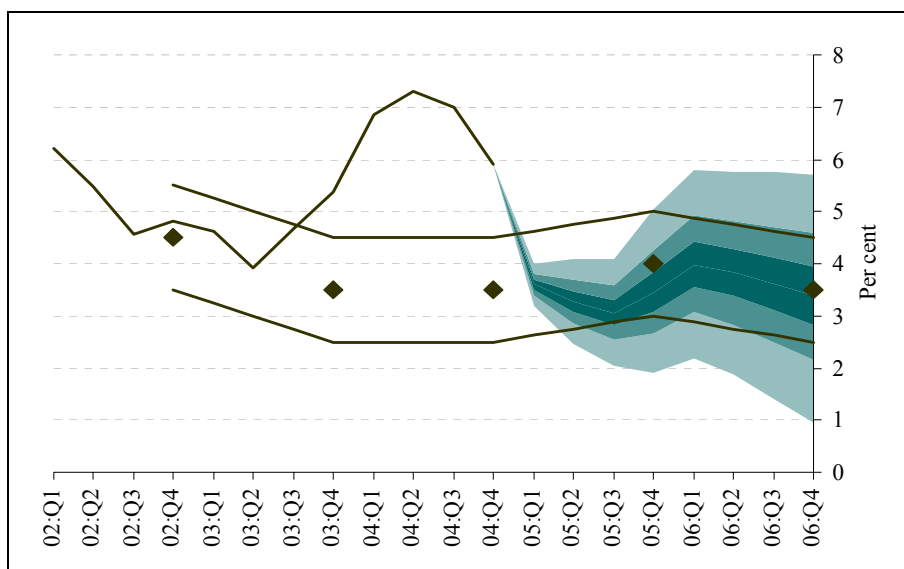
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Based on the current monetary conditions, the rate of price rises may remain within the announced target range

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In our assessment, the rate of consumer price increases may remain within the announced target range in both 2005 and 2006, if the current monetary conditions continue to prevail.

Oil prices and unprocessed food prices, and expected developments in wages, represent the main risks to the central projection for 2005. In addition, the extent to which the year-end inflation rates of 2004 can be regarded as trend inflation dynamics is also a key risk factor. In 2006, changes in administered prices carry significant, downward risks, in addition to those discussed above. Overall, the risks to the central projection are evenly balanced. There is a somewhat higher probability of inflation being below, rather than above, the announced target range in both years 2005 and 2006.

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Sizeable improvement in external imbalance might be expected on the medium term, in case of fiscal consolidation

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In the current projection for 2005, Hungary's external imbalance improves slowly. The external financing requirement is the equivalent of around 8 per cent of GDP, while the current account deficit decreases slightly compared the 9 per cent of last year. Households' rising propensity to save accounts for the most part of this improvement, while borrowing requirement of the government and corporate sectors is expected remain at the previous year's level.

In 2006 significant improvement in the external balance might be expected only if the assumed fiscal consolidation with aggregate demand contraction prevail. As, according to our expectations significant improvement in the private sector's

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financing capacity is not expected for the next year.

In the absence of additional measures, the government deficit target is unlikely to be met in 2005

In 2004, fiscal policy was only able to achieve the official deficit projection, raised in the autumn, by implementing extraordinary year-end measures. In our assessment, the vast majority of those measures improved the fiscal balance only temporarily – the postponed spending will cause excess fiscal determination or risks in respect of the future.

According to our calculations, unless further measures are implemented, the 2005 deficit target of the government is unlikely be met. Our forecast of 5.3 per cent of GDP according to ESA95 methodology is surrounded by significant uncertainty due to the end-year measures taken by the government and uncertainties of national application of the ESA methodology. Meanwhile we expect the fiscal impulse to be broadly neutral in 2005.

A significant tightening would be needed to reach the planned deficit reduction in 2006

In our baseline scenario for 2006, we assume that, based on the modified convergence program, a 0.6 percentage point decrease of the deficit will prevail. The uncertainty of this assumption might be perceived by the fact, that due to the deficit increasing effect of recent trends and determinations, this would require measures of almost 2 per cent of GDP.

Summary table of the main scenario

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

	2003	2004	2005	2006
	Actual / Estimate		**Projection**	
CPI				
December	5.7	**5.5**	**3.6**	**3.4**
Annual average	4.7	**6.8**	**3.4**	**3.8**
Economic growth				
External demand (GDP-based)	0.5	**1.8**	**1.9**	**2.3**
Household consumption	7.6	**3.2**	**2.1**	**2.2**
Gross fixed capital formation	3.4	**11.6**	**4.5**	**4.3**
Domestic absorption	*5.4*	*5.2*	*2.2*	*3.0*
Exports	7.6	**14.1**	**12.1**	**10.3**
Imports	10.4	**14.8**	**9.7**	**9.3**
GDP	3.0	**4.0**	**3.8**	**3.6**
Current account deficit				
As a per cent of GDP	9.0	**8.9**	**8.7**	**8.0**
EUR billions	6.6	**7.2**	**7.7**	**7.6**
General government				
ESA deficit	6.2	**5.3**	**5.3**	**4.7**[6]
Deficit according to national definition[1]	5.3	**4.5**	**4.4**	**3.7**[6]
Demand impact[2]	-0.4	**-0.4**	**0.1**	**-0.6**[6]
Labour market				
Whole-economy wage inflation[3]	10.9	**7.5**	**7.5**	**6.5**
Whole-economy employment	1.2	**-0.4**	**-0.1**	**0.5**
Private sector wage inflation[4]	8.7	**9.3**	**7.8**	**7.1**
Private sector employment[5]	0.7	**-0.2**	**0.4**	**0.7**
Private sector unit labour cost[5]	4.4	**3.4**	**4.2**	**2.6**
Real disposable income of households	4.3	**3.4**	**3.7**	**2.8**

*Our forecasts are based on information received up to 15 February 2005. For details on the changes in
our forecasts relative to the previous* Report *or a comparison with other forecasts, see Chapter 4.1*
[1] *ESA general government balance after adjustment for payments into private pension funds. Adjustment
based on the factors released by the CSO and the Ministry of Finance.*
[2] *This an analytical measure calculated by the MNB since 1998 as change in the augmented (SNA)
primary balance, adjusted for changes in payments to private pension funds. Negative values denote
contraction in aggregate demand.*
[3] *In the case of the general government sector, the thirteenth-month salary for 2004, to be disbursed in
January 2005, has been added to 2004 wages.*
[4] *The current forecast of private sector wage inflation covers the entire private sector, consistent with the
institutional statistics released by the CSO. By contrast, the November* Report *only included the weighted
average of wage inflation in manufacturing and market services.*
[5] *According to the CSO Labour Force Survey.*
[6] *Assumption for the fiscal path based on the Convergence Programme.*

1 Financial markets

Since the publication of the November issue of our Report on Inflation, except for a few minor shocks, both global and regional (i.e. Central and Eastern Europe) investor environment has remained exceptionally favourable.

Despite favourable international financial conditions, prospects for the equilibrium position of the Hungarian economy and hence the risk perception of forint-denominated investments has not improved significantly. Foreign investors' demand for forint-denominated assets has, overall, diminished over the past three months, though it seems to have started to increase in February.

The exchange rate of the forint has been relatively stable, with government securities yields on the decline. Stable exchange rate developments were probably due to market participants' expectations assuming the continuation of cautious monetary policy and the foreign exchange borrowing of the domestic private sector: foreign participants only contributed to the strengthening of the exchange rate in February. Diminishing short-term yields were due to the improving inflation environment and the stable exchange rate. However, long-term economic developments and the fulfilment of the convergence programme, aimed at the adoption of the euro, are still surrounded by considerable uncertainty.

1. 1 Foreign interest rates and investors' perception of risk

In 2005 Q1, similarly to most of last year, the international investor environment was rather favourable both on a global and a regional level.

The US and the European business cycles and interest rate developments have been showing a dissimilar picture for the last half year. Since the publication of our previous *Report*, the interest rate cycle has continued to move upwards in the US monetary policy: The Fed has raised the key interest rate three times, by 25 basis points each, to the current level of 2.5%. According to the Fed, the growth of the US economy has been robust and the basis of the upturn has become broader with no significant tension in the labour market and with moderate inflationary risks. Thus there is no reason for changing the present rate of tightening. Accordingly, the market is expecting that monetary accommodation will be removed at a measured pace, which is also shown in future prices: the market has priced in an overall interest rate increase of 75 basis points until summer in the price of futures transactions for the key interest rate.

Chart 1-1 Federal Reserve and ECB key interest rates
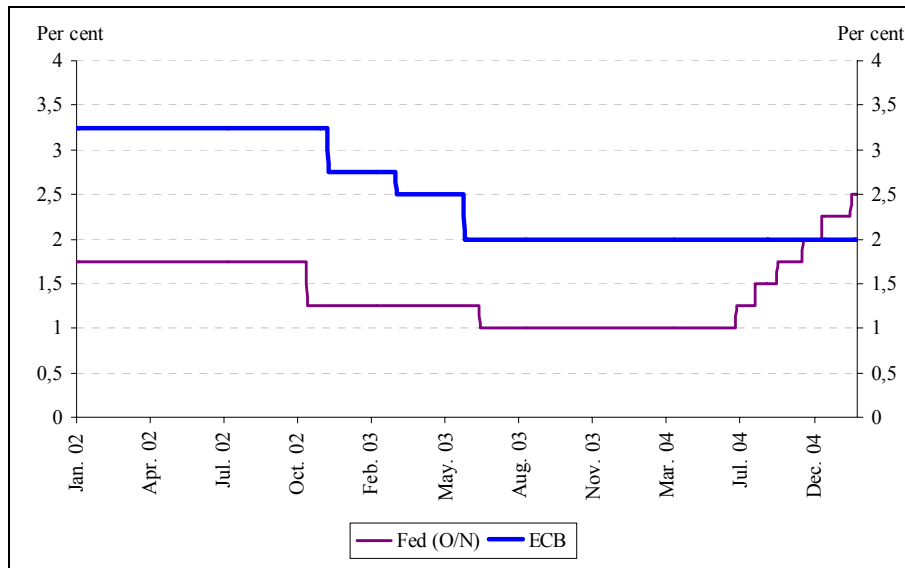
The ECB key interest rate is currently at a historically low level of 2 per cent which has remained flat for more than a year and a half, a level lower than the Fed's interest rate target from early 2005. The export performance of the euro area has been robust, while due to continued weak domestic demand and the US twin deficit the euro which has significantly appreciated vis-à-vis the dollar (and the Asian currencies pegged to the dollar) has limited the possibilities for economic recovery. The interest rate outlook in the euro area is surrounded by a rather high uncertainty as the weak business cycle (partly due to factors outside the scope of monetary policy) was accompanied by an inflation level exceeding the target in the last few months. Nevertheless, the ECB is expecting inflation to fall under 2 per cent in 2005. Euribor futures rates show that expectations for the interest rate increase are shifted to a later date, while a 25 basis point interest rate increase, priced in by the market, can already be seen in futures with June maturity.

Chart 1-2 Ten-year government securities yields
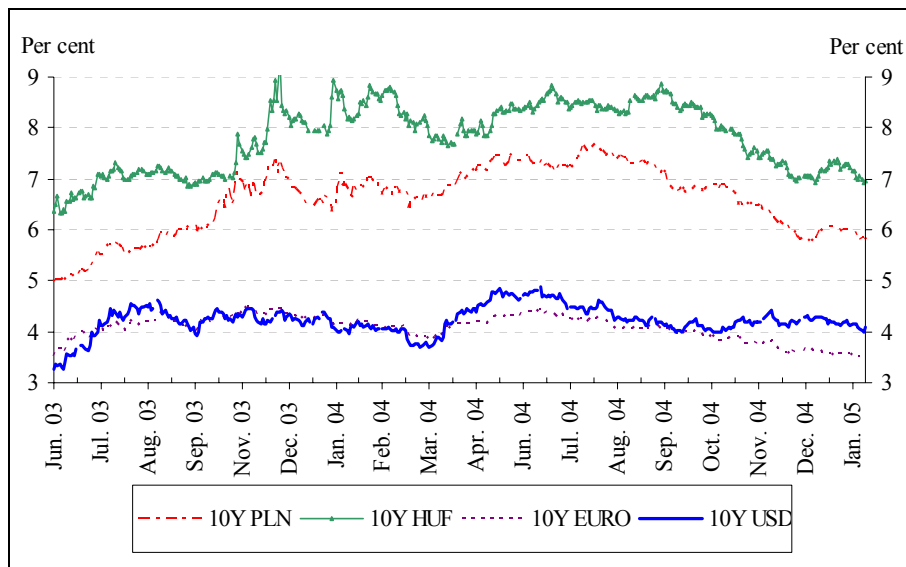
The difference between macroeconomic developments in the euro area and in the US economy is also reflected in the different paths of long-term government securities yields. Since the autumn of 2004 the formerly closely correlated US and European 10-year government securities yields have moved apart. Dollar yields are kept high by expectations of interest rate increases, while due to the weak dollar and the weak economic performance euro yields have declined further since November 2004.

The carry trade[1] activities, which has become more attractive by the global interest rate environment and the weakening dollar, have led to a rather strong risk appetite, also reflected in the lower level of global risk indicators. From mid-May 2004 to early 2005 both the EMBI index indicating the average country risk of emerging countries and the Maggie index showing the interest rate premium of euro bonds declined clearly reaching a historical low.

Expectations for a further weakening of the dollar and a more positive assessment of the fundamentals of emerging markets have also contributed to the increase of 'global risk appetite' making emerging market assets more attractive. The unexpected appreciation of the dollar on two occasions (in mid-December and early January), however, has temporarily decreased international risk tolerance and as a result the majority of emerging market currencies has temporarily depreciated somewhat. In January the falling trend of risk indicators was followed by a slight increase due to the re-strengthening of the dollar, but this proved to be a temporary development.

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[1] Carry trade: speculation to exploit the yield differential by taking excgange rate risk.

Chart 1-3 Global risk indicators

Per cent   basis points
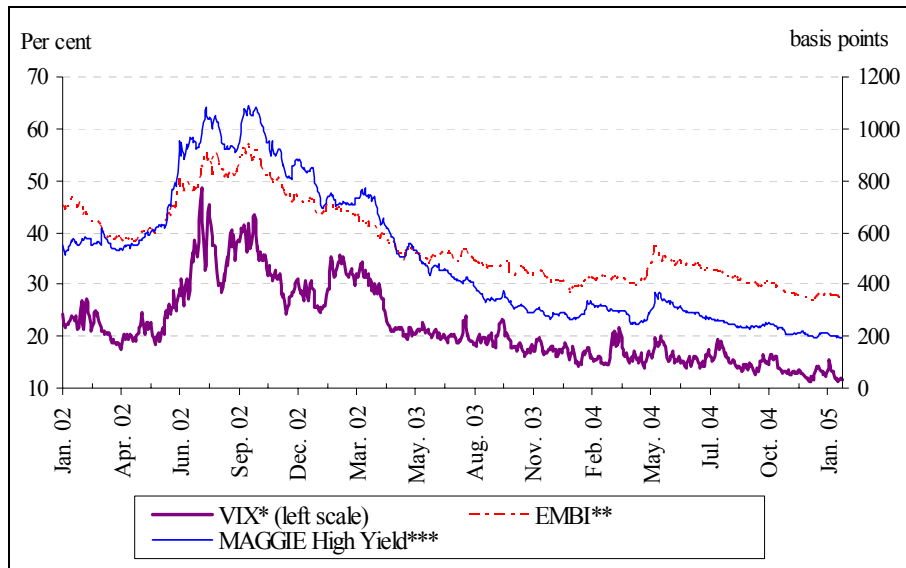
* *VIX – Implied volatility derived from options for the S&P500.*
** *EMBI Global Composite.*
*** *MAGGIE – Interest rate premium index (basis points) of euro-denominated corporate and government bonds calculated by JP Morgan-Chase.*

Apart from the Fed's interest rate policy, the reserve strategy of the world's central banks has a major impact on long-term US government securities yields as in the last few years more than 80 per cent of the deficit of the US current account was financed by the demand for dollar-denominated assets by predominantly Asian central banks. The willingness of central banks to further finance the US current account represents a non-negligible risk from the point of view of dollar-denominated long-term yields and hence the future development of global risk appetite.

Investors' perception of the fundamentals of the Central and Eastern European region clearly improved in the last quarter. In 2004 the budget deficit remained under the planned level in the Czech Republic, in Poland and in Slovakia which was mainly due to the greater-than-expected growth of these economies. The external balance was more favourable than anticipated and investors' perception of the current account is further improved by the significant role played by foreign investment capital in financing the deficit. Investors' improving perception of fundamentals together with growing risk appetite due to the weak dollar have induced a capital inflow of considerable size leading to the appreciation of regional currencies. The temporary, but rather marked strengthening of the dollar on 10 December resulted in the weakening of the exchange rates of the region's currencies vis-à-vis the euro, while the end of January and the beginning of February saw another wave of appreciation in the foreign currency markets of the region. Since early November the Polish zloty has strengthened by more than 8 per cent, while the Czech crown reached a two-year peak following a more than 5 per cent appreciation despite an unexpected interest rate cut by 25 basis points in early January. The Slovak crown has also appreciated by more than 5 per cent while the Slovak central bank tried to slow down the strengthening of the crown by interventions in the foreign exchange market. On 12 January Moody's credit rating agency raised the rating of Slovakia's long-term foreign currency debt from A2 to A3 and at the same

time improved the rating of crown-denominated short-term debt from P2 to P1 and the outlook of the ratings received a positive sign referring to the probability of later improvements in the ratings.

Chart 1-4 Exchange rates of some new EU member states vis-à-vis the euro (appreciation in per cent since 1 November 2004)
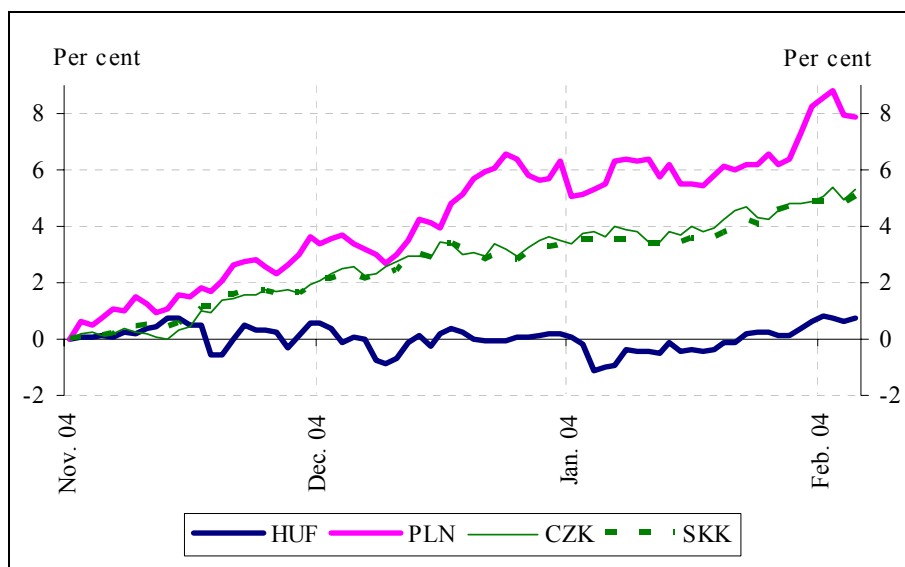
While in the last quarter Hungarian financial market developments took place in a favourable global and regional environment, most country-specific factors had an impact contrary to these positive tendencies. On 11 January Fitch credit rating agency revised down Hungary's long-term forint-denominated debt from A+ to A- in response to missing fiscal targets in the past. On 18 January the Council of Economics and Finance Ministers of the European Union stated in its resolution that the Hungarian government has not taken the necessary actions to terminate the excessive deficit and thereby left the adjustment path it had formerly agreed on with the other member states of the European Union. Apart from Hungary only Greece received a similar assessment among the countries under excessive deficit procedure and this has had an unfavourable impact on investors' perception of Hungarian fiscal policy. The November trade figures, however, caused a positive surprise showing a significantly more favourable balance than formerly published due to higher export and lower import figures. According to preliminary data the foreign trade deficit was lower than market expectations in December as well.

1. 2 Exchange rate developments

In the period since November 2004 the exchange rate of the forint vis-à-vis the euro was relatively stable. Similarly to the last quarter the exchange rate was characterized by low volatility, in the period from November to early February the exchange rate weakened only temporarily and moderately on a few occasions.

Chart 1-5 Exchange rate of the forint vis-à-vis the euro
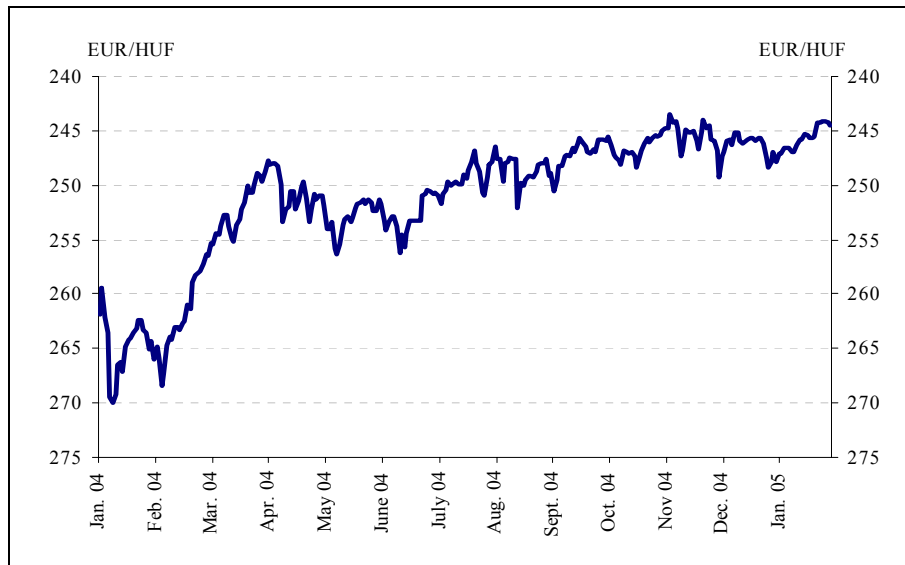
The exchange rate of the forint was affected by external and country-specific factors in a different way. Despite the especially favourable international risk appetite and investors' positive perception of the region there has been no clear sign of a fall in the risk premium expected from forint yields by foreigners in the period since November. The unfavourable assessment of forint-denominated investment is shown by the fact that the decline in the demand for forint-denominated assets by foreigners started in August has on the whole continued since November. Apart from negative expectations concerning the future developments of domestic macroeconomic fundamentals (i.e. high country-specific risks) this could also have been due to the fact that the exchange rate approached the edge of the intervention band making exchange rate risks one-way. In February foreigners' forint positions increased somewhat, although it is not clear yet if this will lead to a more lasting improvement of investors' perception of risk. The growing demand for forint assets by foreigners was probably mainly driven by increasing regional risk appetite.

Foreign investors' positions characterised by a decreasing trend until January is shown by the fact that the growth of their government securities stock was exceeded by the increase of their net swap stock. Based on all this it is likely that foreign investors did not mean to undertake forint positions by purchasing government securities and on the whole they decreased their exchange rate exposure by swap transactions. Since end-January, however, the increase in government securities has already been accompanied by decline in swaps indicating an actual inflow of capital.

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Chart 1-6 Government securities and net swaps owned by foreigners
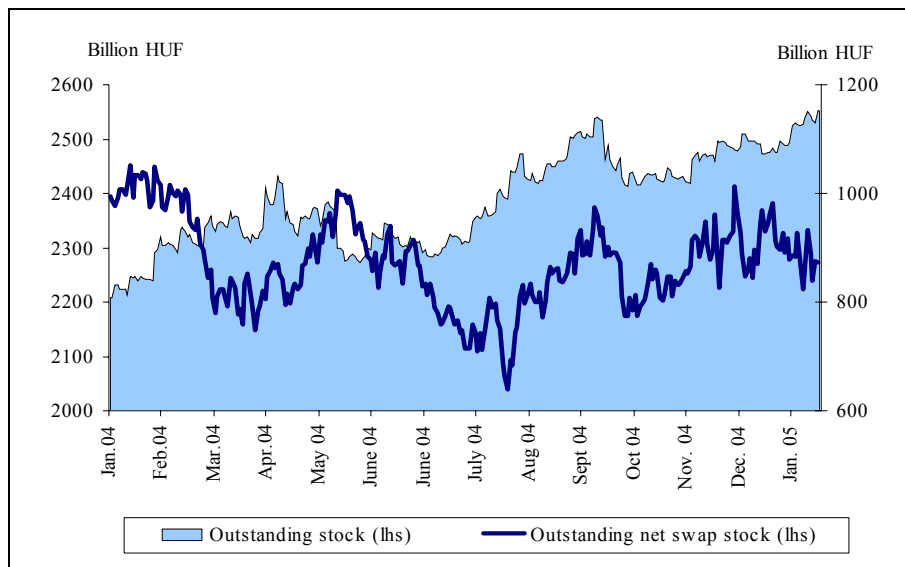
Foreign investors' positions were not reflected by changes in the exchange rate of the forint as the exchange rate has remained flat despite forint positions decreasing until January. The stabilisation of the exchange rate at a strong level was probably due in part to market participants' expectations regarding monetary policy. In addition, the growing foreign currency borrowing of the domestic private sector seeming stabile in the last few months also plays an important role indicating the fact that domestic participants' perception of risk (or risk preference) differs from that of foreigners. Foreigners' forint positions moved together with the exchange rate in only February.

The cases of slight weakening and strengthening of the exchange rate since November mainly caused by the fluctuations of foreign participants' perception of risk. The temporary increase in the uncertainty surrounding domestic fundamentals was reflected for example in the depreciation of the forint following Fitch's revising down of Hungarian government debt. Exchange rate fluctuations in mid-December and early January, however, can be attributed to the temporary moderation of global risk appetite as a result of the temporary weakening of the dollar. Although the extent of depreciation remained under 1 per cent in these cases, depreciation episodes show that a possible change in the favourable external environment may lead to the weakening of the exchange rate.

Chart 1-7 Euro/forint implied volatility
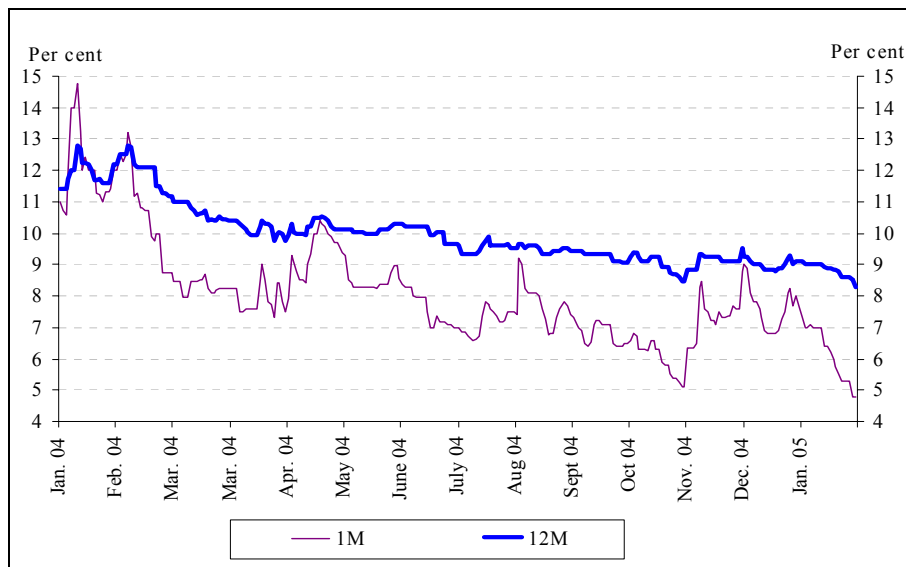
Indicators derived from macroanalysts' surveys and the prices of forint-denominated derivative products provide information on the expectations for the future exchange rate developments and the uncertainty surrounding these expectations. According to Reuters January survey the exchange rate expected by end-2005 has not changed in essence compared to the last few months even despite the fact that the exchange rate at end-2004 exceeded expectations somewhat. In January analysts anticipated an exchange rate of around HUF 254 on average by end-2005 counting for a few per cent depreciation by the end of the year. Until 2006, however, the exchange rate is to remain mostly flat based on average expectations. The Consensus Economics survey involving a greater number of foreign analysts predicts a somewhat greater depreciation by end-2005 than the Reuters survey (analysts' average was HUF 257 in January), while investors anticipate a slightly stronger exchange rate of around HUF 253.6. In the Consensus Economics survey analysts answered a question on the distribution of the probability of the exchange rate for the first time. According to this analysts attach a slight, but not negligible probability of 17 per cent on average to the exchange rate being more depreciated than HUF 265 by end-2005.

Based on the distribution arrived at from the answers to the Reuters survey the uncertainty surrounding expectations has not increased since October. Implied volatilities, the indicators of exchange rate uncertainty calculated on the basis of option prices, indicate a significant fluctuation in short-term uncertainty in the period since November. The one-month implied volatility having a peak in November has considerably decreased since mid-January, presumably due to the strong and stable exchange rate and since end-January longer-term indicators have also been indicating a decline in uncertainty.

Chart 1-8 Forint exchange rates and shifts in the Reuters analysts' exchange rate expectations
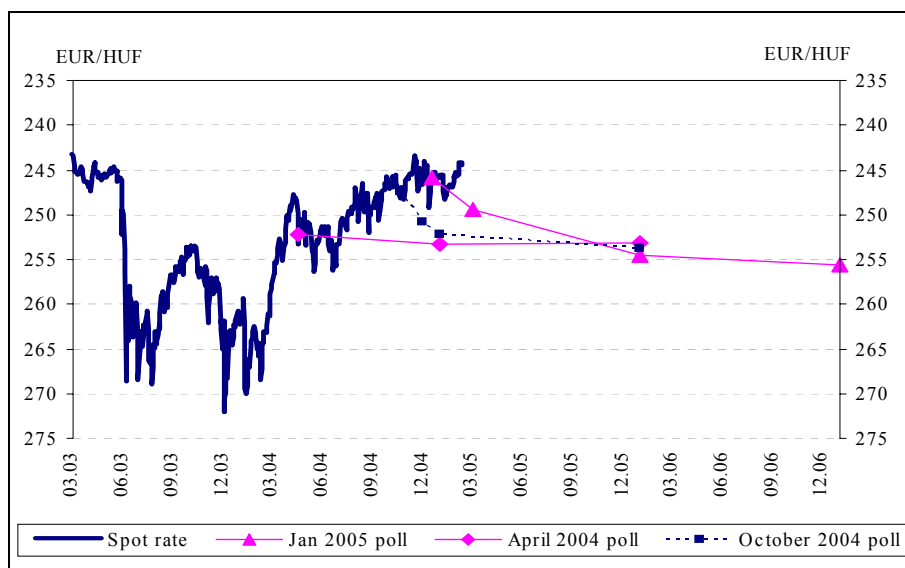
1. 3 Yields

The decline in yields in the Hungarian government securities market, which started last September, continued at all maturities in the first half of the period since last November. In mid-December they stopped declining and remained broadly flat with long-term yields rising slightly. Yields resumed declining again from mid-January. At end-January, benchmark yields were overall 50–150 basis points lower than in mid-November.

Chart 1-9 Benchmark yields in the government securities market
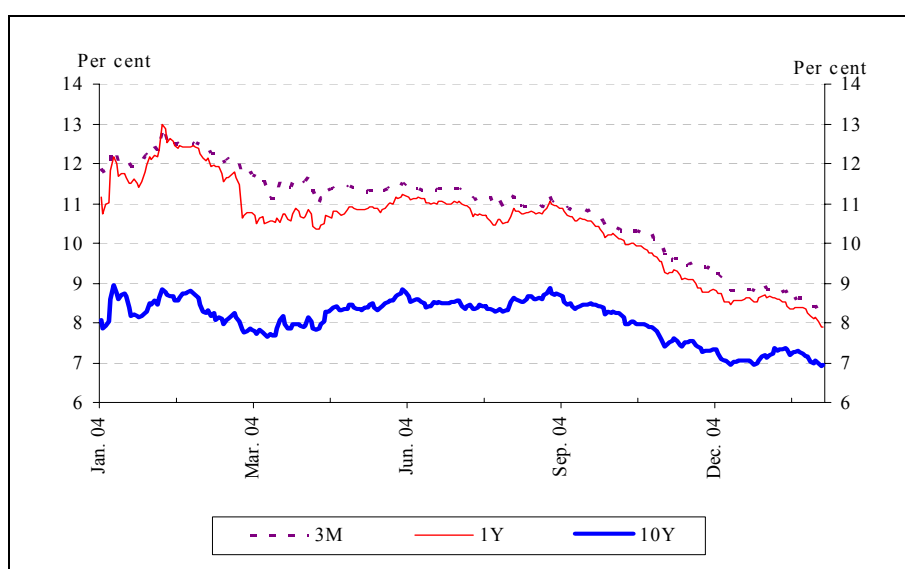
Developments in forint yields are influenced by trends in the international financial markets, which, except for a few minor shocks, have been favourable.Furthermore,

yields are also affected by changes in investors' risk perception. However, the Reuters survey in January and analyses by investment banks revealed that the market perception of equilibrium trends in the Hungarian economy, which is key to investors' risk perception, has not improved. This, combined with a decline in non-resident forint positions and short-term government securities since last autumn, suggests that foreign investors' risk perception has not improved in the short run.

Chart 1-10 Historical expectations for the current account and the general government deficit
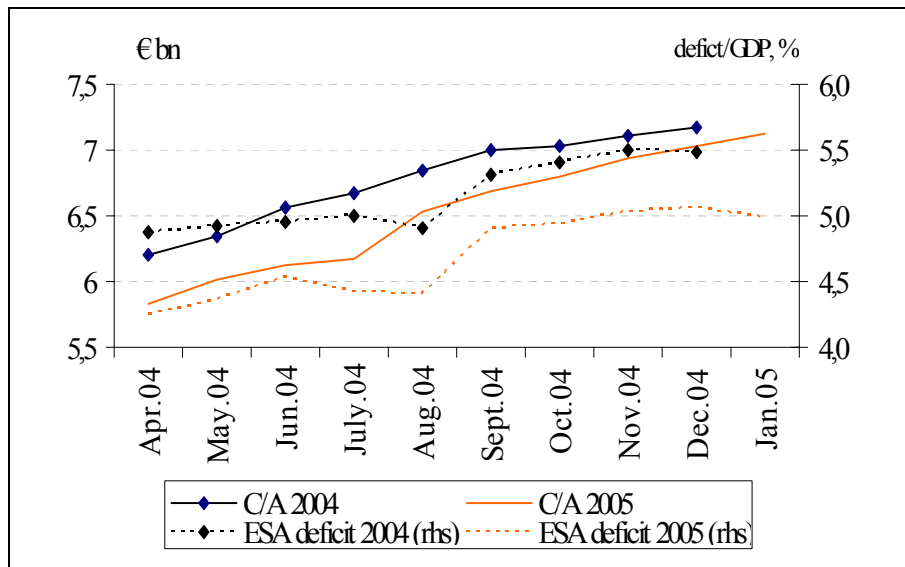
Thus, the underlying reasons for falling short-term yields might have been others than improving risk perception. One such factor may have been the inverted shape of the yield curve, which in itself generates falling short-term yields as time goes on. Other factors may have been expectations of faster cuts in the central bank base rate, for which the rationales may have been a favourable change in domestic inflation, and a permanently stable strong forint exchange rate.

The Monetary Council lowered the base rate by 50 basis points at each of its rate-setting meetings in November, December and January. Intra-day changes in yields reflected that these cuts had been in line with market expectations, leaving market yields roughly unaffected. The path of the base rate expected for the period between early November and mid-December moved downwards by approximately 50 basis points, then, following a brief period of stagnation, it shifted down by a further 50–100 basis points by mid-February. In mid-February, the yield curve indicated a further 170 basis point base rate cut until end-2005. The Reuters survey published in January suggested only a 100 basis point anticipated decline before end-2005 which was consistent with the shape of the yield curve at that time.

Chart 1-11 Anticipated path of the central bank base rate as per the forward yield curve
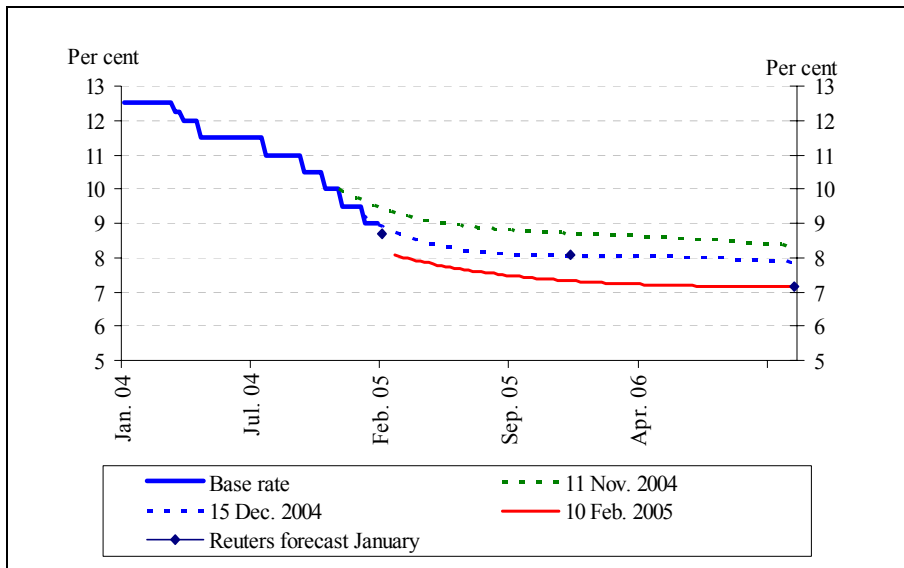
The developments of longer-term yields were characterised by different tendencies as compared to short-term ones. One of the underlying reasons for a decrease in long-term benchmark yields that has materialised since last November was falling short-term yields. The forward yield curve, which provides a picture of expectations about future forint yields by excluding the effects of short-term yields, showed an almost parallel downward shift between November and December 2004, revealing a marked drop also over the long horizons. There was further decline on the short horizon until mid-February. As euro yields influence forint yields significantly, a more reliable picture can be obtained if their impact is excluded. The forward yield differentials suggest that domestic trends accounted for falling yields only up to a maturity of three years. Longer horizons reflected only the decline in euro yields.

Chart 1-12 Derived forward yields at separate points of time
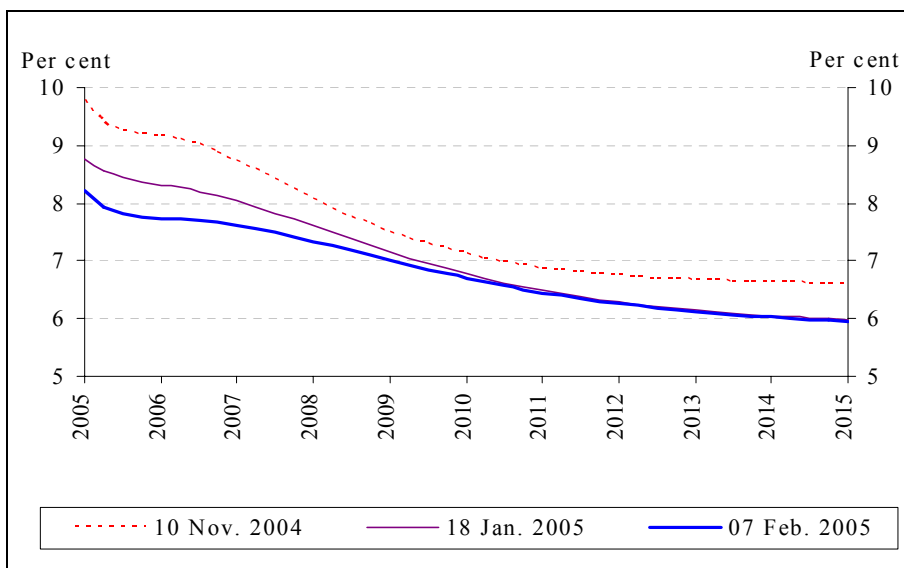
The stagnation of forward differentials starting 5 and 10 years ahead point to the fact that the uncertainty about the longer term prospects for the Hungarian economy has not eased. As long-term forward differentials are indicative of market expectations about Hungary's entry date into the euro area, their high level suggests that the perception of the convergence path remains rather unfavourable. The Reuters survey also reflects unchanged expectations for the country's entry into the Euro area.

Chart 1-13 3-month derived forward differentials

1. 4 Monetary conditions

Monetary policy exerts its impact on the real economy mainly through real exchange rates and real interest rates. Due to the key importance of foreign trade in Hungary, the role of the exchange channel is more important. This section provides a brief outline of recent changes in these variables, and of market participants' view of future developments in them. In assessing market expectations, we rely on the Reuters survey, which is, though not a representative sample of all economic participants, presumably good approximation.

Real exchange rate

In line with the trend in early 2004, the real effective exchange rate, calculated on the basis of the CPI, appreciated by approximately 3 per cent between August and December. Similarly to H1, real appreciation was attributable to the appreciation of the real effective exchange rate, generated by, in addition to the appreciation vis-à-vis the euro, the depreciation of the dollar vis-à-vis the euro.

However, the real exchange rate path, calculated on the basis of market participants' expectations for the nominal exchange rate and inflation, no longer suggests any further real appreciation before end-2006. The extent of the depreciation of the nominal exchange rate, expected to materialise before end-2006, somewhat exceeds the anticipated inflation differential, which points to slight real depreciation. Thus, the

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expected trend in the real exchange rate remains slightly below the rate of the equilibrium real appreciation that characterises the Hungarian economy.

Chart 1-14 Monetary conditions: the CPI-based real exchange rate and its components
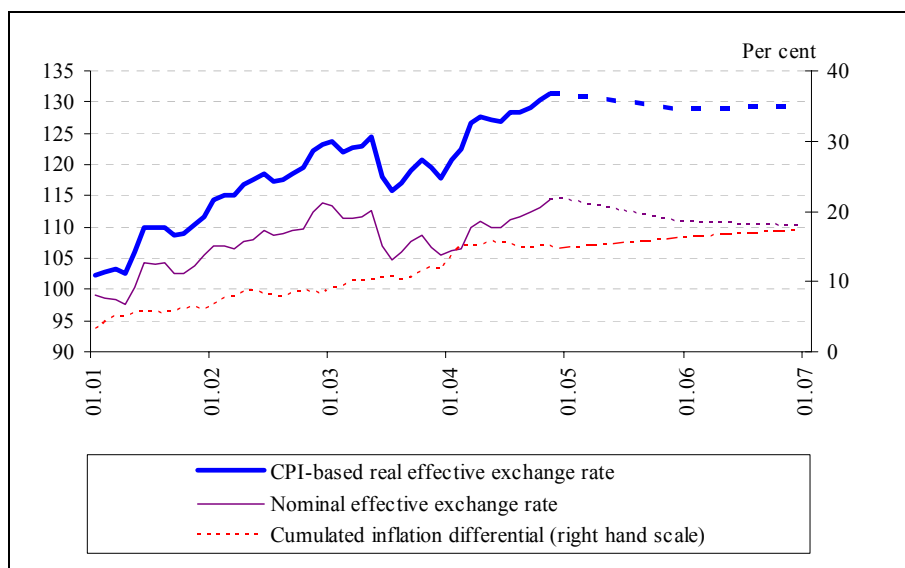
* Real effective exchange rate, a year 2000 average = 100 per cent. Higher values denote real appreciation. Our estimates of expectations for end-2006 were based on a Reuters consensus on inflation and the exchange rate. We assumed that inflation in trading partner countries would not change, relative to a year-on-year average, and that expectations for the appreciation of the effective exchange rate would be identical to those for the appreciation of the forint vis-à-vis the euro.

Real interest rates

Unlike the real exchange rate, which appreciated slightly, the forward-looking real interest rate, crucial to economic decisions, has plummeted over the past few months. Its current 4 per cent level cannot be considered as historically high either. The main underlying reason for declining forward-looking real interest rates is the fall in one-year yields, while inflation expectations calculated on the basis of Reuters surveys have only decreased slightly. Analyst expectations suggest that forward-looking real interest rates may decrease slightly by end-2005, since analysts have projected a smaller decrease in inflation than in yields.

Contemporaneous real interest rates have not decreased to a similar extent, the reason for this being that consumer inflation has fallen significantly over the past months. That is, indeed, why the two real interest rate indicators have converged. The difference, brought about mainly by the impact of last year's raises in indirect taxes on actual inflation, is likely to diminish further, as actual inflation may fall to a larger extent than will inflation expectations for next year.

Chart 1-15 Monetary conditions: the real interest rate*
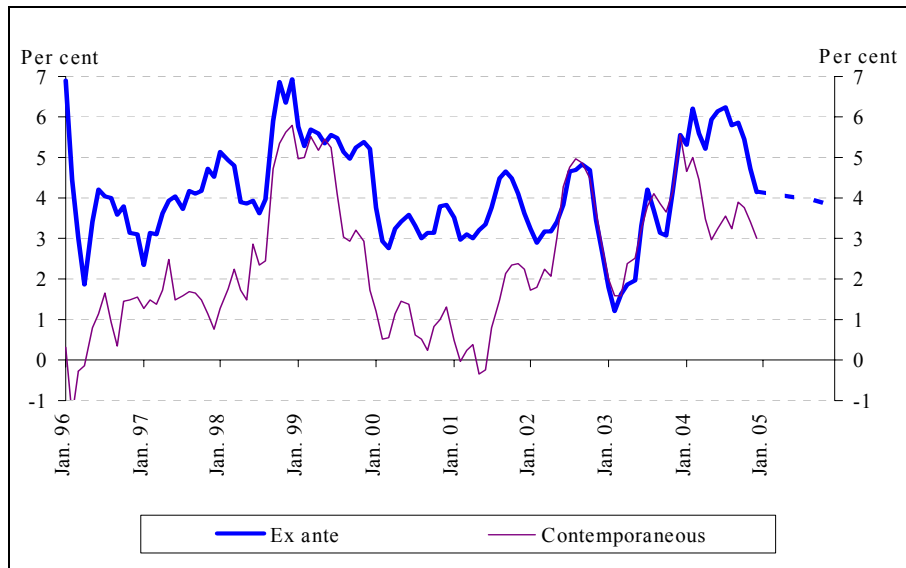
* Monthly averages of one-year government bond yields deflated by the current 12-month inflation and Reuters' one-year ex ante inflation consensus (year-end values, derived from expectations for average inflation by using interpolations). Expectations for January 2006 were calculated using Reuters' inflation consensus on one-year yields.

2 Inflation and its determining factors[2]

2. 1 Economic activity

After vigorous growth in 2004 H1, the uncertainty surrounding the perception of the domestic business cycle increased to some extent in 2004H2. While capital investment was robust, output and exports showed signs of slowdown. However, data already available on 2004 Q4 mostly suggest the business cycle remained as vigorous as it was in 2004 H1, but, it is not simple to interpret data for December. Thus, data are sometimes contradictory which adds to uncertainty; however, overall, economic upswing seemed to continue.

2. 1. 1 External demand

Major trends in the business cycle in Europe changed considerably in 2004 Q3, compared to H1, and, by and large, contributed to a slower economic recovery. Though, after a long period of being broadly flat, capital investment activity in the Euro area finally seemed to gain momentum in 2004 Q3, associated imports led to considerable deterioration in net exports. As a result, despite a significant increase in inventories, economic growth slowed markedly in Europe. GDP growth in Hungary's trading partner countries fell from an annualised rate of 2.2 per cent in Q2 to 1.3 per cent in Q3.

At the same time, however, high demand for imports in the Euro area resulted in an expansion of 12.2 per cent in the size of Hungary's export markets (weighted import volumes of Hungary's 15 largest foreign trade partner countries). This, together with the upwardly revised 10.7 per cent growth in Q2, translates into such robust expansion in external demand that was last experienced 4 years ago. This must, however, be taken with caution, as data on imports are subject to massive revision. Thus, we cannot rule out the possibility that, taken together with data on Q4, they will, after all, attest to somewhat more moderate growth.

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[2] Our analysis is based on data published before 15 February.

Chart 2-1 Size of Hungary's export markets* and GDP in its major foreign trade partner countries
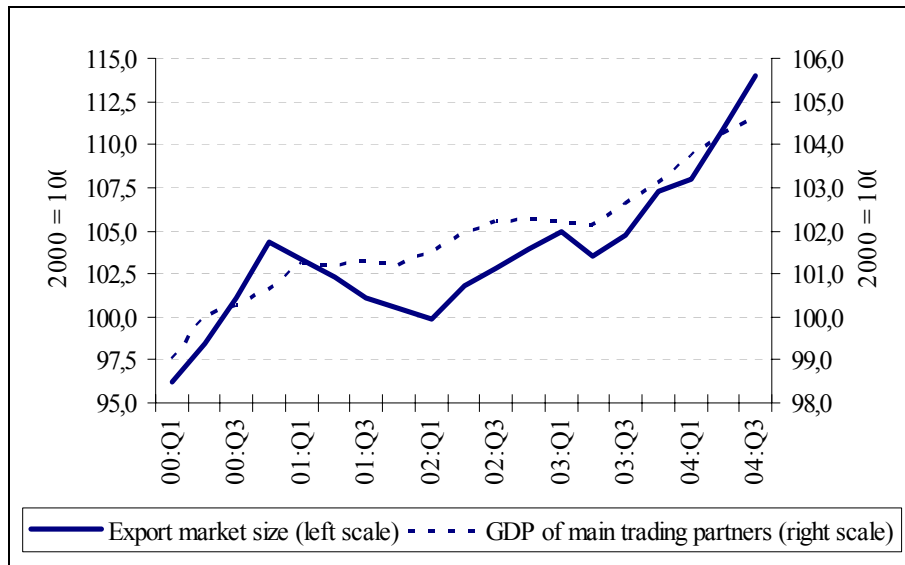
* Volume of imports in Hungary's major foreign trade partner countries weighted with Hungarian exports in a breakdown by countries.

Considering actual data for 2004 Q3, in the whole of 2004, GDP growth in Hungary's foreign trade partner countries was lower than what was expected in November; by contrast, expansion in the size of Hungary's export markets is likely to have been stronger.

Short-term perspectives suggest more sluggish economic activity. This is substantiated by a decline in the volume of new orders and flat business climate indices. A somewhat sudden increase in December in the IFO index, an indicator of manufacturing business activity in Germany, still does not constitute a challenge to this.

Chart 2-2 Business climate indicator for the euro area (EABCI) and Germany (IFO)
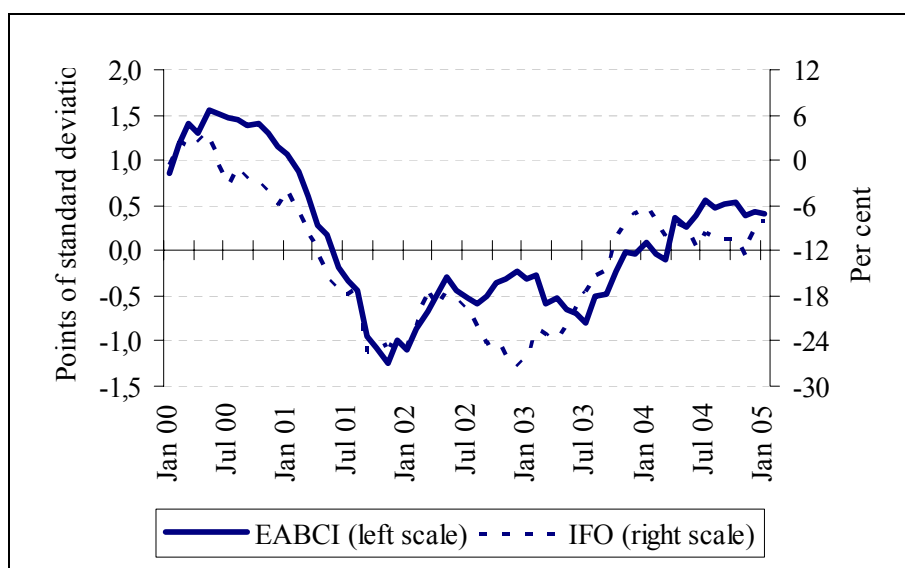
2. 1. 2 Output

Slowdown in the domestic business cycle in 2004 Q3 was best reflected in output. As regards its components, growth in manufacturing value added was lacklustre already in 2004 Q2. Growth in Q3, which amounted to a mere 0.7 per cent even when annualised, had been the slowest since a recovery in the domestic corporate business cycle started to accelerate in early 2003. Although, compared to the previous quarter, growth in value added in market services was somewhat smaller (an annualised 3.1 per cent) in Q3, its pace accords better with our perception of the business cycle.

In order to provide a subtle picture, we must note that while revising data on GDP in 2003, the Central Statistical Office (CSO) performed a significant revision of output series. As a result, the level of manufacturing output is higher than it was assessed earlier, but it has been growing at a slower pace. As regards market services, revised output turned out to have been lower; its growth rate, however, matched the rate assessed earlier.

Industrial production series, less subject to revision, confirm slowdown in 2004 Q3 unambiguously; however, available data on Q4 suggest a new upswing. What makes the degree of this upswing hard to asses is that there were several instances of unusually long downtime in day-to-day business at some large multinational companies in December 2004. In the case of some businesses, this is likely to have been associated with heightened activity in October and November. Overall, hard as it is to assess its degree, manufacturing output picked up in Q4.

As to market services, no reliable indicators are available yet on trends in Q4. Given the 2003 revision of data on value added in the sector, growth is likely to have been smaller, relative to what was expected in November even if its strength remained broadly flat.

Chart 2-3 Value added in manufacturing and market services
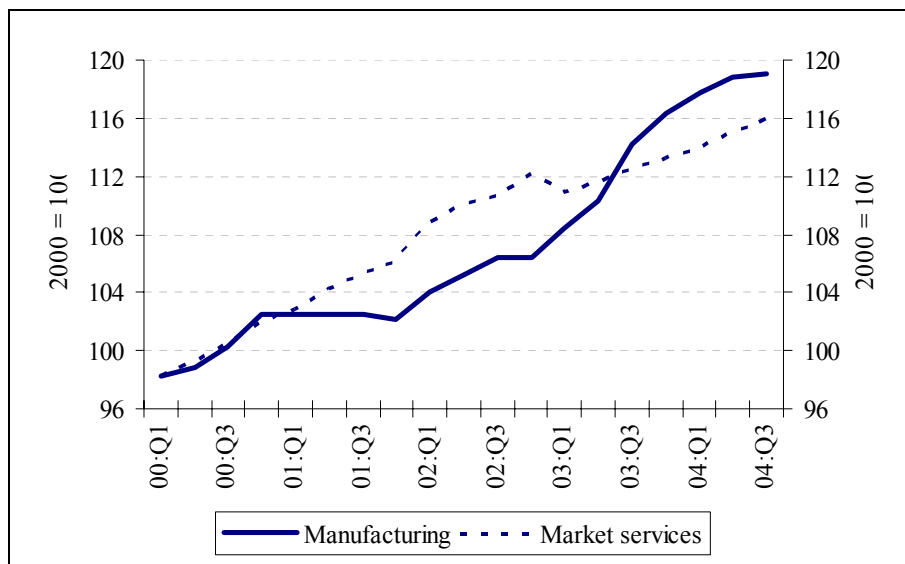
Due to its low growth in 2004 Q3, manufacturing hardly made any contribution to whole- economy output, thus components of output time series representing lower weights also played a part in it. One of these components is a hike in value added in

agriculture in 2004, which was substantially revised already at the time when data on Q3 GDP were published. Based on CSO's seasonally adjusted data, for instance, annualised quarterly growth was 143 per cent (!) in 2004 Q1. Then, following more moderate growth in Q2, it rose again, amounting to an annualised 26.5 per cent.

Smoothing quarterly fluctuations, growth in value added in construction followed a decelerating trend in 2004. This is likely to reflect narrowing demand for new homes. Though annualised growth in Q3 still stood around 6 per cent, it was only sustained by slow supply adjustment in the sector.

2. 1. 3 Household consumption, savings and fixed investment

Households' consumption expenditures grew by an annualised 3.8 per cent in Q3, pointing to the fact that, following robust consumption between 2001 and 2003, households were more frugal in consumption. Nevertheless, even this modest growth was higher than expected in November, when we thought that, due to decelerating growth in households' wage-type income and an increase in their financial savings, household consumption might slow down to an even larger extent. Of late, households' propensity to consume has stabilised at a high level both historically and in an international comparison.

We suspect that the ultimate underlying reason for higher household consumption is easing liquidity constraints. This is corroborated by the fact that data on household savings were revised down in financial accounts in Q2, as instances of households' hire purchases under financial leasing contracts were more numerous than estimated earlier. Furthermore, as we mentioned in November, there is likely to have been a significant increase in other types of household income (e.g. income earned on securities and property leasing).

Chart 2-4 Household purchased consumption expenditure and real income*
Annualised quarter-on-quarter growth rates
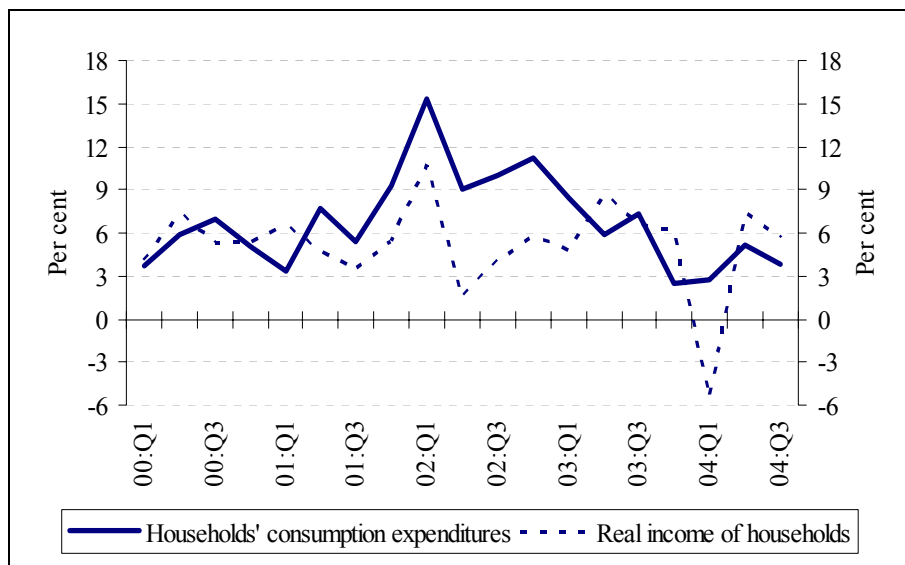
* Households' wage and other types of income deflated by the consumption expenditure price index.

As regards household fixed investment, because of the buoyant turnover in the segment of home furnishings reflected in retail statistics, we believe that growth, in keeping with our expectations in November, is likely to have remained high in Q3 and, probably, in Q4. However, the remaining items of the retail statistics, based on data for October and November, already suggest slower household consumption. (This holds true of new car sales, in particular, accounting for approximately 20 per cent of retail turnover.)

2. 1. 4 Corporate fixed investment and inventories

As was assumed, the decline in corporate fixed investment in 2004 Q2 proved temporary. Q3 saw growth resume at a pace, that can be deemed unexpected, relative to the slowdown in business activity that could be inferred from other trends (mainly in output). Although corporate fixed investment has been following an indisputably rising trend since the pickup in the business cycle in 2003, it has been highly volatile.

Chart 2-5 Corporate fixed investment (at unchanged year-2000 prices) and capacity utilisation*
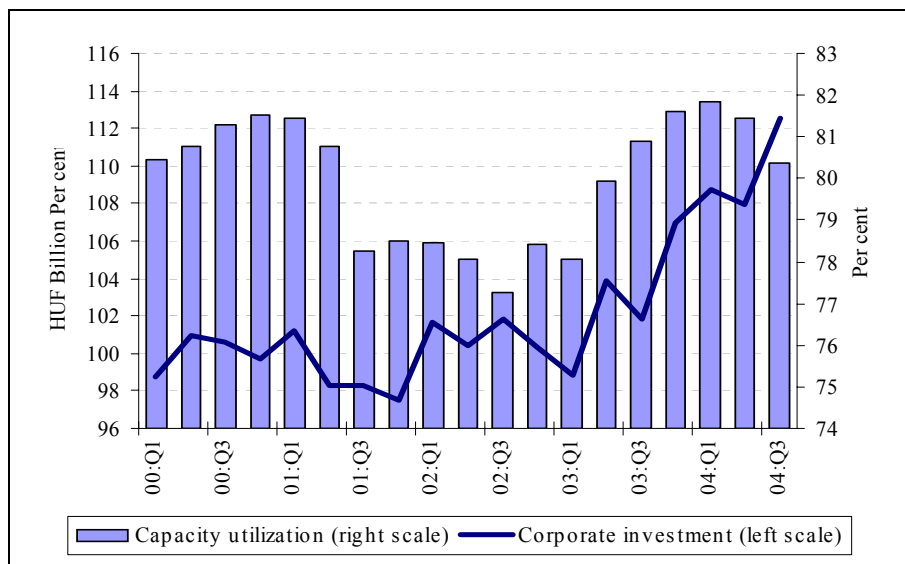
* Kopint-Datorg business cycle survey, seasonally adjusted by the MNB. Corporate investment is MNB estimate.

Presented in the business cycle surveys conducted in Q4, developments in capacity utilisation suggest lower growth in Q4. When seasonal fluctuations are excluded, we find that capacity utilisation has not risen for a year now. On the contrary, it has declined. Thus, future capacity constraints do not seem threatening. However, even though it could have been significantly lower in Q4 than in Q3, on the average of 2004, growth in corporate fixed investment may have been considerably higher than in previous years.

Developments in inventories suggest that the trend in 2004 H1 that, despite expected slowdown in household consumption, commercial stock kept growing vigorously while manufacturing inventories flopped, seems to settle. In Q3, against a backdrop of

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markedly lower growth in commercial stocks and moderate growth in manufacturing inventories, the level of whole-economy inventories remained broadly unchanged.

Chart 2-6 End-of-quarter inventories at unchanged prices
Contribution to annualised quarter-on-quarter growth rates
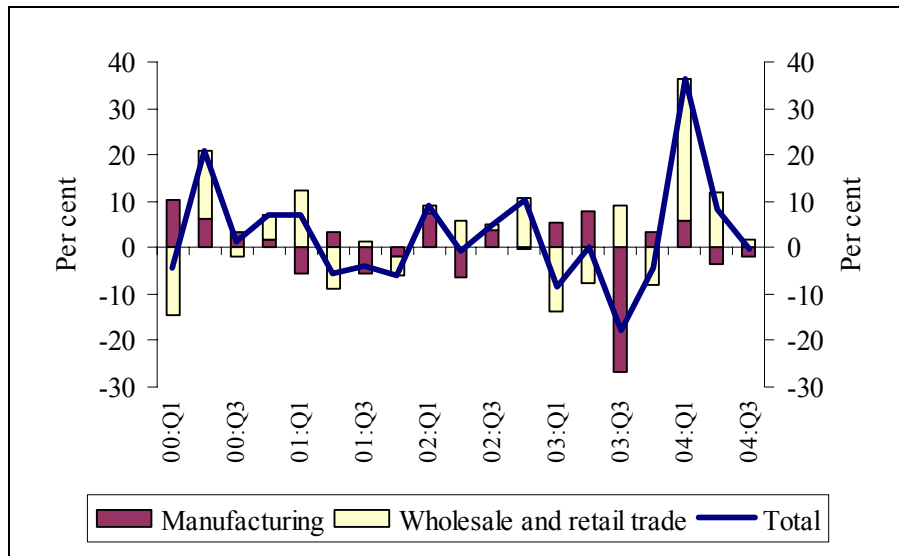
2. 1. 5 External trade

Q3 data under the system of national accounts reveal marked slowdown in exports (annualised quarterly growth fell from 13.8 per cent in Q2 to 4.6 per cent in Q3); imports reflect outright recession (a 9.3 per cent flop from an increase of 25.3 per cent in Q2). For reasons of settlement methodology, as regards data on external trade, it is not primarily the time series under the system of national accounts that have information content with respect to the business cycle.[3]

We seek to grasp permanent trends underlying data on external trade by providing an estimate for trends in (originally) monthly trade series on trade in goods. As the original time series published by the CSO are rather noisy due to a methodological shift and one-off effects in 2004, permanence in their trends can only be assessed if one-off factors are identified and excluded. This holds true, in particular, for the import of goods, as effects attributable to Hungary's EU accession (e.g. purchases brought forward and the recording, immediately upon accession, of goods imported from the EU and stored in public warehouses prior to the accession) distorted the 'natural' dynamics of the time series considerably. Based on estimates for trends, in line with the slowdown in industrial output and sales, growth in the export of goods also seem to be losing momentum. However, in contrast to the trends reflected in national accounts, we can detect no decline in imports; on the contrary, though at an increasingly slower pace, growth continued in Q3. This, owing to expansion in fixed investment, is likely to have been the outcome of stronger-than-expected domestic absorption.

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[3] This is explained by the fact, that trade data in the national accounts are left unaffected by the one-off changes brought about by the EU accession. It is possible, however, to correct for these effects in goods trade data.

Chart 2-7 Exports of goods
At current prices
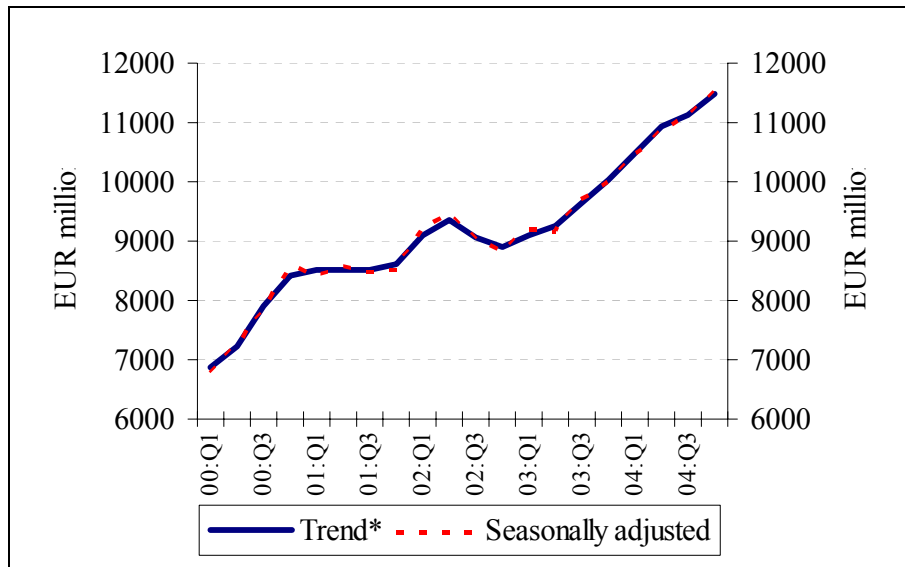
* Time series excluding transitory effects.

Chart 2-8 Imports of goods
At current prices
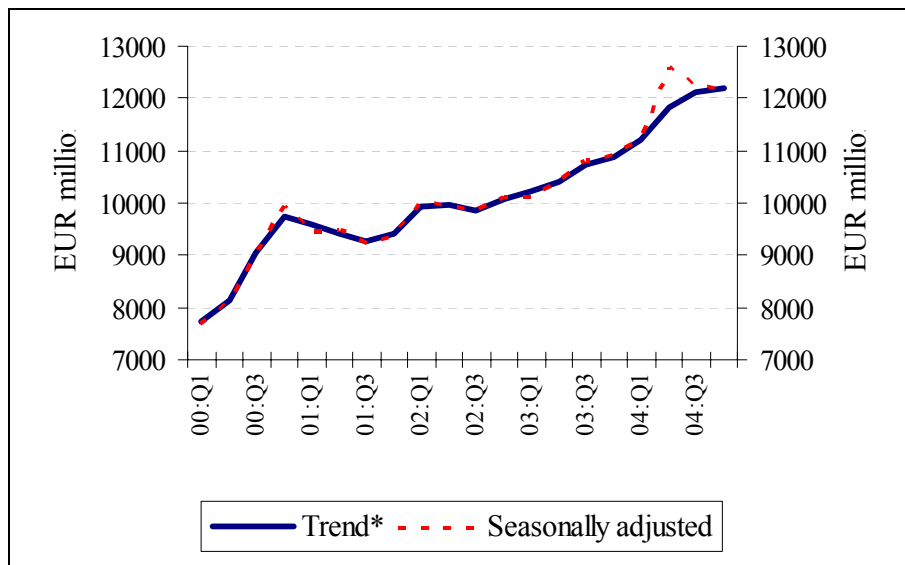
* The seasonally adjusted data series is adjusted original CSO data. Trend data series were corrected for import purchases brought forward and the public warehouse effect. Correction for the former meant deducting an amount of EUR 350 million from growth in imports in March and April, which, distributed evenly, was added to growth during the rest of the year. Correction for the latter meant deducting, on the basis of CSO's most recent data, a total amount of EUR 855 million from the value (the c.i.f. value) of imports during the period between May and November. Correction for the public warehouse effect was excluded from the data series for good.

Trade data for Q4 (which are preliminary with respect to data for December) suggest revived acceleration in the export of goods, consistent with the pick-up in industrial

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export sales in 2004 Q4. However, growth in imports continued to slow down in Q4, thus trade deficit was lower in 2004 than we expected it to be in November.

2. 1. 6 Competitiveness

Real effective exchange rate indices, measuring competitiveness on a cost and price basis, appreciated in real terms in Q3. In the case of PPI-based and ULC-based indices, appreciation can be attributed, in equal measure to the appreciation of the nominal exchange rate of the forint and a rise in producer prices and unit labour costs exceeding the amount of rise abroad. With appreciation lower relative to the other two time series, the CPI-based real effective exchange rate index reflects, almost exclusively, the appreciation of the exchange rate of the forint, since the rise in consumer prices only slightly exceeded that in consumer prices abroad.

Chart 2-9 Real effective exchange rate indices*
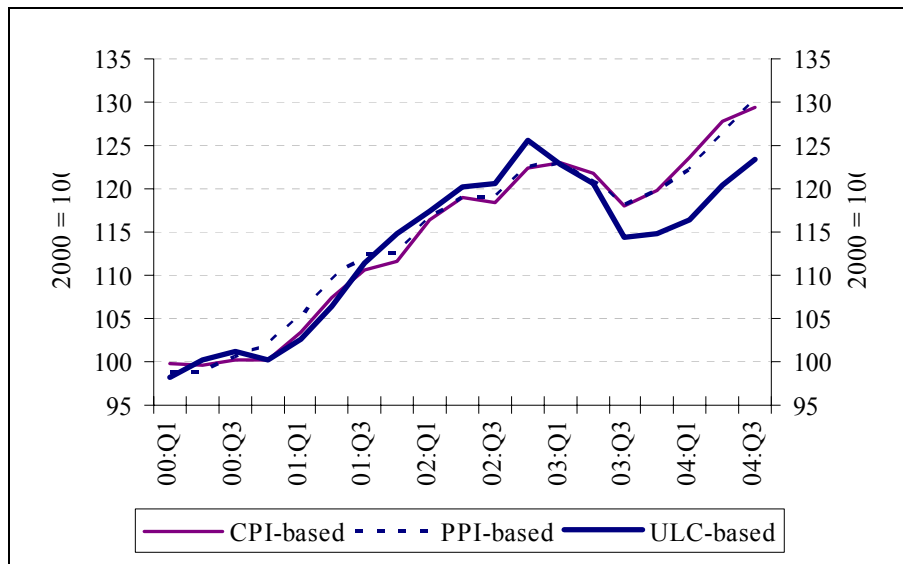
* CPI: consumer price index, PPI: producer price index, ULC: unit labour cost index. Higher values denote real appreciation.

Measuring competitiveness exclusively on the basis of prices and costs may lead to one-sidedness in the case of such economies where there is a clear distinction between companies focusing mainly on domestic sales and those focusing mainly on sales abroad. There are several such multinational companies in the manufacturing sector in Hungary that purchase input mostly abroad, and sell almost exclusively abroad. Developments in domestic prices and costs are only a minor component of the cost structure of such companies. Furthermore, export companies also have other means at their disposal, e.g. reducing their profit margin, to mitigate deterioration in their competitiveness, thereby continuing to be able to retain their customers abroad. In consequence, the markets share indicator provides an important item of information on its competitiveness.

In the first 8 months of 2004, Hungary's share in the market of the former EU 15 countries (the target of over 70 per cent of its exports) grew at a slow, but steady pace,

which had been characteristic since 2001–2002. This, in turn, means that real appreciation has not led to loss in market share. Interestingly enough, increase in the Polish economy's share in the market of the former EU 15 countries, which was vigorous even in 2003, slowed down significantly. As regards the Czech economy, there was an outright decline in its market share, judging from data for the period until August.

Chart 2-10 Hungary's market share in EU 15*
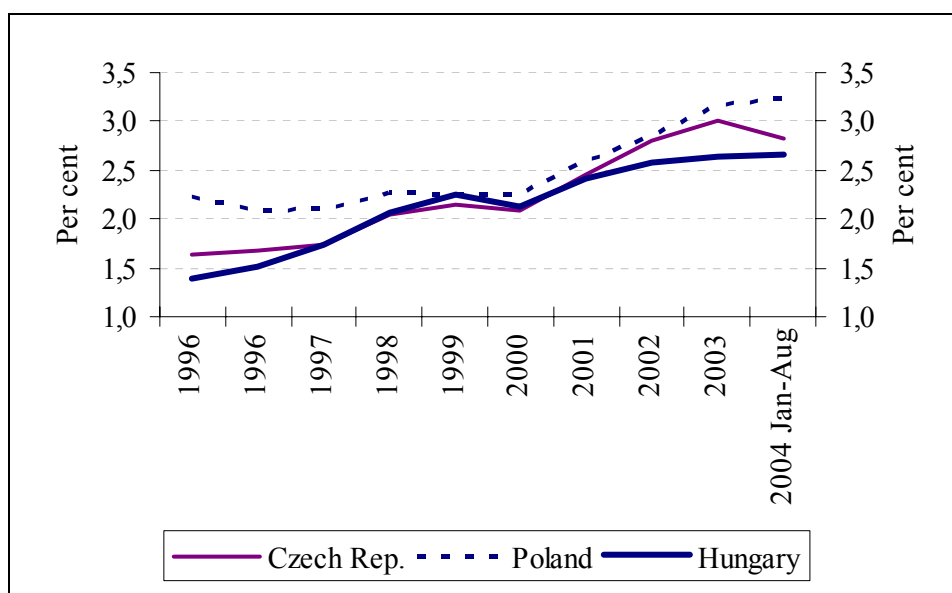
* Share in the overall imports of goods of EU15 from non-EU15 countries. Data calculated from time series at current prices on trade in goods

2. 1. 7 Economic growth

GDP grew by 4.1 per cent in the first 3 quarters of 2004. As regards output, growth was attributable primarily to a thriving manufacturing sector. The revised data for 2003 revealed that the contribution of market services to growth had been lower. Despite its minor weight, agriculture, with growth exceeding 30 per cent in the first 3 quarters of 2004, accounted for 1 percentage point in overall economic growth.

On the expenditure side, fixed investment was a top contributor to growth, though, owing to the large weight attached to it, household consumption, modest as growth in it was, was also an important contributor. Due to the high volumes of imports in 2004 H1, as attested to by national accounts, the contribution of net exports to growth was negative, though only to a slight extent.[4]

Based on what was discussed earlier, major expenditure items are likely to have increased to a lesser degree in Q4. On the output side, though manufacturing growth

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[4] As was mentioned in the section on external trade, the interpretation of data for imports was subject to several one-off factors, which makes the evaluation of trends more difficult. It is, however, important to note, that the CSO did not perform the correction of GDP-based import data warranted by the one-off effect of the release of goods from public warehouses referred to earlier. Thus, robust imports also reflect, at least in part, changes in accounting methods.

might have been robust, the overall weight of the sector in the overall whole-economy value added hardly exceeded 20 per cent. As regards the other sectors, their value added only grew at a more moderate pace. Thus, overall, though increase in GDP was smaller in 2004 Q4 than in Q3, average annual growth is likely to have amounted to 4 per cent.

Chart 2-11 GDP
Annualised quarter-on-quarter growth rates
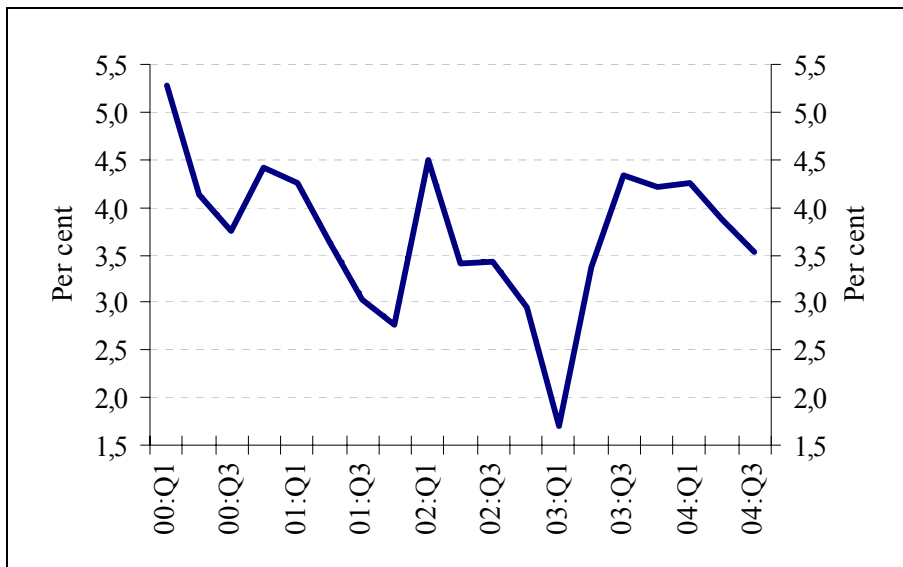
In a regional comparison, based on data for the first three quarters, economic growth in Hungary continued to exceed that in the Czech Republic, but it fell behind economic growth in Poland. It was deterioration in net exports that put a brake on economic growth in the Czech Republic (the country's market share also shrank in the market of EU as was pointed out in Chapter 2.1.6). In Poland it was continuously strong domestic absorption that sustained consistently robust GDP growth.

Chart 2-12 GDP growth in the region
Annual growth
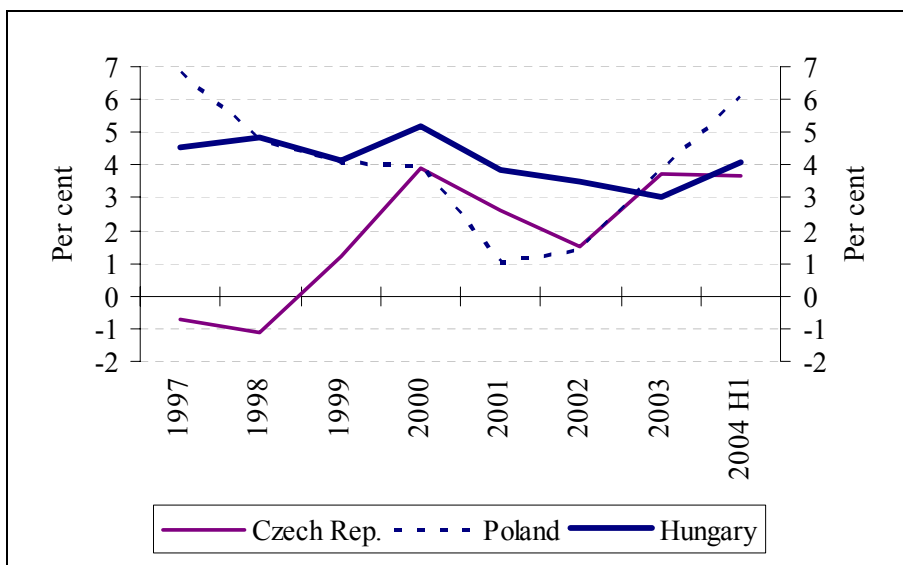
2. 2 Labour market

Judging from data available for end-2004, it seems that earlier tightness in the labour market further eased in the final months of 2004. This is underpinned by less intense labour use, as well as subdued wage growth. [5]

2. 2. 1 Labour use

Available data suggest that growth in private sector labour use started to slow at end-2004. We can keep track of changes in labour use by relying on statistics on the total hours worked, which provide an aggregate measure for changes in employment and labour intensity (average number of hours worked). Most recent data reveal that the underlying reason for less strong labour use is slower increase in both employment and labour intensity.

Vigorous growth in the number of total hours worked in the private sector, which started in mid-2003, came to a halt in 2004 H2, and it has not risen significantly over the past months. Slowdown in earlier growth rate is attributable to more moderate labour use in market services and, within this, sectors dependent on domestic demand (e.g. trade, hotels and restaurants). The total number of the hours worked in the manufacturing sector continues to decline steadily, which is the outcome of, in addition to the ongoing phase-out of activities in the textile industry, much less heavy labour use in machinery over the past months.

Slackening labour use in manufacturing continues to be attributable to reduction in employment to an extent that exceeds labour intensity growth. Opposite trends in employment and the average number of working hours continued at end-2004, thus there has been an unbroken increase in the latter for nearly 18 months with the former declining simultaneously. Though, recently such an increase due mainly to broadly flat average working hours in machinery has apparently come to a halt, steadily improving productivity and vigorous investment activity corroborate our assumption, that of late capital intensity has increased in manufacturing production.

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[5] December data has been published after the cut-off date of the Report. According to tha data wages in the corporate sector increased by 9.4% in December, and by 9,3% in the whole year. These numbers are in line with our expectations.

Chart 2-13 Number of the hours worked
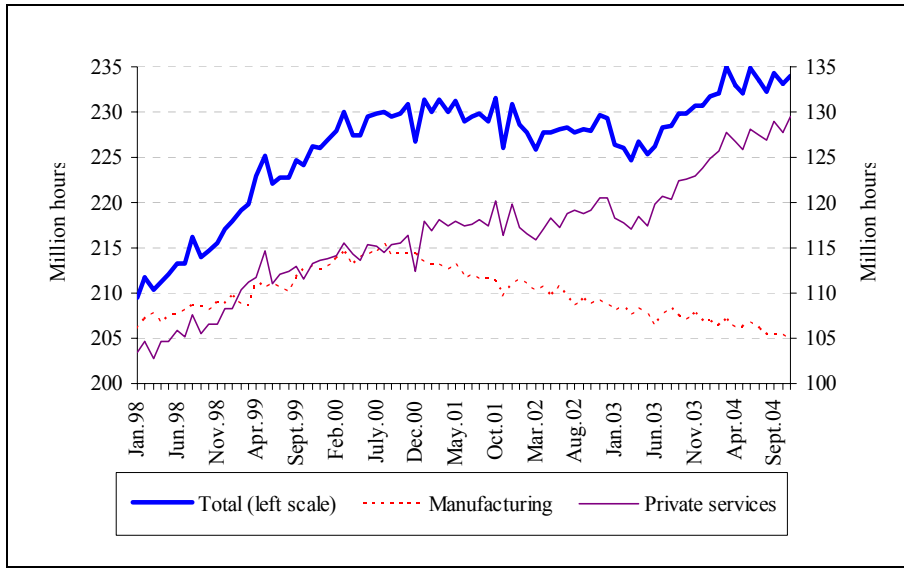
Chart 2-14 Average hours worked by manual workers and employment in manufacturing
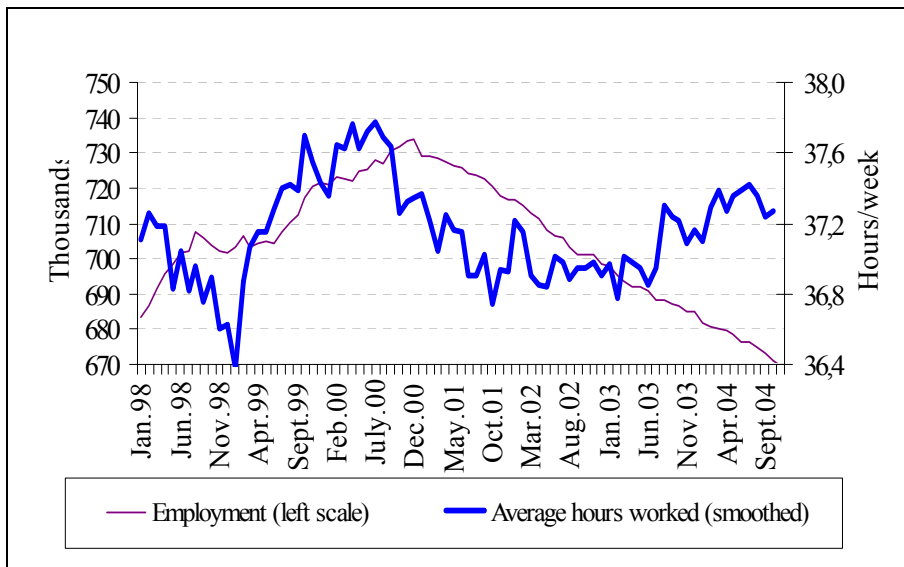
Chart 2-15 Full-time employment in the private sector and manufacturing
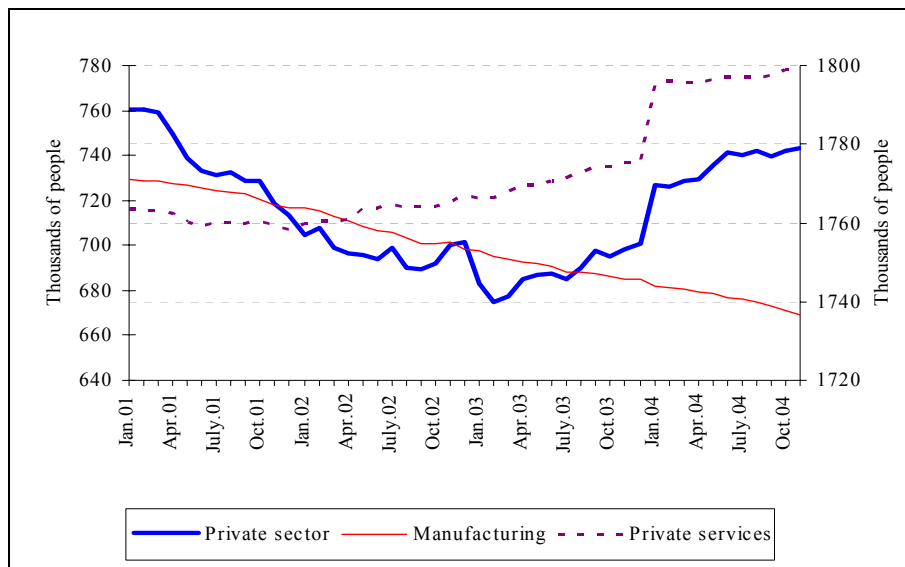
Overall, in as late as end-2004 *employment* in the private sector was below the pre-downturn levels of end-2000. The primary underlying reasons for this is sectoral restructuring in manufacturing and increased capital intensity referred above. Employment in market services has grown vigorously since end-2003. This has, however, been slackening especially in sectors dependent on household consumption over the past months. Thus, during the whole of 2004, no rise materialised in employment in the wholesale and retail sector following the hike in January.[6] Except for the real estate sector, where employment grew by over 10 per cent, employment in the other sectors only rose moderately.

As a result of the above factors, robust growth in employment discernible in early 2004 had slackened significantly by November. Simultaneously, close to 15,000 jobs had been cut in the public sector from end-2003, and as a consequence whole-economy employment already fell in 2004 H2. Most recent data reveal that declining whole-economy employment is corroborated by both Labour Force Survey (LFS) and institutional statistics. The uncertainty described in our previous *Report*, i.e. the fact that the two statistics followed differing trends, disappeared.

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[6] The hike in employment in the wholesale and reatil sector in January 2004 was of such proportions (nearly 20,000 persons) that, for the time being, cannot be explained by economic reasons. On the other hand, however, though there was a methodological change in institutional statistics in January, the CSO ruled out the possibility that this change had caused to the steep rise in employment data.

Chart 2-16 Whole-economy employment as per institutional statistics and the Labour Force Survey (LFS)

- Number of full-time employees by institutional labour statistics
- Number of employed by LFS (right scale)
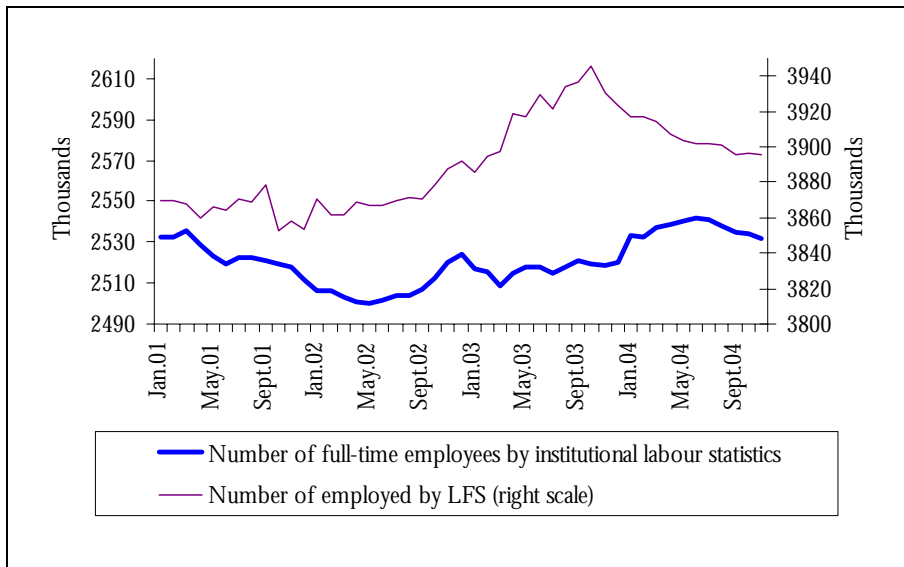
2. 2. 2 Labour market reserves and tightness

In addition to declining labour use, recent rise in employment is also likely to signal the easing of bottlenecks in the labour market. There has been an unmistakeable rise in unemployment since end-2003. It is reflected in the rising number of the registered unemployed and in the unemployment category according to the LFS.

Chart 2-17 Registered and LFS unemployment

- LFS Unemployment
- Number of registered unemployed
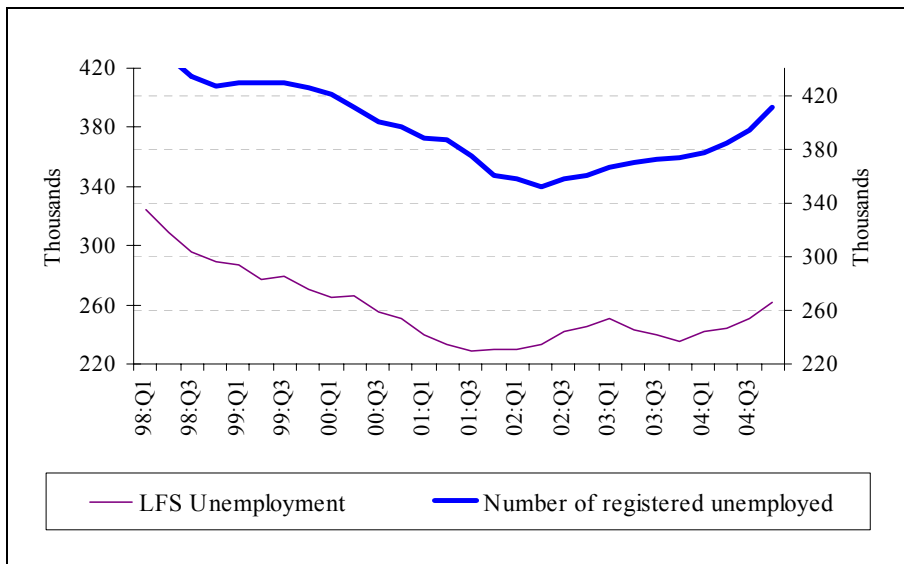
As we pointed out in earlier issues of the *Report*, LFS may not be able to grasp labour availability in the Hungarian economy satisfactorily. When examined, the time series of activity, employment and unemployment reveal that it is activity rather than unemployment that is strongly correlated with employment. This suggests that the unemployed is not the sole source of employment, certain groups of the economically

inactive are also to be reckoned with. Furthermore, a certain part of those laid off probably do not become active jobseekers. Rather, they become economically inactive for some time.[7] Accordingly, we believe that changes in the number of the unemployed alone do not always provide a reliable guide to developments in labour market reserves. In order to get one, a joint study of unemployment and economic (in)activity is needed.

Chart 2-18 Economic activity and unemployment
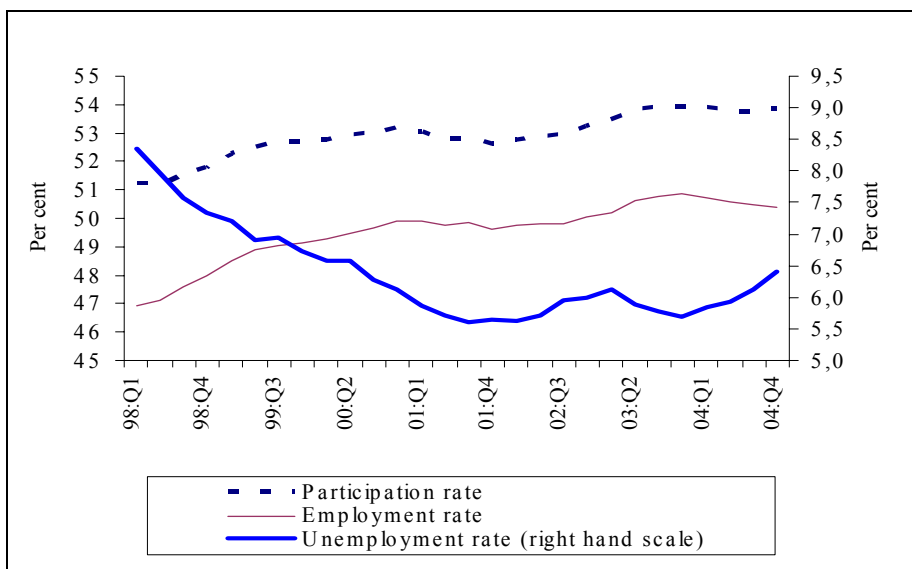
* Based on CSO's household labour force survey (LFS), ILO-indicators:
Rate of activity: the economically active (those in employment +the unemployed) to working age (15 to 74 years of age) population ratio. Employment rate: rate of the economically active within the population of working age (15 to 74 years of age). Unemployment rate: the number of the unemployed as a proportion of the economically active population.

With respect to year 2004 as a whole, activity rate was broadly flat, while a rising rate of unemployment was attributable fundamentally to declining employment. At the same time, however, rising unemployment in 2004 Q4 was associated with a slight increase in activity. For the time being, we cannot provide any explanation for the cause of increased activity. We expect activity to edge up gradually in the long run, owing to the ageing of the economically inactive who were crowded out from the labour market in the early 1990s. Short-term fluctuations in activity are likely to be subject to flows

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[7] This phenomenon is not unique to Hungary. In the UK, for example, a number of studies have been published on it recently (e.g. Schweitzer M. (2003) 'Ready, willing, and able? Measuring labour availability in the UK', BoE Working Paper No. 186, and Gregg P. and Wadsworth J. (1998) 'Unemployment and non-employment: unapacking economic inactivity', Employment Policy Institute Economic Report). At the same time, it also seems to be stating the obvious that flows between employment and inactivity are stronger in transition economies than in advanced ones. For a Hungarian analysis of the topic, see Galasi P. (2003) Munkanélküli indikátorok és az állásnélküliek munkapiaci kötődése" ['Unemployment Indicators and the Labour Market Attachment of the Unemployed'], Budapesti Munkagazdaságtani Füzetek, BWP 2003/2.

between the above labour market statuses, of which we have little knowledge for the time being.[8]

Although labour market tightness is likely to ease on a whole-economy level, labour shortage is expected to persist especially in certain sectors of manufacturing. This is corroborated by a Labour Office short-term labour market forecast based on data for hiring in 2004. Compared to hiring 6 months before, 14 per cent of the companies surveyed complained about labour shortage, with over 50 per cent of such complaints citing shortage of skilled manual workers. We assume that shortage of skilled labour is also likely to have had a part to play in the slowness of the decrease of manufacturing wage inflation.

2. 2. 3 Wage inflation

Although monthly wage data can be considered rather noisy, with respect to year 2004 as a whole, following a rapid rise in it early on, which, in our opinion, was attributable to a rise in indirect taxes, wage inflation started to fall from mid-2004. Developments in wages in the final months of the year aptly illustrate the volatility of data. While wage inflation (calculated as an annual index from CSO data) in the private sector fell well below 7 per cent in October, it was close to 10 per cent in November again.

We expect that declining wage inflation was due to two factors: one was dwindling labour demand and the other was lower inflation expectations. The question is the speed of falling wage inflation in early 2005, i.e. whether there has occurred any material change in wage adjustment or we will be witnessing a slow decline in wage inflation, similar to the one in 2004 H2.

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[8] Currently available data fail to enable us to identify the impact of a raise in the age of retirement or the abolition of the compulsory military service on activity over the past period. Pursuant to the decree on the raise in the age of retirement, in theory, the number of those eligible for old age pension and, hence, activity, would grow in even years. However, the time series on the number of those eligible for old age pension does not substantiate this, due probably to a high proportion of those in early retirement. As regards the abolition of the compulsory military service, with the number of conscripts exerting only a negligible impact, no increase in inactivity can be detected.

Chart 2-19 Private sector and manufacturing wages
Annual indices
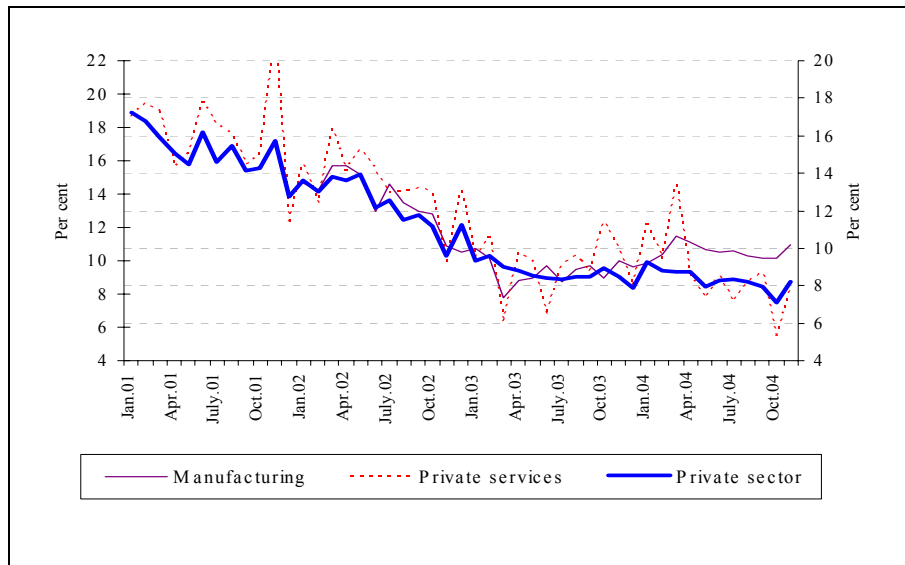
Decline in labour demand varied from one sector of the economy to the next in terms of both causes and time. In consequence, wage inflation was different in manufacturing and market services. We assume that initially (around 2001-2002) falling external demand and a stronger forint forced export-oriented companies to perform more significant adjustments than market services sectors benefiting from a pick-up in domestic demand. As a result, manufacturing wage inflation decreased more markedly than that in the market services sector. Since 2003 increase in manufacturing output has not been associated with a corresponding increase in employment, which has resulted in a significant fall in corporate ULC, with no change in the growth rate of wages. At the same time, however, employment in the market services sector rose vigorously, since relatively high sales prices did not deteriorate the profitability of market service providers materially despite low productivity.

This situation changed in 2004, when, in keeping with increasingly subdued household consumption and after a jump attributable to an increase in indirect taxes early on in the year, increase in sales prices in the market services sector, too, started to become more moderate, which no longer allowed for the possibility that high wage inflation and robust increase in employment could be sustained. During the year, against the backdrop of declining employment, wage inflation in the wholesale and retail sector fell consistently (currently standing at a mere 5 per cent); wage growth in the real estate and other services sector was around 7 per cent. By contrast, with the exception of the textile and the food industry, wage inflation got stuck at high levels in the manufacturing sector, and only seems to be declining slowly. This may also be contributed to shortage in skilled labour in certain areas. As a combined outcome of the above factors, in contrast to what could be experienced earlier, last year manufacturing wages grew at a greater rate than did wages in the market services sector.

One of the underlying reasons for recent decline in private sector wage inflation is likely to have been lower *inflation expectations*. That the rise in indirect taxes in early 2004 had not been incorporated into these expectations permanently may have contributed to

falling wage inflation. However, the extent to which a robust fall in the price index in H2 contributed to declining wage inflation, and whether it may lead to a considerable tightening of wage setting behaviour is still a moot question. According to a January 2005 TÁRKI Survey, wage inflation, anticipated for the next 12 months, has not diminished significantly over the past period. This corroborates our assumption, i.e. that we cannot expect wage inflation to decline more vigorously this year than what was experienced in 2004 H2.

Chart 2-20 Corporate perception of and expectations for wages as per the TÁRKI Survey
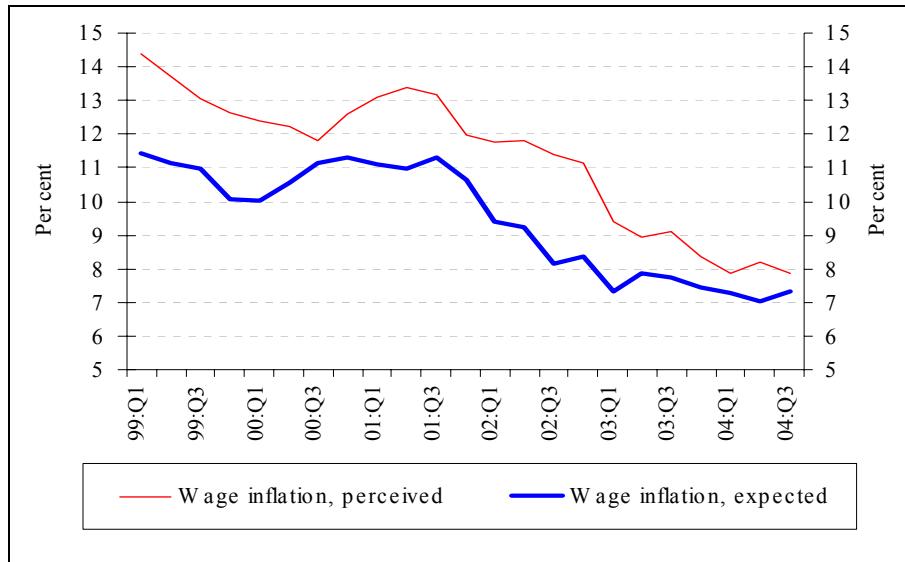
Recent developments in the *nominal ULC* in the private sector in a broader sense, also including the self-employed, are hard to assess unambiguously, due to the noisiness of data. With data revision going back to 2003 and affecting the output side of GDP, it seems that private sector productivity growth came to a temporary halt in early 2003, which, combined with a declining trend in wage inflation, resulted in a rise in ULC. In 2004, however, declining employment in categories outside the institutional labour statistics (e.g. the self-employed, etc.) led to rising productivity growth. Thus, despite the slow decrease of wage inflation, it contributed to significant moderation in ULC growth. Overall, we assume that, given the above factors, moderate labour use in the private sector contributed to a slow rise in productivity, while ULC decreased more significantly than did wage inflation.

Chart 2-21 Nominal unit labour cost (ULC), productivity and wages in the private sector*
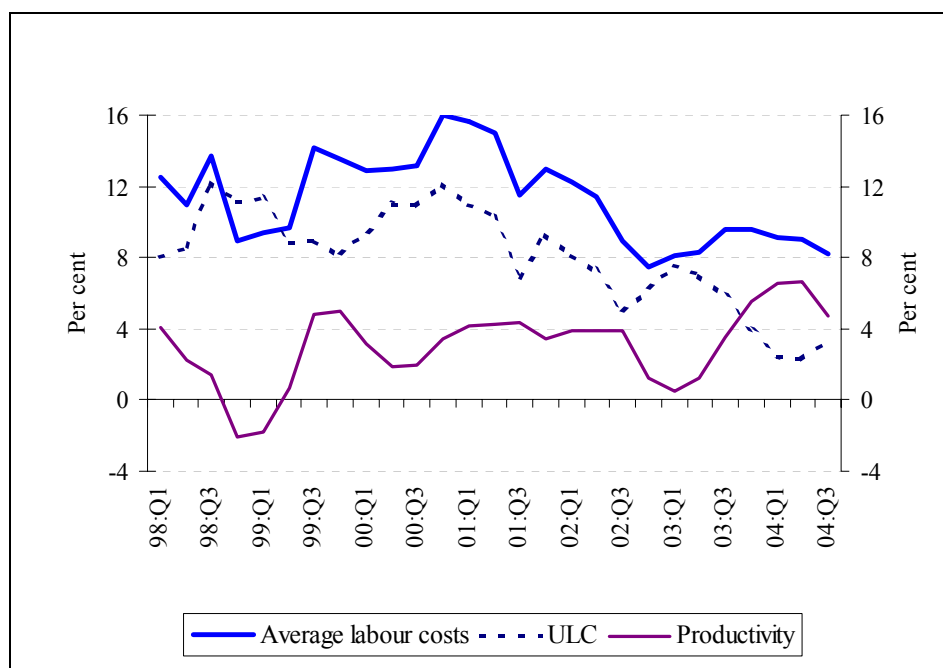
* The private sector as defined in the LFS. Projection for 2004 Q4 data.

2. 3 Inflation developments

In 2004 the average CPI stood at 6.8 per cent, while the 12-month December price index, i.e. the price increase which occurred in a year, reached 5.5 per cent.[9] Notwithstanding the increase in inflation in the first part of the year, which is primarily the result of the rise in indirect taxes, the second part of the year, and particularly the last quarter, witnessed significant disinflation. Though several favourable factors also contributed to the moderation of price dynamics, more lasting components of the price index played the main role in it.

Table 2-1 CPI and its major components in 2004
Annual percentage changes

	Q1	Q2	Q3	Q4	*annual average*
Core inflation	6.0	6.2	5.9	5.3	*5.8*
Unprocessed foods	4.9	8.0	11.9	1.5	*6.6*
Vehicle fuels and market-priced energy	1.0	7.8	7.6	10.0	*6.6*
Regulated prices	11.7	10.1	8.3	7.2	*9.3*
CPI	**6.8**	**7.3**	**7.0**	**5.9**	*6.8*

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[9] The CSO published the January 2005 CPI data after the cut-off data of our analysis. The data behind the 4.1 per cent CPI, especially the deceleration of core inflation, reinforce the disinflation picture outlined in our analysis.

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	2004 Q4	2003 Q4	2004 Q1	2004 Q2	2004 Q3	2004 Q4
CPI	5.4	6.8	7.3	7.0	5.9	4.9*	5.0	5.1	4.9	3.9
Core inflation	4.8	6.0	6.2	5.9	5.3	4.3*	4.9*	4.4*	4.2*	3.6*

* MNB estimate.

Chart 2-22 Core inflation developments

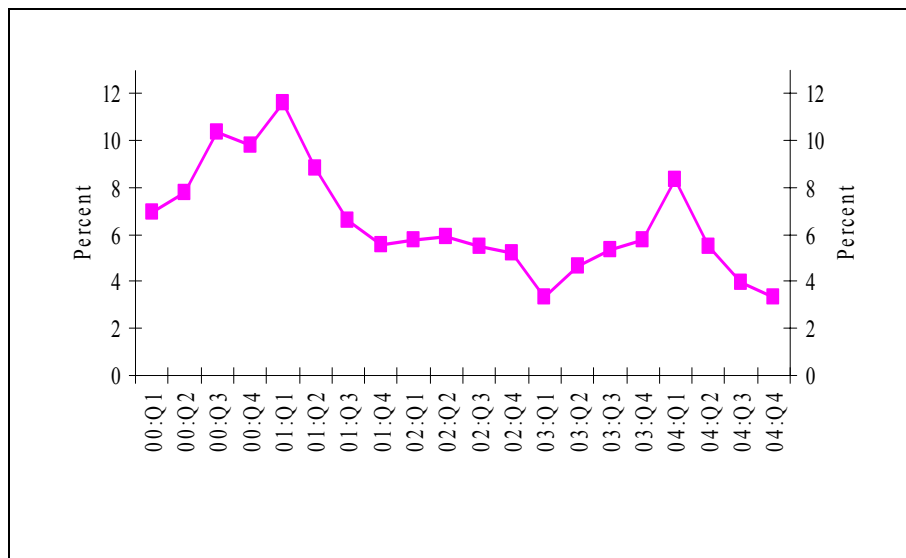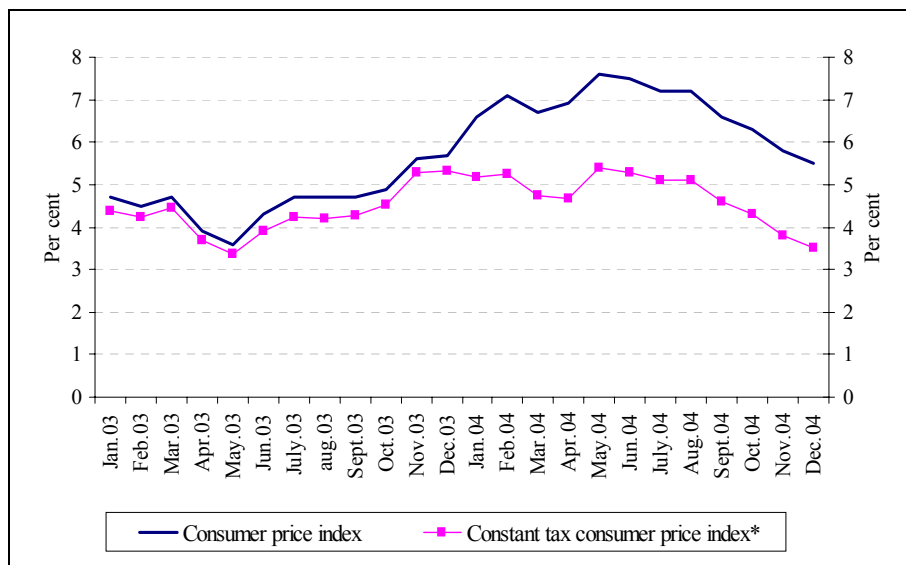Seasonally adjusted, annualised quarter-on-quarter growth rates

Chart 2-23 Developments in headline (CPI) and constant tax (CTI) inflation

Annual percentage changes

* MNB estimate for 2003.

Considering the factors that generally influenced the last year price development, the period can be separated in several phrases. In 2003 H2 and early 2004 inflationary factors prevailed. The weaker-than-before forint exchange rate increased the imported inflationary pressure, and it may have contributed to the growing inflation expectations and thus to the robust rise in nominal wages. Furthermore, the economy suffered from supply-side shocks resulting from the rise in indirect taxes (mainly VAT and excise duties), in the producer price of gas and from the introduction of new types of taxes. The evolving of the inflationary effect of the aforementioned factors was also supported by strong aggregate demand, as the consumption of households was still dynamic and the activity of companies was becoming livelier.

However, starting from mid-2004 disinflationary factors came to the front. The strengthening of the forint exchange rate reduced the imported inflation directly, thus dampening the impact of the substantial increase in the price of oil as well. In addition, the stability of the exchange rate supported the credibility of the nominal anchor, and thus may have indirectly contributed to the lessening of inflationary expectations and to the declining wage inflation. Meanwhile, the demand side also changed: simultaneously with the continuing buoyant business activity of companies a notable slowdown in the consumption growth of households compared to previous years could be observed. As a result of the above, it seems that the supply side shocks in early 2004 had a direct impact only on the increase of the price level, but there were no secondary, spill over effects.

The aforementioned processes affected the individual components of the price index differently. Tradables inflation clearly increased in 2003 H2, in which the key role may have been played by the fluctuation and the devaluation of the exchange rate in 2003. During 2004, parallelly with the gradual appreciation of the exchange rate, tradables inflation also declined. Moreover, the index that shows the monthly change went into the negative domain in December. It also means that tradables inflation was lower at the end of the year in Hungary than in the European Union, which is our main import market. However, it is not surprising in a period following a significant and steady exchange rate appreciation, as it happened in Hungary in early 2003 and in other countries of the region after considerable and lasting appreciations of exchange rates. Besides, price dynamics may have been reduced by the increasingly intense competition in the market of tradable goods, which may have been made more dynamic by the EU accession.

Chart 2-24 Hungarian tradables and the imported inflation
Seasonally adjusted, annualised quarter-on-quarter growth rates
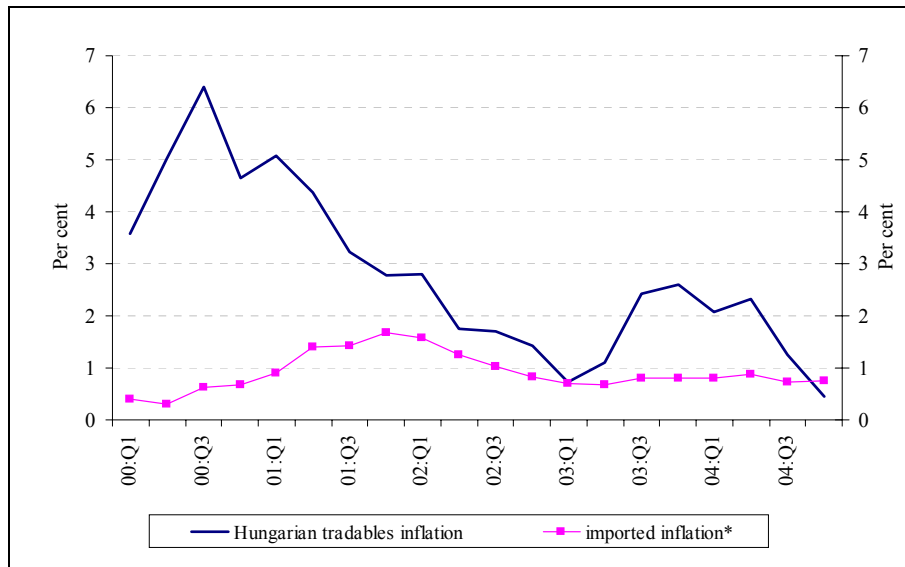
* non-energy industrial goods in the eurozone. Source: Eurostat, NewCronos.

Starting from 2003 Q2 non-tradables inflation was rising for a year. During this process, the increase in VAT in the beginning of the year played a decisive role in the inflation growth observed in 2004 Q1. However, later in the year the rate of price increase of non-tradables stabilised around the level of early 2003, and it even decreased during the year. At this point in time it is hard to decide whether the low price indices observed in this range of products from 2004 Q2 on are a part of a longer-term process, or the disinflation is only temporary. It is conceivable that last year, because of the increase in VAT, some market participants brought the planned mid-year price rises forward to the beginning of the year, i.e. it was the seasonality of repricing that was different from the usual. A reference to this may be the fact that the 'outlier' of the 2004 Q1 non-tradables inflation was higher than what would be thought to be justified by the VAT rises. At the same time one must not exclude that the significant slowdown of household consumption last year compared to the previous years really contributed to the moderation of the price increase of non-tradables.

Chart 2-25 Non-tradables inflation

Seasonally adjusted, annualised quarter-on-quarter growth rates
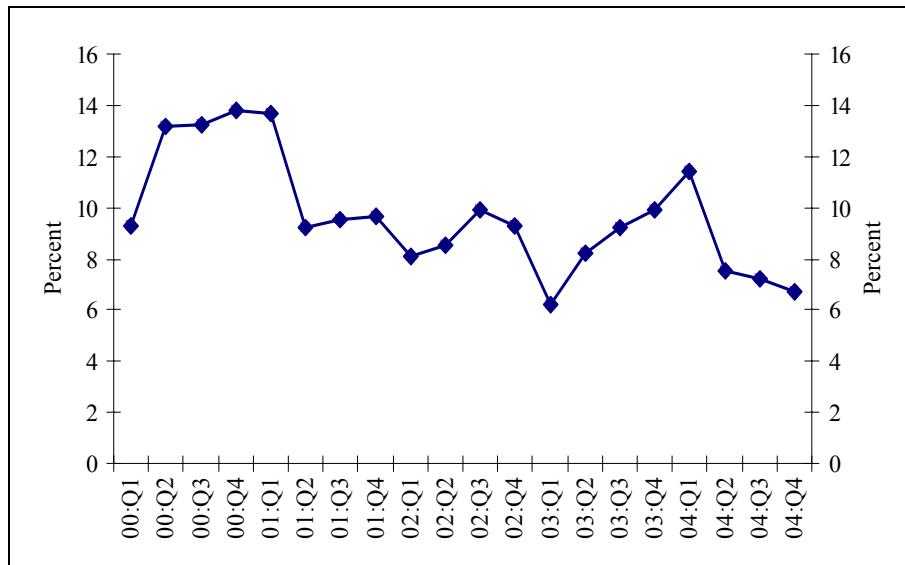
Inflation in processed foods picked up significantly in 2004 Q1, and the increase in VAT in the beginning of the year may have played a crucial role in it. In Q2 and Q3 inflation of this range of products returned to the inflation level experienced in H2 of the previous year, then, at the end of the year, the price increase slowed down considerably. Very often, the underlying factors were at cross-purposes. The price of one part of agricultural commodities increased (e.g. wheat, meat, sugar), another part decreased (e.g. milk and diary products). Meanwhile the gradual appreciation of the forint exchange rate and the increasingly dynamic competition in the market, partly due to EU-accession, dampened the price increase of processed foods markedly, similar to the tradable goods.[10] As a result of these impacts the quarterly price increase fell to a fairly low level at the end of last year.

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[10] The developments in the food market related to the EU accession (e.g. lower milk and dairy product prices, higher price of sugar) are in conformity with our earlier expectations. See Barnabás Ferenczi – Zoltán M. Jakab – Nóra Nagy B.: Do food prices in Hungary conceal inflationary tensions? An analysis on the potential effects of EU entry on food prices, MNB Background Studies, 2002/1.

Chart 2-26 Inflation in processed foods
Seasonally adjusted, annualised quarter-on-quarter growth rates
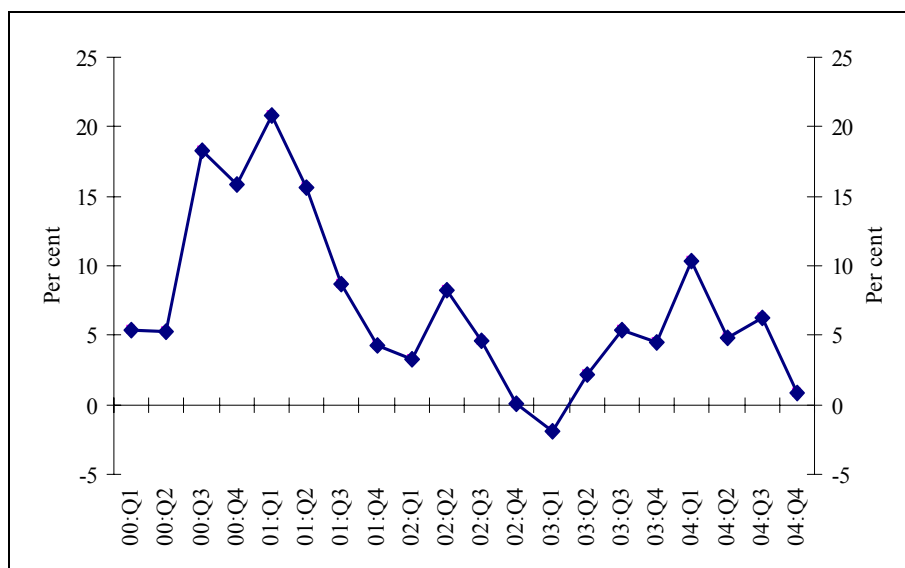
In early 2004, there was a marked increase in the excise duty on alcohol and tobacco products, which, even if in several steps, was eventually passed on completely to the consumers by the producers and the trading sector.[11] At the same time, a fierce price competition was observed in the tobacco market in the last quarter, which, simultaneously with the depletion of stocks, was also reflected in consumer price statistics by the end of the year.

Although the more volatile components of CPI had an upward overall impact on inflation in H1, they clearly contributed to disinflation in H2, and particularly in Q4.

In case of unprocessed foods a rise in prices was experienced in the first three quarters of the year, which is attributable primarily to the price increase of unprocessed meat products, and particularly of pork products. Nonetheless, meat prices rose not only in Hungary, but also in the European Union and in other new member states of the region, so it is a regional phenomenon. In Q4, however, unprocessed meat product prices started to decline, and, probably due to the favourable summer weather, the (seasonally adjusted) prices of flour, potato, vegetables and fruits also became lower. Nevertheless, the high base of the end of last year also contributed to the quick Q4 decrease in the price index showing the annual changes in unprocessed foods.

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[11] As for beers, their price increase in the beginning of the year was lower than the extent which would have resulted directly from the tax increase, which may be explained by the fierce price competition following the EU entry.

Chart 2-27 Price level of unprocessed foods
Seasonally adjusted data
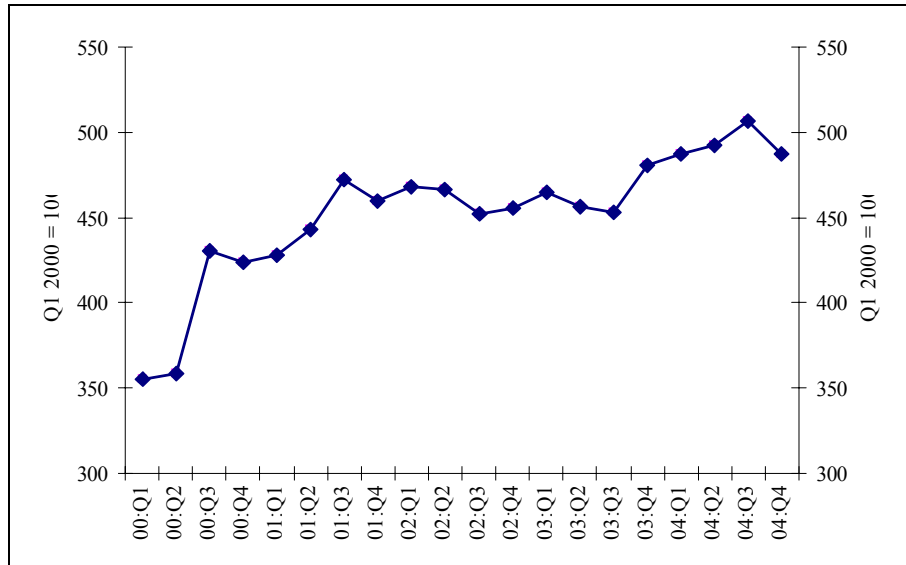
Chart 2-28 Price developments of meat products in Hungary and in selected countries of the region*
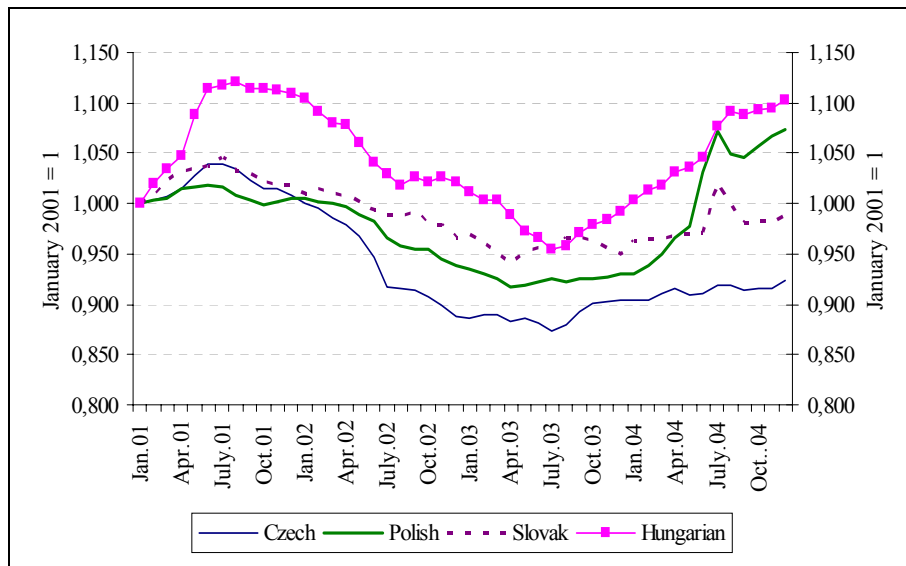
* For each country in their own currency. Source: Eurostat, NewCronos.

Oil prices in dollar started to grow as early as the beginning of the year, but the substantial increase was between May and October. Then, in the last two months there was a significant correction, and by December oil prices returned approximately to the level observed in May. Nonetheless, the impact of the high 2004 oil prices on domestic CPI was very limited, which is a result of several factors. On the one hand, the price increase in dollar was dampened by the appreciation of the euro against the dollar and of the forint against the euro. On the other hand, two thirds of the price of vehicle fuels, which is the fastest-reacting CPI component to the changes in oil prices, is comprised of taxes, which means that only one third of the consumer price is the part which directly

reacts to the changes in oil prices. The impact of oil prices on consumer prices was also dampened by the Government's temporarily cutting the excise duty on vehicle fuels. In 2004 the feed-through effect of high oil prices was also lessened by the fact that the prices of gas and electric energy follow the price developments of the energy market only with a lag of several quarters and via an administrative decision, thus the regulated prices of these household fuels did not rise in 2004 H2.[12] However, high vehicle fuel prices, indirectly, as cost factors, may have an upward effect on the prices of other products, although this effect could not be significant in 2004, as the increase in vehicle fuel prices did not prove to be persistent.

Chart 2-29 Brent oil price developments
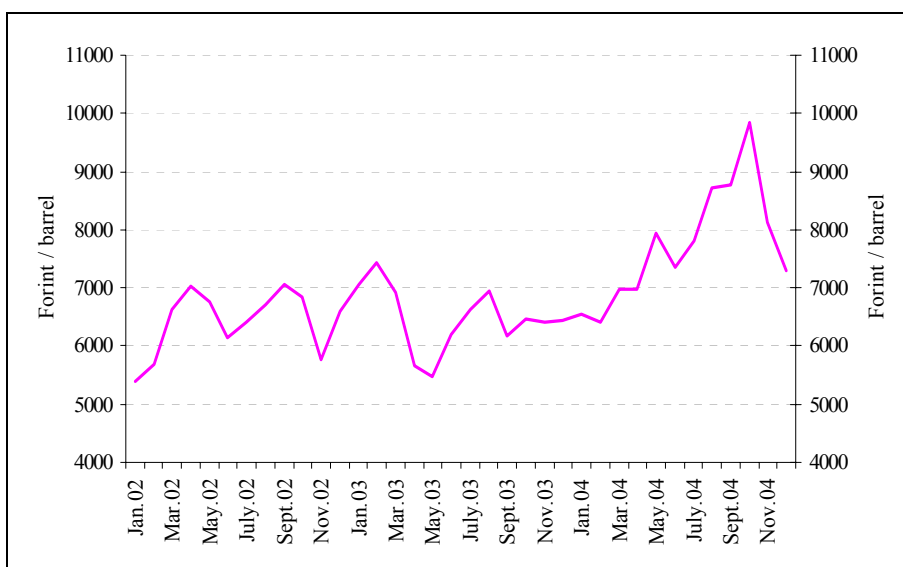
During the whole year the increase in regulated prices exceeded the CPI increase, although this excess, except for the last two months, was decreasing during the year, i.e. the inflationary pressure caused by regulated prices slackened. A significant part of regulatory price increases observed in the beginning of the year may be connected to the rise of indirect taxes, but the increase in the prices of gas, local public transport and pharmaceuticals also had a substantial upward impact on inflation. However, freezing the pharmaceuticals prices 15 per cent lower than the earlier level and the base effect, i.e. the fact that mid-year gas and electricity price increases of the previous year were not repeated in 2004, resulted in a marked decline in the annual index of regulated prices.

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[12] However, the higher-than-earlier world market prices for oil may obviously have had an impact on the increase in regulated energy prices in early 2005.

Chart 2-30 Developments in CPI and regulated prices
Annual change
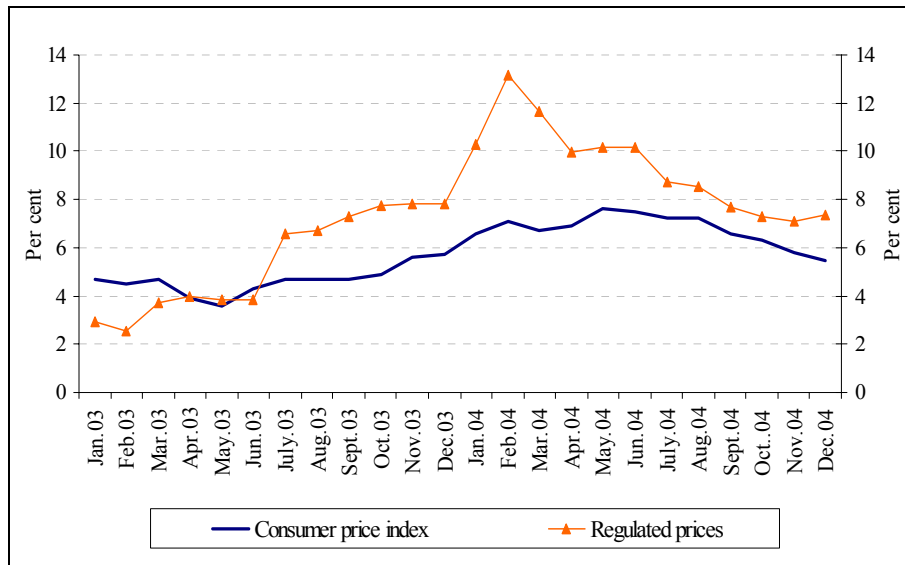
2. 3. 1 Inflation expectations

From the second half of 2003 to early 2004 the inflation perception and expectations of corporations, households and professional forecasters increased. However, from mid-2004 on, simultaneously with factual data, market participants' perceptions related to the inflationary environment gradually improved, i.e. the increase in inflation triggered by the rise of indirect taxes in the beginning of the year was not incorporated in inflation expectations in a lasting manner, which may have played a role in the disinflation of 2004 H2.

However, it is a cause for concern that, according to the latest data, inflation expectations of corporate executives did not continue to improve, and professional analysts' longer term projection (with regard to December 2005) decreased only slightly.

Corporate sector

According to TÁRKI's survey, the inflation perceived by corporate executives and the trend of their inflation expectations moved together with factual data in the last years. This relationship remained last year as well, i.e. both the gradual increase in inflation between end-2003 and mid-2004 and the following disinflation were reflected in corporate managers' inflation perception and expectations.[13] At the same time it also means that the shock-like increase in inflation mainly triggered by the rise in indirect taxes did not become permanently incorporated in corporate executives' expectations,

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[13] It is worth calling the attention to the fact that in the history of surveys conducted since 1999 it was the first, and so far the last time in early 2004 that the expected inflation exceeded the level of perceived inflation, i.e. it was the only survey when corporate executives expected a break in disinflation. This was also the time when the largest spread of responses related to expected inflation was given, which reflects the uncoordinatedness of expectations.

which may have contributed to the disinflation realised in 2004 H2 and to the dissolution of the persistence of inflation. However, it is a cause for concern that, compared to the previous one, the latest survey did not show any further diminishing in inflation perception or expectations. At the same time, the average level of expected inflation, which is essentially the same as the level experienced in early 2003, reflects a more uniform opinion than before, which is shown by the smaller spread of responses.

Chart 2-31 Inflation perception, expectations and their variation by corporate executives in the TÁRKI survey*
For the previous and next 12 months
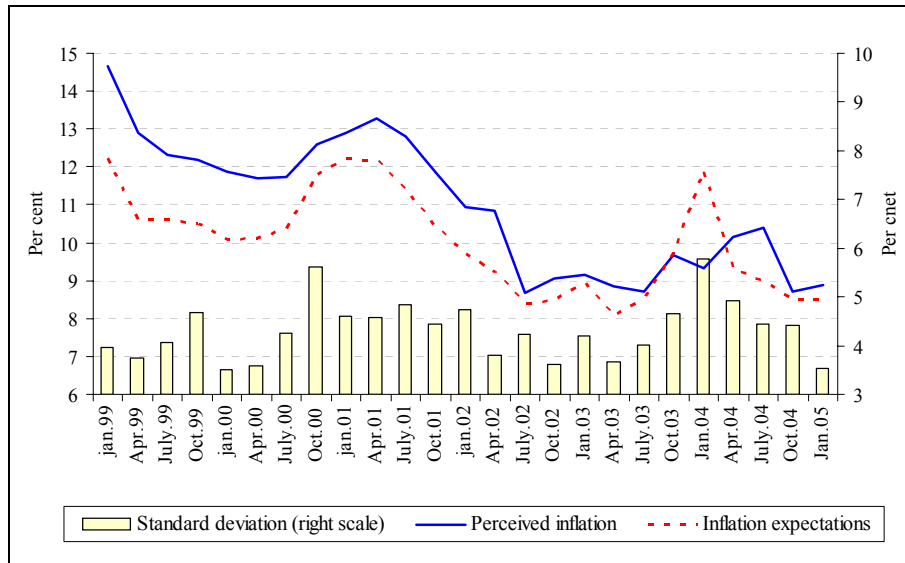
* *The calculation of the average and the standard deviation was made by elimination of the outliers.*

Households

Similarly to corporate data, according to TÁRKI's survey, the inflation perceived and expected by households also moves together well with factual data. However, after the increase in inflation in early 2004 the inflation expectation of households and, above all, the inflation perceived by them started to decrease later than those of corporate executives, although by the end of the year the perception by households with regard to the inflationary environment more or less returned to the characteristic level of 2003.

Chart 2-32 Households' perceived and expected inflation based on the TÁRKI survey*
For the previous and next 12 months
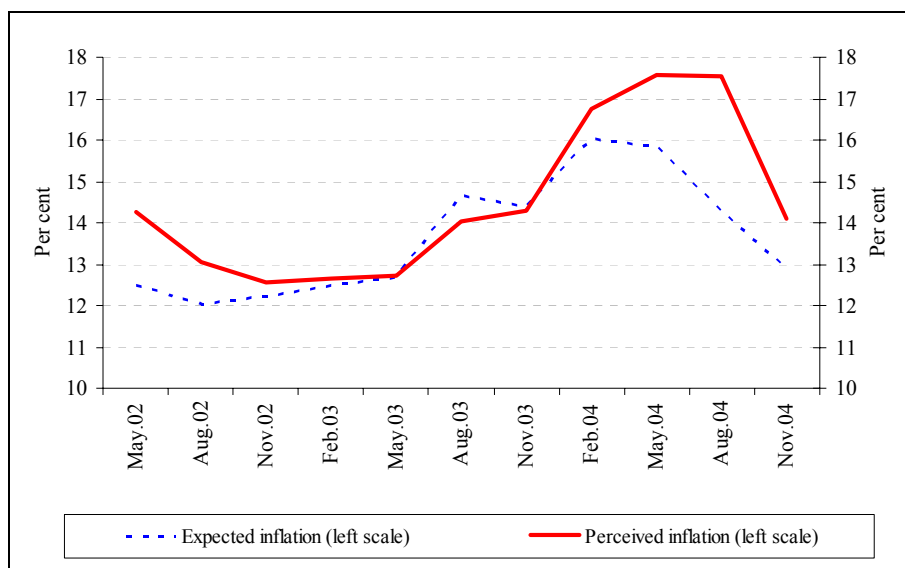
The calculation of the average and the standard deviation was made by elimination of the outliers.

Chart 2-33 Responses to inflation-related questions in GKI survey of households
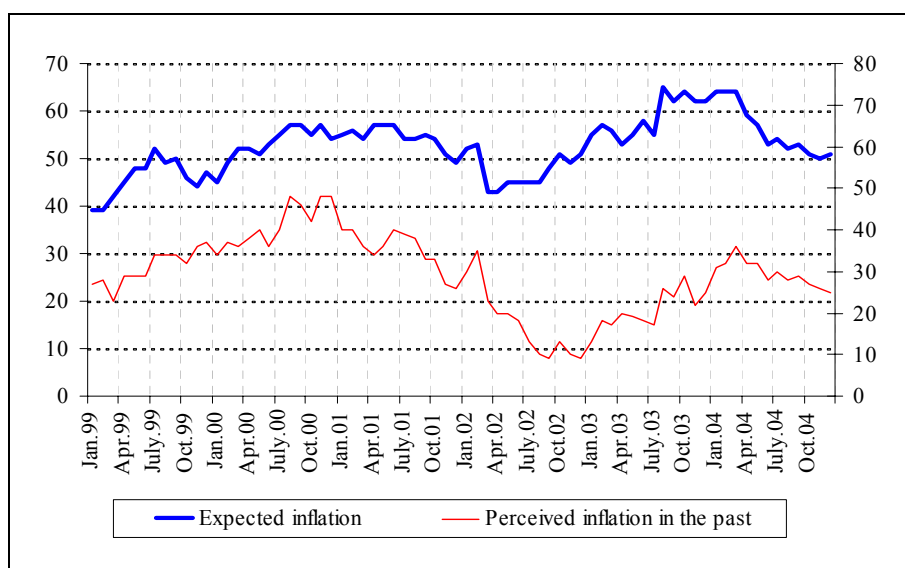
* Balance indicator, i.e. the positive (negative) shift records the increase (decrease) of inflation perception or expectation. Source: GKI survey, Ecofin databases.

Analysts

According to a Reuters poll up to January 2005, in the last quarter professional forecasters decreased their projections both for short term (for December 2004) and for longer term (for December 2005). However, it deserves attention that they decreased their longer-term projection to a smaller extent than the short-term ones, i.e. they may

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consider a part of the reasons of the late 2004 disinflation as temporary. Since December 2004 the Reuters survey has included analysts' projections for end-2006 as well, according to which disinflation will continue in 2006 too.

Chart 2-34 Analysts' inflation projections in the Reuters survey

Percentage changes on a year earlier
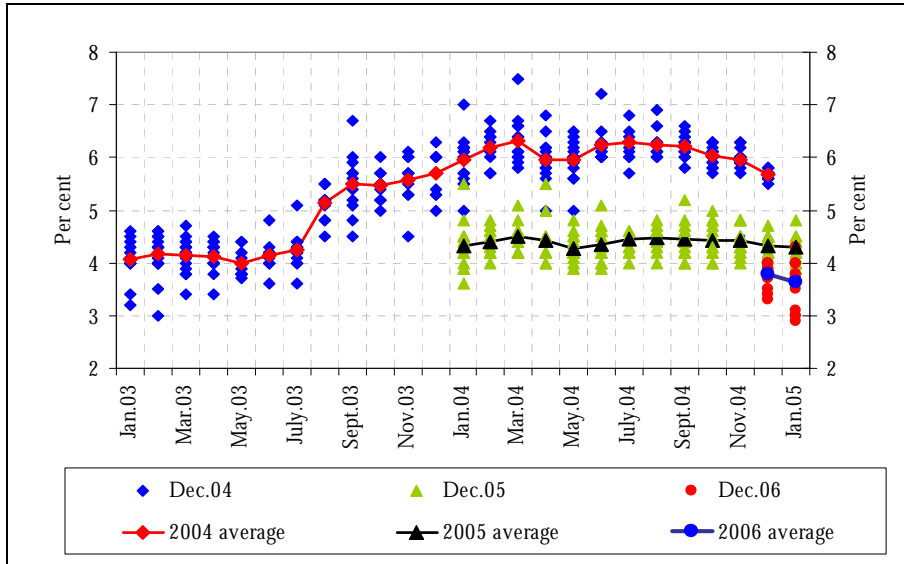
3 Inflation outlook[14]

3. 1 Overview of projections

Assuming no change in the January 2005 monetary conditions and that all other assumptions of the main scenario hold, disinflation is expected to strenghten over the projection horizon. The consumer price index is expected to fall to around 3.6 per cent by late 2005, and around 3.4 at 2006 year-end. Disinflation is due to several factors with different time path.

The fact that the 2004 indirect tax hikes no longer have their impact felt affects the 2005 trend of inflation to a major extent. In the first months of 2005, the direct effect of VAT and excise duty hikes cease, causing a significant drop in inflation indicators, given the fact that we do not expect any second round effect.

However in addition to the effect of indirect taxes, macroeconomic processes also point toward disinflation.

Assuming the current nominal exchange rate level to prevail, accordingly to the processes in 2004H2, we expect strong import competition. Contrary to inflation in earlier years, this will result in stagnating or only slightly increasing prices in certain tradable sectors, like industrial goods, processed food or beverages categories.

In non-tradable sectors, determined mainly by domestic processes, inflation might also decrease. As in the private sector demand for labour is decreasing and labour market tensions are releasing, labour costs will put inflation under less pressure. On the one hand, there is hardly any increase in the private sector demand for labour, while on the other, after a temporary decline, labour market activity is once again on the increase: with the number of inactive persons falling, labour supply is growing. These trends will entail a slight increase in the rate of unemployment and ease the inflationary pressure of wages.

Diverse demand factors have different impacts on inflation. Pick-up in the aggregated demand can offset the above-specified disinlflationary factors only indirectly and within limits. Household consumer demand, a high priority factor for inflation, will expand moderately and thus reduce the aggregate demand impact in both years.

There are indications of a falling trend of inflation expectations, which is conducive to disinflation. The stagnation of wage expectations, however, may impose uncertainty.

The most recent information suggests that in 2005 regulated prices will continue to increase at a rate above average. 2006 regulated prices are invariably forecast on the basis of our rules, as they comply with the long-term trend. For 2006 we assume a hike in tobacco excise duty resulting in a slight pickup in core inflation.

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[14] Our forecast has been based on the information that was readily available on the 15th of February. January CPI data, published on 17 th of February is in accordance with the trends outlined in our projection.

In our opinion, the uncertainty surrounding the central scenario is symmetrical for both years. World prices for oil and the highly volatile unprocessed food prices, which depend heavily on weather conditions and diverse regional factors, involve standard uncertainty. A risk is inherent in the fact that, as a result of the 2004 indirect tax hikes, certain corporations have prescheduled their pricing decisions, and therefore transient factors have contributed to the end-2004 slowdown in inflation. Finally, risk may also be imposed in the expected duration of easing in labour market tensions and the transience of rise in unemployment. In our risk assessment, the only sizeable downside risk in respect of 2006 is involved in regulated prices. As the currently available information is insufficient, in this group inflation may be lower than forecast on the basis of projection rules. All other uncertainty factors are symmetrical in both years.

Overall, the likelihood of inflation to exceed the upper bound of the target band in 2005 is inconsiderable, while the probability of inflation below the target band around 30 per cent. In respect of 2006, the chance for inflation to exceed the 3.5 ± 1 per cent target band is also smaller (around 20 per cent) than the probability of remaining below (around 30 per cent).

Chart 3-1 The fan chart of the inflation forecast*
On a year earlier
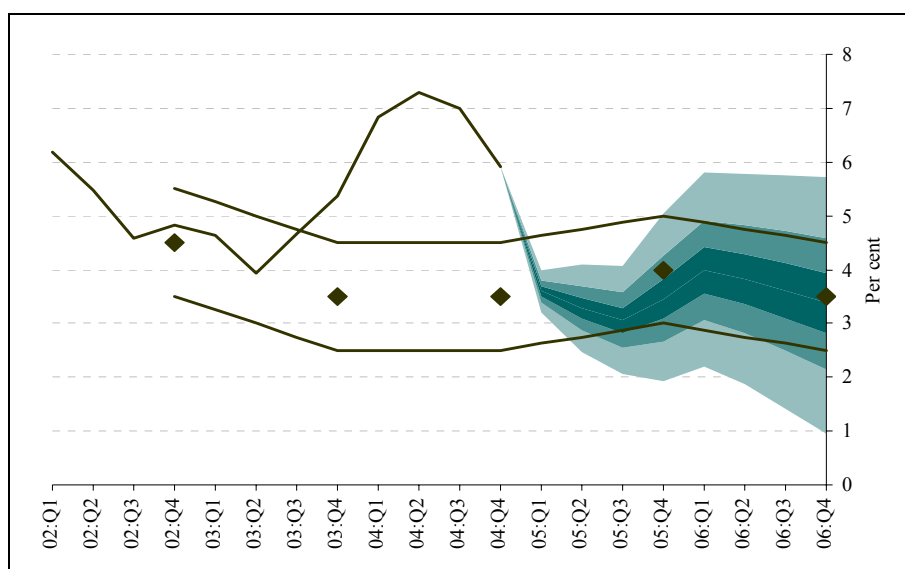
* The fan chart shows the uncertainty around the central scenario. Overall, the coloured area represents a 90 per cent probability. The darkest central band contains the central projection (as the mode) with a 30 per cent probability. The year-end points denote the announced inflation target, while the two lines denote a ±1 per cent tolerance interval assigned to the target.

3. 2 Expected inflation and its determinants in the main scenario

In line with earlier practice, the current projection is conditional. In compliance with our projection rules, the average January 2005 EUR/HUF and EUR/USD exchange rates and average short-term interest rate are assumed to remain unchanged over the entire forecast period. Based on average January 2005 futures quotes, oil prices are expected to constantly decline up to the end of 2006.

Table 3-1 Major assumptions determining the central scenario *

	2005	**2006**
HUF/EUR exchange rate (HUF)	246.6	246.6
USD/EUR exchange rate (cent)	131.3	131.3
Brent oil price (USD per barrel)	43.7	40.9

* Based on January exchange rates and averega oil futures quotes.

Our 2005 forecast is provided in consideration of the 2005 budgetary trends and the effective budget and tax acts. 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 undertaken in the amended Convergence Programme.[15]

3. 2. 1 Expected trends in the business cycle

As explained in Chapter 2.1., although short term information on the economy's external environment may be controversial, in the long run the pick-up in external business activity can be expected to strengthen, as underpinned by the fact that global oil prices are lower than in the previous years.

Chart 3-2 External demand*
2000 = 100
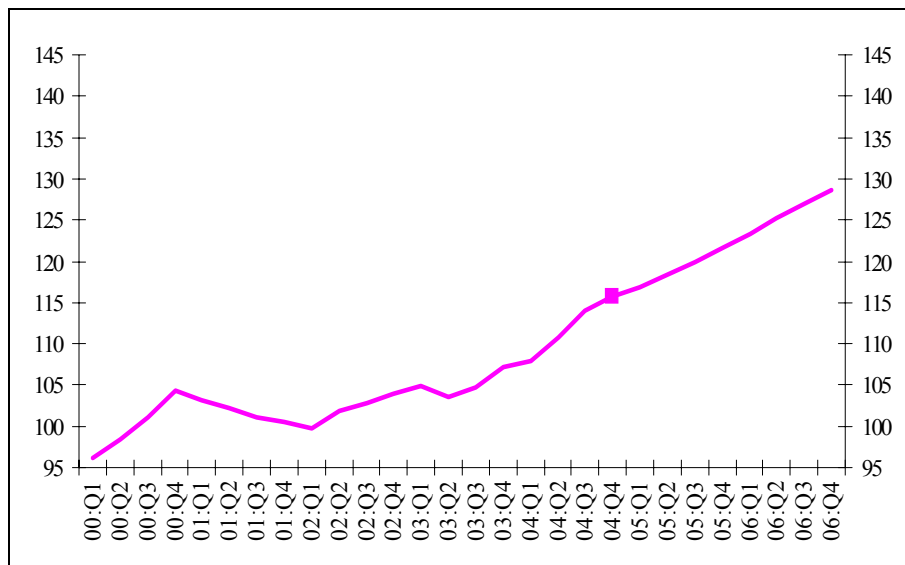
* External demand: weighted import demand of main export markets

In the long term this involves a favourable sales opportunity for the Hungarian export sector, whose external market share can be increased over a longer period. As the real exchange rate, which is based on the unit labour cost and used for measuring competitiveness in the export sector, will practically remain unchanged or perhaps

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[15] For more details on the forecast of general government finances see Chapter 4.2.

slightly appreciate over the forecast period, it is expected to reduce exports only marginally. Overall, exports will expand at a rate between 10 and 12 per cent.

Chart 3-3 Market share and the real exchange rate*
2000=100
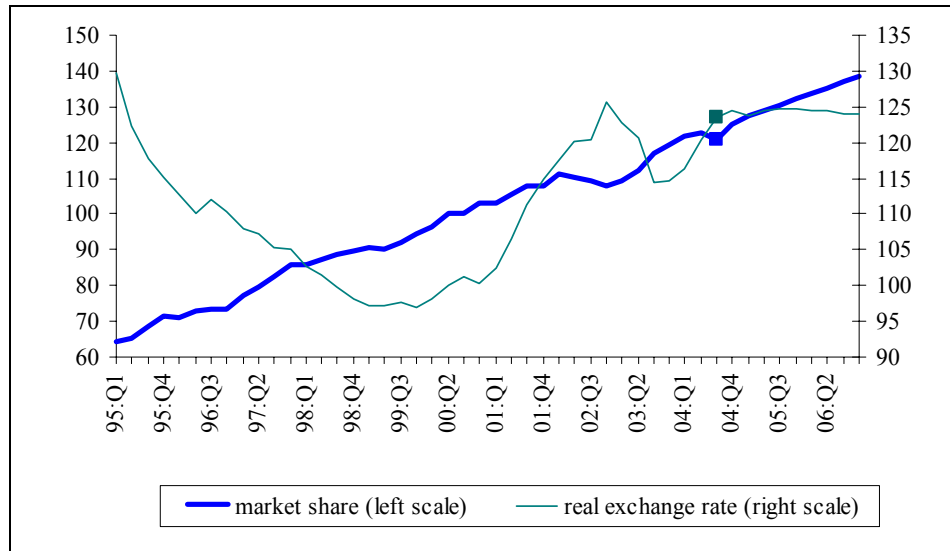
* Market share: goods export/weighted import demand; real exchange rate: based on manufacturing unit labour cost, inverted scale, upward movements indicate appreciation.

Simultaneously with the external business activity and growth prospects, corporate fixed investment will keep increasing rapidly, primarily as a result of continued capital-labour substitution in manufacturing. The exceptionally intense 2004 Q3 corporate fixed investment activity is not expected to continue in the short term. The investment-to-capital ratio is on the constant rise from the relatively low 2002–2003 level to approach the levels recorded in previous years. Overall, corporate fixed investments are expected to expand dynamically, by roughly 6–7 per cent.

Chart 3-4 Corporate sector investment ratio*
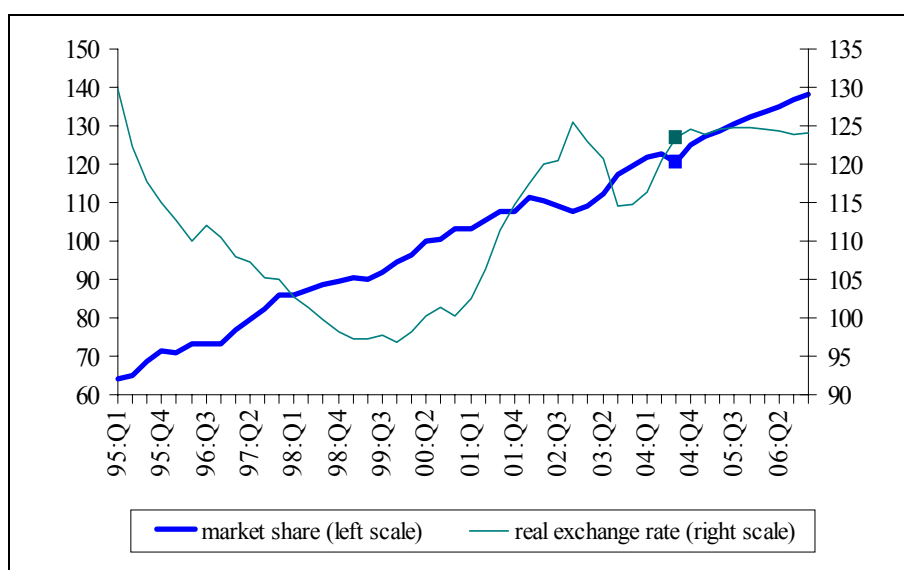
* Corporate investment/corporate capital stock, at constant prices, MNB estimate.

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Government fixed investments are expected to slightly slow down, but still exhibit a rapid growth in 2005. The changes implemented in the housing subsidy scheme are, however, likely to trigger decline in household fixed investment, which will, in turn, counteract this trend. The combined effect of these factors will result in slowing whole-economy gross fixed capital formation during 2005–2006 relative to 2004.

While in the corporate sector an unbroken increase is forecast in the demand for capital, only a slight expansion is expected in the demand for labour. Reasons for this include the substitution of labour with capital, particularly in manufacturing, and skill bottlenecks, which are likely to enhance productivity and require a more efficient use of labour. Meanwhile, labour demand will decline in market services, particularly in sectors sensitive to domestic consumption. In our forecast, after a period of temporary decline, labour supply will return to the longer-term trend determined by demographic trends. As a result, employment is forecast to rise by a mere 0.4 per cent in 2005 and 0.7 per cent in 2006 in the private sector as a whole. According to our assumptions, public sector labour demand will fall by nearly 3 per cent in 2005-2006 in cumulative terms.

As in terms of labour, increase is faster in supply than demand, the rate of unemployment will rise and, combined with the effects of falling inflation expectations, lead to a gradual decrease in wage inflation. As a result, private sector wage inflation is projected to remain below 8 per cent in 2005 and stand at around 7 per cent in 2006.

Wage share is expected to fall in the private sector. The reason for this is that productivity is likely to increase faster than wage inflation, and with a view to the fact that health care contribution is assumed to be eliminated in 2006, unit labour costs are projected to undergo a moderate increase by 4.2-2.5 per cent, thus easing the cost-pushed inflation.

Chart 3-5 Wage inflation and unit labour costs in the private sector
Annualised quarter-on-quarter growth rates
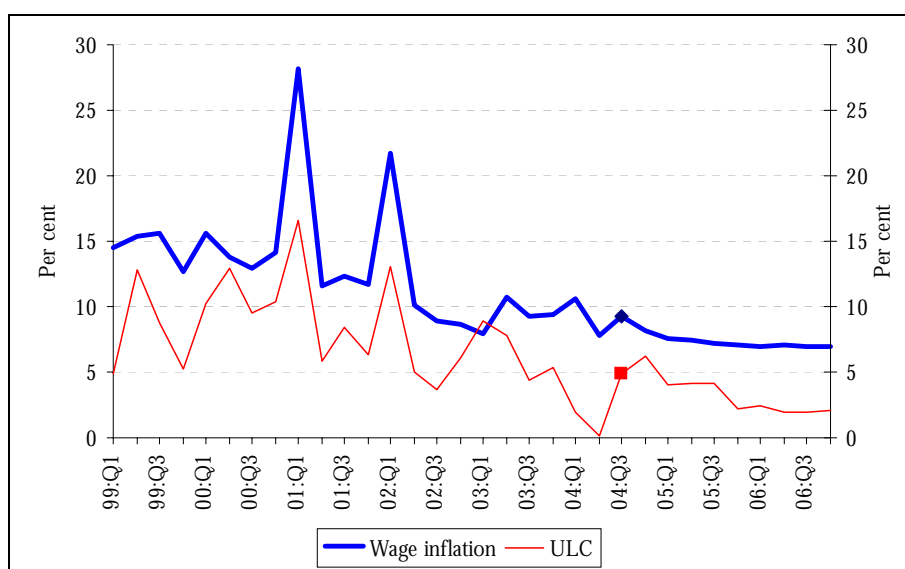
Indirect tax hikes have significantly reduced household real disposable income in 2004. While nominal wage inflation will slightly slow in 2005, with the passing of the effects of indirect tax hikes, real income increase is expected to gather pace. Thus in 2005

households' real disposable income will rise by 3.7 per cent, in excess of the 2004 growth rate. In 2006 it is forecast to increase somewhat slower, by around 2.8 per cent.

As a result of consumption smoothing by households,[16] household consumption expenditure will rise slower than real incomes. The removal of liquidity constraints and the development of the financial institutional system (e.g. an upturn in foreign currency lending) also points to higher consumption growth rate. Accordingly, households' propensity to consume (or the proportion of income spent on consumer goods) remains high, stabilising above 91 per cent.[17] With a view to the fact that the households have been capable of maintaining this high rate of consumption for a relatively long time, this projection expects a comparatively slow decline in the consumption-real income ratio.

Chart 3-6 Households' propensity to consume* (per cent)
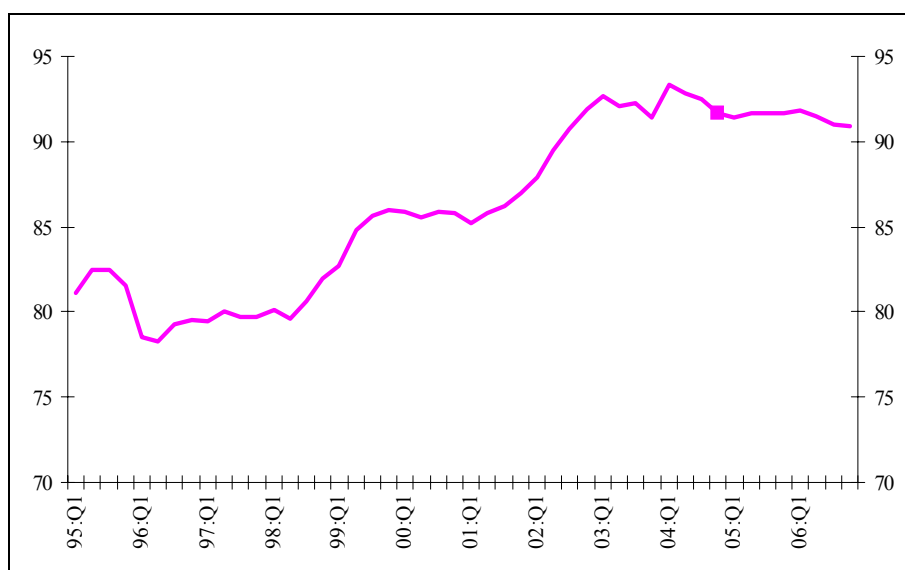
* Household consumption expenditure/disposable income, real value, own estimate.

In the current forecast, the general government will have a near neutral impact on the aggregate demand in 2005. The fiscal path assumed for 2006, however, will contract demand by 0.6 per cent of GDP.

Overall, fixed investments will lose account in the aggregated demand, while the contribution of gross capital formation (via inventory accumulation) and consumption to economic growth will stabilise. Less import-intensive items will gain significance in the aggregate demand, and this structural shift suggests slower expansion in imports than exports, which increases the role of net exports in economic growth. Imports may rise at a pace below 10 per cent in both years.

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[16] Consumption smoothing means that household consumption is adjusted to income fluctuations in a smooth way.

[17] In an international comparison 91 per cent is considered as very high. For further details see the December 2004 issue of the *Report on Financial Stability.*

Chart 3-7 Economic growth and its constituents*
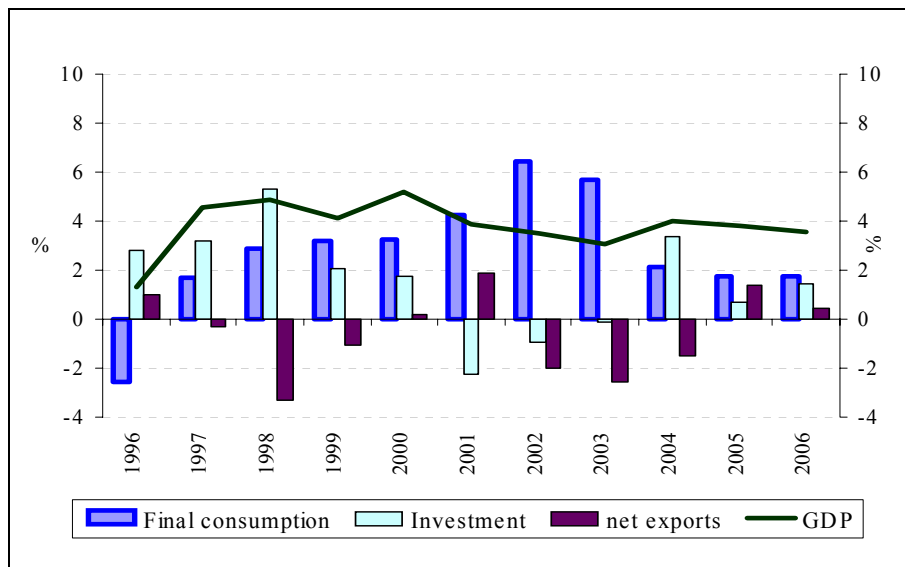
Contribution of the individual factors to the annual growth of GDP, percentage points.

Table 3-2 Projections in the main scenario

	2004	**2005**	**2006**
Economic growth			
Household consumption	3.2	2.1	2.2
Gross fixed capital formation	11.6	4.5	4.3
Domestic absorption	5.2	2.2	3.0
Exports	14.1	12.1	10.3
Imports	14.8	9.7	9.3
GDP	4.0	3.8	3.6
General government			
Demand impact*	-0.4	0.1	-0.6**
Households			
Real disposable income of households	3.4	3.7	2.8
Labour market			
Wage inflation (whole-economy)	7.5	7.5	6.5
Wage inflation (private sector)	9.3	7.8	7.1
Employment (national)	-0.4	-0.1	0.5
Employment (private sector)	-0.2	0.4	0.7
Unit labour cost (private sector)	3.4	4.2	2.6

* This is an analytical measure calculated by the MNB since 1998 as changes in the augmented (SNA) primary balance, adjusted for changes in payments to private pension funds. Negative values denote contraction in aggregate demand.   ** Assumed on the basis of the Convergence Programme.

Based on the trends seen in the business cycle, GDP is expected to grow by 3.8 and 3.6 per cent overall in 2005 and 2006, respectively. In this forecast, the potential rate of economic growth is expected to remain slightly below the GDP growth, somewhere between 3–4 per cent. Thus the output gap will gradually shift from the current negative level to the positive domain. For this reason, demand-pushed inflationary pressure will have its effect felt only slowly and to a minor extent primarily from 2006 on.

3. 2. 2 Details of the main scenario inflation forecast

In our forecast, the consumer price index will slow to 3.6 and 3.4 per cent by December 2005 and 2006, respectively. Core inflation will also decrease signifficantly in 2005, whereas a slight speed-up is expected in 2006.

In our short-tem forecast on inflation, crucial role is assigned to the assessed permanence or transience of the low end-2004 rate of inflation. In corporate pricing practice prices are probably reviewed at certain intervals. It is not impossible that following the 2004 indirect tax hikes, when companies were compelled to re-price their products anyway, they prescheduled their pricing decisions. For this reason, the low core inflation rate suggested by the end-2004 data are included in our projections with caution, as they may comprise the transient effects of a pricing behaviour.

If the HUF exchange rate is as stable as assumed, it would significantly restrain core inflation (mostly traded and food inflation) in 2005. For some products in these groups we project falling or slightly increasing prices. This can also be explained by anecdotal information suggesting intensified market competition in food and tradable markets. The effect of the 2004 appreciation in the nominal exchange rate will mostly wane in 2006. In 2006 other indirect effects, such as those originating from the labour market, will also play role.

The quarter-on-quarter index of core inflation (adjusted for excise duty effects) will be slightly slowing in the second hallf of 2005. The reason for this is that the massive decline in unit labour costs will ease the cost-push (wage) pressure on inflation.

Inflation expectations foreshadow an environment of declining inflation. Survey data hardly reveal if the expectations they involve are actual or rather reactions on past inflation trends. Surveys clearly evidence, however, that the 2004 indirect tax hikes raised inflation expectations only temporarily, and monetary conditions proved to be sufficient to have market participants consider them as a one-off inflationary pressure instead of developing expectations on permanently high inflation.

In terms of the demand side pressures on inflation, our projection is a bit heterogeneous. While the aggregate demand-push pressure is moderately increasing (the output gap is increasing) in the commodity market, one of its constituents, i.e. household consumption, which directly influences inflation, keeps slowing.

There are two factors fuelling the 2006 acceleration in the year-on-year index of core inflation: the effect of the low 2005 base and an assumed hike in excise duty levied on tobacco, as required by EU tax alignment. Except of these effects trend core inflation would decelerate in 2006.

The available information suggests that in 2005 regulated prices will rise more rapidly than consumer prices. With the exception of telephone charges, our forecast reckons with 2006 price hikes in line with the long-term trend on the basis of our projection rules.

Unprocessed food prices are forecast to rise moderately in both years, as recent trends suggest a slower-than-earlier price increase in the long term, explained among others by an intensifying competition in imports. First and foremost due to our assumption of falling global oil prices, our estimate of motor fuel inflation indicates a declining trend.

Table 3-3 CPI and its major constituents in the main scenario

On a year earlier, per cent

	2004		2005				2006			
	Actual		**Forecast**							
	Q3	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
CPI	**7,0**	**5,9**	**3,6**	**3,3**	**3,1**	**3,5**	**4,0**	**3,8**	**3,6**	**3,4**
Core inflation (CSO, actual)	5,9	5,3	3,6	2,8	2,6	2,9	4,0	4,4	4,2	3,9
Core inflation* (MNB, estimate)	6,1	5,5								
Unprocessed food	11,9	1,4	-4,1	-3,6	-4,3	1,3	1,8	1,7	1,6	1,3
Motor fuels and market-priced energy	7,6	10,0	6,7	5,0	3,1	1,4	2,1	0,5	-0,2	-0,1
Regulated prices	8,3	7,2	4,9	6,4	6,6	6,6	5,2	3,7	3,4	3,3

* For reasons of methodology, the indicator under review, may, in the short term, be different from the one published by the CSO. Over the longer term, however, both follow identical trends. The reason for this difference is that the core inflation published by the CSO may not be accurately reproduced from the available group CPI data, as the detailed data reveals that the CSO handles several groups (e.g. pharmaceuticals) in a breakdown of items within and outside core inflation. For this reason, this projection applies an approximation, which does not cause diversion from the CSO's core inflation data in the long term.

Table 3-4 Major indices of our CPI forecast

On a year earlier, per cent

	2004	2005	2006
	actual	**forecast**	
December	5.5	3,6	3,4
Annual average	6.8	3,4	3,8

4 Special topics

4. 1 Background information on the projections[18]

In what follows, we illustrate the changes in our current projections relative to those published in the November 2004 *Report*; then, we present an alternative inflation forecast based on monetary conditions assumed by the market participants; finally, we compare our projections with those of other research institutions and market analysts.

4. 1. 1 Changes in the January 2005 projection relative to November 2004

Table 4.1 Changes in the central scenario relative to November 2004

Percentage changes on a year earlier, unless otherwise indicated

	2003	2004		2005		2006	
	Actual	**Estimate**		**Forecast**			
		Nov	**Current**	Nov	**Current**	Nov	**Current**
Consumer price index							
December	5.7	5.9	**5.5**	4.4	**3.6**	3.9	**3.4**
Annual average	4.7	6.8	**6.8**	4.5	**3.4**	4.2	**3.8**
Economic growth							
External demand (GDP-based)	0.5	1.9	**1.8**	2.1	**1.9**	2.2	**2.3**
Household consumption	7.6	3.3	**3.2**	1.8	**2.1**	1.9	**2.2**
Memo: Household consumption expenditure	*8.1*	*3.6*	*3.9*	*2.3*	*2.7*	*2.1*	*2.4*
Fixed capital formation	3.4	9.2	**11.6**	4.2	**4.5**	3.6	**4.3**
Domestic absorption	*5.4*	*4.8*	*5.2*	*2.5*	*2.2*	*2.3*	*3.0*
Exports	7.6	14.5	**14.1**	11.3	**12.1**	11.0	**10.3**
Imports	10.4	14.8	**14.8**	9.3	**9.7**	9.2	**9.3**
GDP	3.0	4.0	**4.0**	3.7	**3.8**	3.5	**3.6**
Current account deficit							
As a percentage of GDP	9.0	9.0	**8.9**	8.6	**8.7**	7.9	**8.0**
EUR billion	6.6	7.3	**7.2**	7.7	**7.7**	7.5	**7.6**
General government							
ESA-deficit	6.2	5.6	**5.3**	5.5	**5.3**	4.9[5]	**4.7**[5]
Demand impact[1]	-0.4	-0.7	**-0.4**	0.3	**0.1**	-0. 7[5]	**-0.6**[5]
Labour market							
Whole-economy wage inflation[2]	10.9	8.3	**7.5**	7.9	**7.5**	7.3	**6.5**
Whole-economy employment	1.2	-0.4	**-0.4**	-0.1	**-0.1**	0.5	**0.5**
Private sector wage inflation[3]	8.7	9.4	**9.3**	8.3	**7.8**	7.8	**7.1**
Private sector employment[4]	0.7	0.0	**-0.2**	0.8	**0.4**	0.8	**0.7**
Private sector unit labour cost[4]	4.4	5.9	**3.4**	4.4	**4.2**	2.7	**2.6**
Real disposable income of households	4.3	3.9	**3.4**	3.2	**3.7**	2.3	**2.8**

[1] This is an analytical measure calculated by the MNB since 1998 as changes in the augmented (SNA) primary balance, adjusted for changes in payments to private pension funds. Negative values denote contraction in aggregate demand. [2] For the annual average wage inflation in the general government, the 13th month salary for 2004, due in January 2005, is included among 2004 wages. The current projection on the whole-economy wage refers to the institutional participants included in the publications of CSO. They cannot be directly compared to the figures published in the November 2004 Report. *[3] The current private sector wage inflation comprises the complete private sector covered by CSO's institutional statistics, as against the November 2004* Report, *which included the weighted*

In our assessment, the macroeconomic conditions of disinflation have improved since the November 2004 *Report*. Our inflation forecast has been revised downwards over the entire forecast period, and the GDP growth projection has been slightly increased.

Changes in assumptions

Since the last issue of the *Report,* the EUR/HUF exchange rate used in our scenario has not undergone any major change that could have had direct influence on the deviation of the current projection relative to the November 2004 *Report.* However, the US dollar has weakened significantly (by roughly 5 per cent) vis-à-vis the euro.

The January 2005 US dollar futures prices for oil slightly differ from our November 2004 assumption: 2005 prices are a little lower and 2006 prices are somewhat higher than expected before. At the same time, depreciation of the US dollar vis-à-vis the forint has considerably reduced (by 4–7 per cent) the forint futures prices for oil that are used as a technical assumption in our projection. In the short term, lower oil prices will have a favourable effect on inflation through fuel prices, while in the long term they tend to ease the cost-induced pressure on consumer prices.

As indicated in the November 2004 *Report,* there would be no rise in the excise duty on alcoholic drinks and tobacco in 2005. However, our inflation projection has been modified by the fact that hikes in the regulated prices of certain products fall short of our earlier assumptions. In this respect, primarily the agreements concluded on the prices of pharmaceuticals, lower-than-expected gas price rises and the announced compensation packages for electrical energy prices have affected our earlier projections.

Table 4.2 Changes in the major assumptions of the central scenario relative to November 2004

	August 2004 projection		Current projection		Change (per cent)	
	2005	**2006**	**2005**	**2006**	**2005**	**2006**
EUR/HUF exchange rate (HUF)	246.8	246.8	246.6	246.6	-0.1	-0.1
EUR/USD exchange rate (cent)	125.0	125.0	131.3	131.3	5.1	5.1
Brent oil price (USD per barrel)	43.9	40.6	43.7	40.9	-0.6	0.7
Memo: Brent oil (HUF per barrel)	*8676*	*8014*	*8198*	*7676*	*-5.5*	*-4.2*

* Annual averages. Calculated on the basis of January 2005 average exchange rates and futures quotes for oil

Changes to the real economic projection

Following a slowdown in 2004 Q3 and Q4, increase in gross domestic product has gathered pace in line with the estimations underlying the projection published in the November 2004 *Report*. The engine of growth included buoyant investment activity in 2004 Q3, and accelerating exports and industrial output in 2004 Q4. Over the forecast

period, slowdown in GDP growth is forecasted to be behind the November 2004 projection.

Currently, national investment activity is projected to slow less rapidly over 2005 and 2006 than expected in the November 2004 *Report.* Consumption smoothing by households also suggests a more moderate and more delayed slowdown than earlier envisaged. In the long term, recovery is expected in the external business cycle and increase in Hungary's market share, while in contrast to earlier expectations, improvement in the net exports is seen as likely already in the short term.

As a result of the combined effect of the above factors, we have revised our projection on the annual GDP growth upwards by 0.1 percentage point relative to November 2004 over the entire forecast period.

Changes to the inflation projection

Relative to the November *Report,* we have lowered our inflation projection by 0.8 and 0.5 per cent for December 2005 and 2006, respectively.

In 2004 Q4 the consumer price index did not rise as high as we had expected; this tendency has been amplified by the January CPI figure. This faster-than-expected disinflation is due to several factors. The stronger and more stable forint in 2004 H2 increased import competition, while at the same time the EU entry might have further reinforced market competition. The intensifying import competition reduced the prices of several commodity groups. Declining oil and unprocessed food prices proved to be a significant deflationary factor.

Beyond the lower inflation figures, changes in our central scenario as well as our perception of the real economy have also altered our projections. Lower assumptions on world prices for oil and a more moderate rise in regulated prices than expected in November 2004 have prompted us to revise our projections downwards to a major extent for 2005 and a minor extent for 2006. Of real economy trends, we assess the import competition tougher than before; further, a reduction in the wage inflation pressure resulting from declining labour demand has also had a major downside pressure on our projections, and finally, declining inflationary and wage inflation expectations affect them in the same way.[19]

4. 1. 2 Impact of an alternative interest rate and exchange rate assumption on our projection

Just as in earlier issues of the *Report,* an alternative interest rate and an alternative exchange rate path different from our technical assumption are discussed in this *Report.* The aim is to render our projections more comparable to forecasts that are based on interest and exchange rates assumed by the economic participants rather than invariable interest and exchange rate conditions.

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[19] Compared to our forecast in November, our forecast has also slightly decreased due to technical reasons, the publication of the CSO's new consumption basket. In this, the wieght of durables incresaed, which showed declining prices recently.

In this case these alternative paths are derived from the arithmetic average of responses by macroanalysts polled by Reuters in January. According to the survey, the analysts expect an approximately 2 per cent weaker exchange rate and 1 percentage point lower interest rate for 2005, and a 3–4 per cent weaker exchange rate and 2 percentage points lower interest rate for 2006.

The joint realization of these assumptions would raise our forecast of the 2005 annual inflation by approximately 0.2 and 0.4 per cent for 2005 and 2006, respectively.

Chart 4.1 Interest rate based on the January Reuters survey and the assumption with a constant interest rate
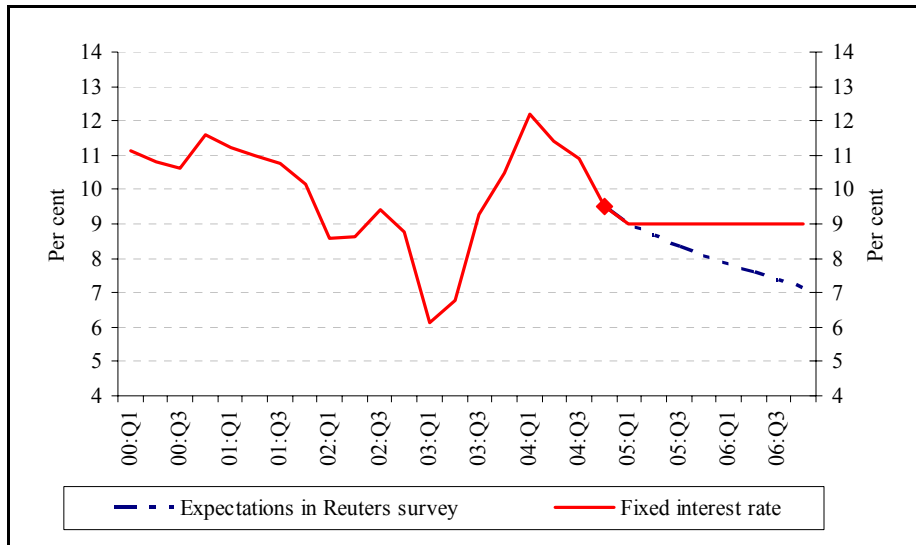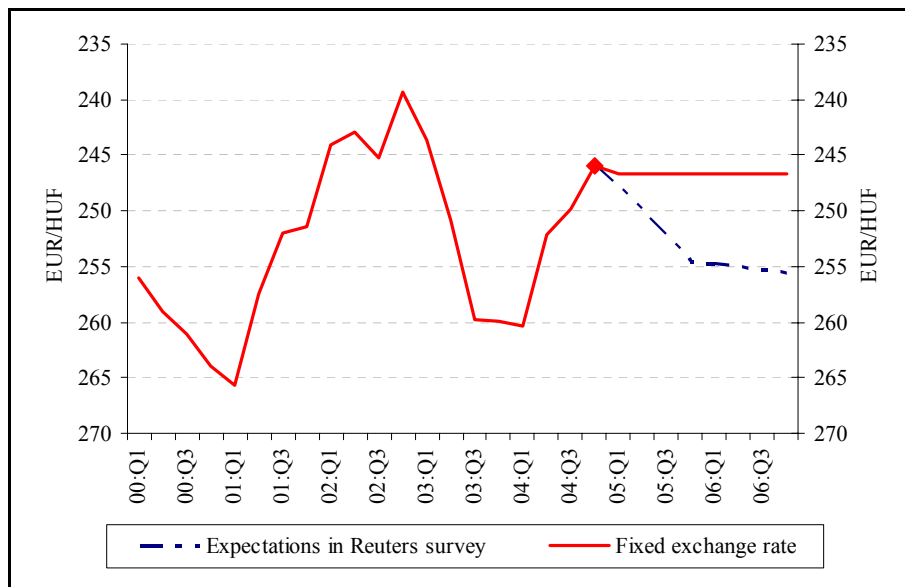

Chart 4.2 Exchange rate based on the January Reuters survey and the assumption of a constant exchange rate*

* Inverted scale.

4. 1. 3 A comparison of our projections with those of other institutions[20]

A comparison of this forecast with the projections of other research institutions and market analysts reveals that while our perception of the growth outlook is fairly similar to other analysts', our inflation forecasts lie in the lower segment of the market projections. In terms of the equilibrium trends, we still assume more significant imbalances, unchanged since the November 2004 projections, than the market consensus.

Market analysts have lowered their consumer price index projections far less than the MNB has, and so our current 2005 forecast is below the market surveys while our 2006 forecast shifted toward the lower bound of the market analysts' projections.

The GDP growth we forecast for 2005 corresponds to analysts' expectations, whereas the 2006 projection remains slightly below the market consensus.

Although our current account and general government deficit projections are both higher than the market consensus, they still remain within the band specified in market analysts' projections.

Most analysts consider Hungary's export market more extensive than perceived by the MNB, while there is practically no difference between forecasts for the rate of GDP growth to be achieved by Hungary's main foreign trade partners.

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[20] Please, note that the MNB projections cannot fully be compared to the projections of other institutions. Our projections are conditional, whereas other institutions usually set up unconditional projections. In addition to the difference between the assessment of current and expected trends, another reason for the divergence between the projections made by the MNB and other institutions may also result from the disparity of our central scenario from other institutions' projections on variables that are exogenous from our perspective.

Table 4.3 MNB central scenario versus other forecasts *

	2005	2006
Consumer price index (CPI), December on a year earlier, per cent		
MNB	3.6	3.4
Reuters survey (January 2005) [1]	*3.9-4.3-4.8*	*2.9-3.6-4.3*
Consumer price index (CPI), annual average growth rate, per cent		
MNB	3.4	3.8
Consensus Economics (January 2005) [1]	*4.0-4.5-5.4*	*3.0-3.7-4.8*
European Commission(October 2004)	4.6	4.2
IMF (September 2004)	4.4	-
OECD (December 2004)	4.7	4.5
Reuters survey (January 2005) [1]	*3.4-4.4-4.8*	*3.2-3.8-4.5*
World Bank (January 2005)	4.4	4.3
GDP, annual growth rate, per cent		
MNB	3.8	3.6
Consensus Economics (January 2005) [1]	*2.6-3.7-4.1*	*2.4-3.8-4.3*
European Commission (October 2004)	3.7	3.8
IMF (September 2004)	3.7	-
OECD (December 2004)	3.6	3.5
Reuters survey (January 2005) [1]	*3.3-3.8-4.1*	*3.4-3.9-4.3*
World Bank (January 2005)	3.6	3.7
Current account deficit, EUR billion		
MNB	7.7	7.6
Consensus Economics (January 2005) [1,2]	*5.9-7.2-8.2*	*5.4-7.0-8.0*
Reuters survey (January 2005) [1]	*6.2-7.1-8.1*	*6.2-7.0-7.5*
Current account deficit, as a percentage of GDP		
MNB	8.7	8.0
European Commission (October 2004)	8.5	8.5
IMF (September 2004)	8.2	-
OECD (December 2004)	8.5	8.2
World Bank (January 2005)	8.8	8.6
General government deficit, in an ESA-95 methodology, as a percentage of GDP		
MNB	5.3	4.7[3]
Consensus Economics (January 2005)[1]	*4.3-5.0-5.6*	*3.5-4.5-5.4*
European Commission (October 2004)	5.2	4.7
OECD (December 2004)	4.9	4.5
Reuters survey (January 2005) [1]	*4.5-5.0-5.5*	*4.3-4.7-5.0*
World Bank (January 2005)	4.9	4.7
Projections on the size of Hungary's export market		
MNB	6.3	5.8
European Commission (October 2004)[4]	6.6	6.5
OECD (December 2004)[4]	6.3	7.4
IMF (September 2004)[4]	5.8	-
Projections on the rate of GDP growth by Hungary's foreign trade partners		
MNB	1.9	2.3
European Commission (October 2004) [4]	2.0	2.1
OECD (December 2004)[4]	1.9	2.5
IMF (September 2004)[4]	2.0	-

* The MNB's projections are conditional, thus they cannot always be directly compared with projections made by others.
[1] In addition to the averages of polled analysts' responses (the values in the middle), the smallest and largest values are also indicated in italics for the Reuters and Consensus Economics surveys in order to illustrate dispersion. [2] Consensus Economics Inc. (London) 'Eastern Europe Consensus Forecasts' specifies current account projections in US dollars, therefore they are converted at the EUR/USD exchange rate assumed in the current Report. *[3] Assumption based on the Convergence Programme. [4]Calculated by MNB, where the projections of the named institutions regarding the individual countries are considered with the weights used for calculating the MNB's own external demand indicators. This way the forecast may differ from the numbers published by the institutions aforesaid. Sources: Consensus Economics Inc. (London) 'Eastern Europe Consensus Forecasts (17 January, 2005); European Commission Economic Forecasts, Autumn 2004; IMF World Economic Outlook (September 2004); OECD Economic Outlook (December 2004); Reuters survey, January 2005; World Bank EU-8 Quarterly Economic Report (January 2005).*

4. 2 Developments in general government deficit indicators

Projections of fiscal developments are currently impeded by an expressly high level of uncertainty, which follows partly from developments related to the EU accession and partly from measures taken by the government at the end of 2004.

In our analysis fiscal developments are described with different indicators at the same time, they can be used simultaneously in order to analyse the situation in a more complex way. Developments of cash-flow revenue and expenditure are reflected in the so-called GFS deficit, this indicator is available during the year on a monthly basis. The so-called ESA deficit is accrual-based, this indicator is monitored in the context of the European macroeconomic policy coordination, particularly in the context of the Stability and Growth Pact and also the Maastricht criteria. Our analytical indicator is the so-called augmented (SNA) deficit, which takes into account the expenditure of quasi-fiscal activity and more suitable for assessing the underlying component of the deficit. Fiscal impact on demand is estimated by calculating the change in the primary augmented deficit (the so-called fiscal demand impact).[21]

A lengthened examination of VAT returns as of the end of last year resulted in a slowdown of VAT refunds implying an improvement in the cash flow balance of the 2004 budget, the effect of which is estimated to amount to 0.6 per cent of GDP. This measure has different effects on the deficit categories regularly analysed in our scenario. The impact of this measure is fully reflected in the cash-flow deficit (GFS). The impact on ESA deficit depends on the refunds in January-February 2005. When analysing the ESA deficit, considerable methodological uncertainty is caused by the fact that there has not been an established and well-defined methodology in Hungary for applying corrections on an accrual basis. Our projection is based on the deficit methodology known to date. Naturally, a change in the application of the ESA methodology in Hungary would imply different ESA deficit figures compared to those in this Report even if the underlying developments were the same.

The so-called augmented (SNA) deficit accounting applied by us is not affected by the temporary influencing of the VAT refunds, as this deficit category measures the underlying fiscal developments. Thus, the deficit indicator is adjusted with the net VAT revenue movements between years on a cash basis, so this deficit category shows a more stable picture than other deficit indicators.

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[21] See *Manual to Hungarian Economic Statistics*, MNB 2001

Our central projection for 2005 is based on the following assumptions:

- As for the VAT refunds, half of the refund liabilities deferred from last year affects the 2004, the other half the 2005 ESA deficit.

- Except for the open-ended primary expenditure estimates, all other primary expenditure estimates are assumed to be achieved as provided by the budget law.

- Final freezing of the expenditure reserve of about HUF 100 billion contained by the budget law is assumed for the central government.

- As for the interest balance, our projection was prepared on the basis of the 7 February forward yield curve.

- Furthermore, we took into account those fiscal measures that have been approved by the parliament, or officially approved, publicly announced and sufficiently detailed.

Under these assumptions and based on the currently known ESA methodology, our central projection shows that the 2005 deficit target cannot be achieved unless further measures are taken in the course of the year to improve the balance. In the absence of such measures ESA deficit is likely to be 5.3 per cent of GDP.

Relative to our November 2004 projection, looking at years 2004 and 2005 together, our deficit projection moderated by approximately 0.5 per cent of GDP. The underlying factors are mainly an increase in our projection for direct tax revenues and the movement of the yield curve in the direction of a lower net interest balance.

As there is no approved budget or draft budget for 2006, we have not prepared a full projection for 2006. Instead, the 2006 deficit figures as calculated assuming that, as announced by the Government in the convergence programme update, the deficit will decline by 0.6 per cent in 2006.

Table 4.4 Fiscal indicators according to our baseline scenario
As a percentage of GDP

	2003	2004	2005	2006
	Actual / Estimated		Projection	Assumption***
1) GFS deficit	**-5.9**	**-6.4**	**-5.5**	**-4.5**
2) ESA adjustments	-0.3	+1.1	+0.2	-0.2
3) ESA deficit (1+2)	**-6.2**	**-5.3**	**-5.3**	**-4.7**
4) Deficit according to national definition*	-5.3	-4.5	-4.4	-3.7
5) Adjustment for temporary items	-0.9	-1.1	-0.5	n.a.
6) Quasi-fiscal expenditure	-1.3	-1.5	-2.3	n.a.
7) Augmented (SNA) deficit (3+5+6)	**-8.5**	**-8.0**	**-8.3**	n.a.
8) Augmented (SNA) primary balance	-4.6	-4.1	-4.3	n.a.
9) Fiscal demand impact**	**-0.4**	**-0.4**	**+0.1**	**-0.6**

Based on the adjustment published by the CSO and the Ministry of Finance, modification of the ESA deficit taking into account the revenues and expenditures of private pension funds.[22]
*** This is an analytical measure calculated by the MNB since 1998 as changes in the augmented (SNA) primary balance, adjusted for changes in payments to private pension funds. Negative values denote contraction in aggregate demand.*
**** Not a projection but an assumption based on the Convergence Programme.*

Chart 4.3 Fiscal demand impact, 1996-2004
As a percentage of GDP
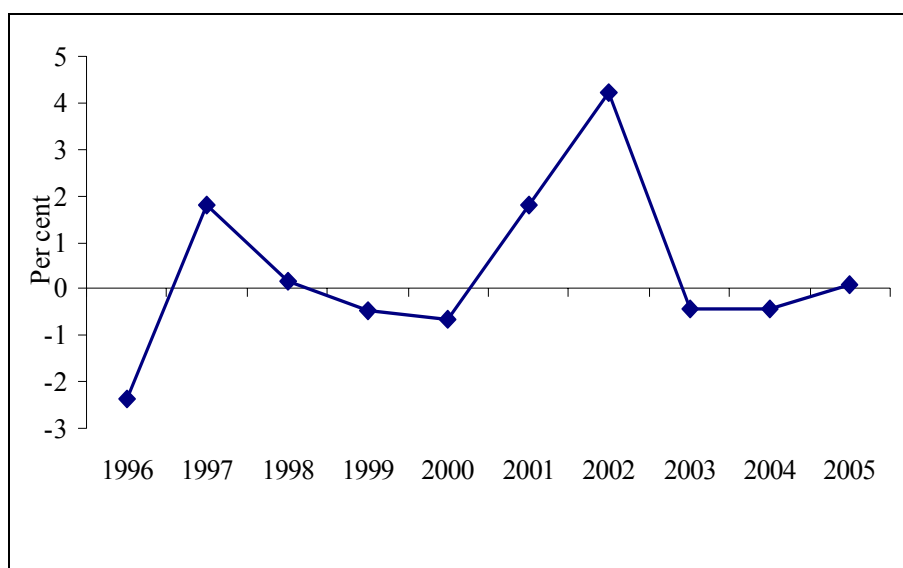
4. 2. 1 Assessment of the 2004 fiscal balances

According to preliminary, although still not full-scale data, the original deficit targets for 2004 have not been achieved. The approved Budget Act included an ESA deficit of

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[22] No separate estimate for the future balance of private pension funds has been elaborated. Instead, the adjustments published in the joint communiqué of the CSO and of the Ministry of Finance have been accepted. See: CSO Statistical News, 19th edition, dated 6 December 2004.

3.8 per cent of GDP. However, even the deficit target raised to 4.6 per cent last spring after the year 2003 deficit had become known could not be achieved. In September the Government modified its official deficit projection to 5.3 per cent, which is expected to be attained due to the extraordinary year-end measures.

The figures in our current estimate are different from those in our November 2004 central projection. It is attributable to the slowdown in and partial stoppage of VAT refunds in 2004 Q4, by which the Ministry of Finance diverted both the year 2004 and year 2005 deficit levels from the deficit levels that would result from normal fiscal developments. We drew attention to this possible outcome in our previous *Report*.

In early-January the Ministry of Finance announced that the cash-flow deficit of the central government[23] of last year was 1,284 billion forints, which equals a cash-flow (GFS) deficit of 6.3 per cent of GDP. Almost throughout the whole last year the deficit exceeded the proportional part of the deficit target, and this trend could be brought down to the level expected by the Ministry of Finance only with extraordinary measures at the end of the year.

On the revenue side of the government budget, tightening VAT controls resulted in a slowdown in VAT refunds. As a result of this measure, the Tax and Financial Control Administration did not refund the VAT within the statutory 45 days to those VAT payers who have an EU VAT tax number. We estimate the effect of this measure to be around 0.6 per cent of GDP, i.e. the actual cash-flow VAT revenue data of 31 December 2004 may show a similarly more favourable position compared to developments perceptible during the year. Of course, this impact automatically improves the cash-flow deficit as well, which would be nearly 7 per cent of GDP without the aforementioned measure.

Compared to our November 2004 projection, the budget collected higher-than-expected revenues from corporate taxes. The additional corporate tax revenues may be attributed to underlying developments, although this may be judged only after the general meetings of corporations, when the extent of last year's tax overpayment is revealed.[24]

In comparison to our previous projection, shortages were experienced in the fields of personal income taxes and social security contributions. These developments considered to be lasting in 2005 as well; its risk was perceived during last year too.[25]

Government budget expenditures were broadly in accordance with our November 2004 central projection. From the developments in expenditures in 2004 some conclusions arise that may be causes for increased care over the projection horizon.

Last spring the Government took measures in order to reduce expenditures. The fulfilment of expenditure estimates in 2004 indicates that the Government had enough

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[23] Government budget: central budget, social security funds, extra-budgetary funds together, excluding local municipalities.
[24] Relevant data are to be available as late as the time of preparing our August report.
[25] See line three in the table titled 'Factors of uncertainty in the GFS and ESA deficit projection for 2004' on page 56 of the November report.

room for manoeuvre in the area of central budget to force budgetary units and chapters to carry out the decided tightening of expenditures. However, it is a warning sign that the usual December increase in expenditures was far behind the average of recent years. It may indicate that the units and chapters carried a part of their expenditures over to the next year, through increasing the carry-over money stock. On the one hand it increases the risk of exceeding the 2005 deficit target, while on the other hand it suggests that the government's room for manoeuvre for further extraordinary expenditure-cutting programmes narrowed during 2004, and a part of the savings on expenditures decided last spring may arise as effective expenditure in 2005.

In early-February the cash-flow deficit of **local governments** was known only on the basis of flash reports. A lot of uncertainties were involved in the deficit figures compiled on the basis of flash reports, e.g. what part of the sold properties is considered as privatisation income according to statistics. The deficit of the sub-sector is expected to have amounted to 0.1 per cent of GDP. If our expectations are proved, the cash-flow general government deficit ratio amounted to 6.4 per cent of GDP in 2004.

Due to the high methodological uncertainty that characterised the year of the EU accession an *adjustment between GFS and ESA deficits on accrual basis* cannot yet precisely be accounted for. Based on our assumption regarding VAT refunds, relative to the extent of the earlier assumed correction, a lower correction, equalling 0.3 per cent of GDP is derived. Thus, for 2004 the correction between the ESA and GFS balances may amount to approximately 1.1 per cent of GDP.

In the case of the accrual-based (ESA) deficit, an uncertainty factor is involved in the developments in cash-flow VAT refunds in January and February 2005. The Ministry of Finance is able to temporarily divert the level of the ESA deficit from the deficit level that follows from the macro-economic and fiscal trends by the January–February scheduling of VAT refunds.[26] So this deficit category is extremely sensitive to the dynamics of the VAT refunds in January–February 2005 and to the magnitude of the overdue amounts of VAT refunds at the end of February. Assuming that there will be no extraordinary interferences from the Government's side in the VAT revenues and refunds in the first two months of 2005, based on the currently known ESA methodology, the ESA deficit is expected to be in the range of 5.3 per cent of GDP in 2004.

In comparison to our previous *Report*, our estimate of the **2004 fiscal demand effect** has been modified. According to our current estimate the contraction in the fiscal demand was around 0.4 per cent of GDP in 2004, i.e. compared to our November *Report* we are now calculating with a fiscal path that is looser by 0.3 per cent of GDP. The change in our estimate is partly of technical character, as now we switched to using

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[26] According to the current official methodology, a component of the ESA deficit corrections is the VAT. The procedure is as follows: The January–February 2005 VAT refunds and the January VAT revenues affect the 2004 ESA deficit, as the VAT revenue of the first month of the year is registered for the previous year, but in case of VAT refunds the previous year is adjusted for the amount of refund in the first two months.

the adjustment for the impact of the pension reform calculated by the CSO.[27] The level of quasi-fiscal investments is now thought to have been higher in 2004 than our expectation in November, which resulted in a further 0.1 percentage point decline in the fiscal demand reducing effect estimated for 2004 earlier.

4. 2. 2 Fiscal balance expected for 2005

When planning the year 2005 budget it could already be seen that even the modified 2004 deficit target would hardly be attainable. The measures by the Government at end-2004 make it even more difficult to attain this year's deficit target; the measures involve an accumulation of fiscal tensions for 2005.

Under our central projection, in all probability, the 4.7 per cent ESA deficit target for 2005 cannot be attained without further balance-improving measures taken in the course of the year. Without such measures the ESA deficit for the current year is estimated to be 5.3 per cent of GDP.

Taking into account that temporarily, until 2006, it becomes possible to account for the effect of the pension reform of 1997 statistically, the accordingly adjusted deficit indicator according to national definition for this year will amount to 4.4 per cent of GDP.

Our new projection for the 2005 ESA deficit is 0.2 percentage points lower than the projection in our November *Report*. The main underlying reason is the upward modification of our earlier projection for direct tax revenues, and as a consequence of the change in the yield curve in the meantime our interest balance projection became lower. When preparing our central projection, as for the central budget appropriations, blocking of the so-called expenditure reserve defined in the budget act was supposed, similarly to the November 2004 *Report*.

Our central projection is considerably determined by our assumption that a slowdown in VAT refunds at end-2004 will not be repeated at end-2005 or in 2006 Q1, and in this year VAT refunds will be effected within the time-limit specified in the tax law. From the cash-flow perspective it means that irrespective of the Q1 reduction in the VAT refund liabilities accumulated in 2004, it will entirely affect the year 2005 net VAT revenue, i.e. the amount of the stock carried over from 2004 was deducted from the 2005 cash-flow net VAT revenue. From the accrual-based perspective the situation is even more difficult. As it cannot be foreseen whether the Tax and Financial Control Administration is going to completely transfer the refunds carried over from last year by the end of February, or if the refunds will continue to be slowed down in the framework of tighter tax control, i.e. the stock of VAT refunds carried over from last year remains

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[27] There are several alternatives to determine the effect of the pension reform. One of them is to deduct the expenditures of private pension funds from the total amount of the membership fees received by the funds and of the yields realised on the accrued assets based on the balance sheets of the private pension funds. (In our opinion this approach would be in conformity with the statistical accounting applied by EUROSTAT.) The other method is to establish how much of the contributions is missing from the revenues of the pension fund based on the amount of contribution actually collected from private pension fund members.

or even further increases, our central projection is based on the assumption that half of the carried over liabilities will be paid back by the Tax and Financial Control Administration by end-February, while the rest will be paid back during the year. According to this assumption, half of the refund liabilities accumulated at the end of last year (around 0.3 per cent of GDP) will be reflected in the deterioration of the ESA deficit deriving from the 2005 developments.

The table below is a summary of the main differences between year 2005 central projection and the appropriations in the budget act. As it can be seen, *the difference is nearly 0.7 per cent of GDP at the level of cash-flow deficit*, most of which is present at the primary balance level.

Table 4.5 Differences between our the 2005 projection and the approved budgetary estimates

Cash-based, as a percentage of GDP

	Difference, as a percentage of GDP
I. Revenues (1+2+3)	**+0.6**
1) Direct taxes	-0.1
2) Indirect taxes	-0.7
3) Other revenues	+1.4*
II. Primary expenditures (4+5)	**+1.2**
4) Primary expenditures	+1.1*
5) Expenditure reserves (freezes)	+0.1
III. Primary balance (I-II)	**-0.6**
6) Interest balance	-0.0
7) Current-price GDP difference	-0.1
Differences total (III.+6+7)	**-0.7**

These two items are technically connected, their balance matters, see in the text.

As for the tax categories that determine the main budget revenues, in 2005 we expect nearly 0.8 per cent of GDP less revenues to be collected than scheduled in the Budget Act. Of this difference, around 0.3 percentage points of GDP is explained by our assumption regarding the VAT refunds, i.e. this difference in indirect taxes is not related to the developments in 2005. Last year revenues from the simplified entrepreneurial tax grew at an earlier unexpected rate, and in December the number of such taxpayers increased markedly. Thus, compared to our November forecast our projection for the corporate tax and simplified entrepreneurial tax (EVA) revenues was raised (to higher levels than those in the statutory appropriations), while our central projection for the personal income tax and social security contributions is below the level appropriated in the budget.

The significant surplus in other revenues is a consequence of the fact that budgetary units' and institutions' own revenues were higher already in 2004 than the revenue level in the adopted 2005 budget act. The revenue-increasing dynamics prescribed by law were taken into account in our projection. These types of extra revenues can improve the budget balance only to a small extent (by 0.1–0.2 per cent of GDP, as we estimate), as in the case of such units and institutions a significant part of their own revenues

automatically involves additional expenditures as well, which is included in the higher-than-appropriated expenditure level in the primary balance (item 4 in Table 4-5).

On the expenditure side, in case of each expenditure item over which the Ministry of Finance has its control we, as earlier, accepted that these budget appropriations will be attainable. For the open-ended expenditures we prepared our own estimate; our forecast for pension and pharmaceutical expenditures together includes higher expenditure than the statutory appropriations by 0.1 per cent of GDP.

We calculated with the almost full deficit reducing impact of the expenditure reserve created by the budget law for 2005, although as we see, blocking a part of the personal income tax revenue given to local governments is to result in a higher deficit level at the sub-sector (see this effect in line 5 of Table 4-5).

Our interest balance projection was prepared in accordance with the earlier applied technical rules, based on given yield curve and structure of financing. The early-February yield curve and the updated financing plan of the Government Debt Management Agency were used and constituted the basis of our interest balance projection. According to our calculations the cash-based interest balance of the budget may exceed the statutory appropriation by 0.04 percentage point of GDP.

On the basis of the above-mentioned adjustment, for the corrections between the cash-flow (GFS) and ESA deficits we prepared a technical estimate, which can improve the ESA deficit level compared to the GFS balance by approximately 0.2 percentage points of GDP.[28]

In order to increase government control over expenditure estimates, the 2005 Budget Act includes a new provision, which can has a significant impact on the time profile of the deficit during 2005.[29] The impact of this measure will be reflected in a change in the seasonality of expenditures, whereby the change in the deficit can be smoother in the course of the year than in previous years. Thus a comparison of the interim deficit developments with those of previous years provides a proper picture of fiscal developments only if the impact of the new measure is taken into account.

According to our estimate for the *fiscal demand effect*, the budget is to have a broadly neutral impact on the aggregate demand (+0.1 per cent) this year. In our November forecast an 0.3 per cent increase in demand was projected. The difference is basically the result of the fact that our projection for the year 2004 demand effect had changed (the extent of fiscal adjustment declined), and as the demand effect indicator indicates

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[28] We are aware of the intention of the Finance Ministry to change the methodology for calculating the accruals based VAT refunds. If such changes were implemented and the Eurostat consented, the 2005 ESA forecast would be lower by a couple of tenths of a percentage point of GDP, while the 2003 ESA deficit figure would be increased compared to the figures in this Report solely due to the change of methodology. The GFS and the SNA figures, or the demand impact estimates would not change.

[29] In the first six months of the year budgetary units and chapters may spend only 35 per cent of the part of their expenditure appropriations provided by law which excludes wages and wage-related costs. If this measure proves to be effective in H1, it will provide increased space for the government to take mid-year steps to improve the balance.

the changes in demand, our projection for 2005 was also modified because of the base effect.

4. 2. 3 Uncertainty of this year's deficit forecast

All risk factors that may be seen from the autonomous economic and fiscal developments are summarised below.

Table 4.6 Major factors of uncertainty in the ESA deficit projection for 2005
As a percentage of GDP

Central projection of ESA deficit: -5.3 per cent			
Direct tax revenues will be higher than those assumed in the central projection	+0.2	A bigger-than-expected increase in certain open-ended expenditures	-0.1
EU subsidies co-financing will be lower than planned	+0.1	Corporate tax revenues will fall behind the expected	-0.1
Local governments' cash-flow deficit will be lower	+0.1	Investment expenditure of local governments will exceed expectations	-0.1
		The new measure regarding the carry-over funds will only partially be effective	-0.4
		Lost revenues on consumption- and excise-type taxes	-0.2
Impact of favourable fiscal developments on the balance	*+0.4*	*Impact of unfavourable fiscal developments on the balance*	*-0.9*
ESA deficit in the favourable case	**-4.9**	**ESA deficit in the favourable case**	**-6.2**

As it is illustrated, the spread of risks is perceived asymmetrically towards the higher deficit.

Of the risks pointing to a higher deficit level the extent of risks attributable to the measure regarding the carry-over funds from 2004 needs to be underlined. The total amount of carry-overs from 2004 to this year is higher than that of the opening carry-over funds of early-2004. In order to handle the risk of reducing the carry-over funds, the Government included a measure in the Budget Act. The new rule says that the carry-over funds of budgetary units and chapters cannot be lower at the end of the year than the opening stock was at the beginning of the year. Observing this measure carries a significant risk, as it may be supposed that in case of certain budgetary units and chapters the effectiveness of the measure cannot be assured due to outstanding liabilities. The risk can be even higher, because it can be assumed that a part of the accumulation of the carry-over funds was not a result of intentional behaviour, but certain revenues were received by budgetary units at the end of the year. As a consequence, budgetary units had no time left at the end of last year to spend these amounts, irrespective of the fact that these revenues were burdened with liabilities, e.g. the revenue from the UMTS concession in December.[30]

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[30] The concession of the third generation mobile phone frequencies. In accordance with Eurostat's decision the received concession revenues must be registered as a lump-sum revenue in the year of granting the concession. When calculating the demand effect estimate and the so-called SNA-type deficit indicator the concession revenues are spread for the whole period.

4. 2. 4 Planned deficit reduction for 2006 and its uncertainty

As there is no approved budget or detailed budget bill for 2006, we have prepared a so-called normative (conditional) and a risk-based projection (quantifying the existing determinants) for 2006, as in our November 2004 *Report*. The purpose of the risk-based projection again is to use current determinants in outlining an alternative path that shows how next year's budget balance would evolve without further balance-improving measures (mainly the year 2006 budget). The conditional projection constitutes the central path in the *Report*, while the difference between our risk-based projection and the normative path represents the quantifiable risk in attaining the targeted reduction in deficit.

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.

The path that may be outlined on the basis of the determinants contains the phasing out of extraordinary revenues in 2005, and also quantifies the effects of lasting tax cuts resulting from the already announced measures to be taken by the Government. Selling the already built highway sections, MOL's payment to the gas compensation fund and financial institutions' extraordinary corporate tax payment liabilities constitute one-off revenues that improve the year 2005 deficit level. The effect for the whole year of the tax cut (cancellation of the lump sum health care contribution), indexation of pensions and the improvement in the interest balance constitute a determinant with lasting effect.

Table 4.7   Assumed and determinant-based deficits for 2006
As a percentage of GDP

	1	2	**1-2**
	Deficit in 2006		***Determinants not yet covered by measures***
Deficit indicators	Effect of determinants	Central projection (assumption)	
GFS deficit	-6.4	-4.5	**-1.9**
ESA deficit	-6.6	-4.7	

The difference between the normative and determinant-based paths in 2006 on the cash-flow (GFS) balance level, if the central projection for 2005 is realised, indicates the necessity of a further fiscal balance improving measure amounting to 1.9 per cent of GDP in 2006.

The risk-based scenario assumes complete termination of the lump sum health care contribution in 2006 (from the beginning of the year) and payment of the full 13th-month pension.

In terms of the GFS balance, our risk-based path reckons with an additional increase in fixed investments by the central budget amounting to 0.5 per cent of GDP, owing to an agreement concluded with the European Union on investment expenditure.[31] According

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[31] 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.

to our calculations, if the appropriations are attained, the level of investments does not allow the fulfilment of the aforementioned agreement in 2005. Therefore, as we estimate, extra investment expenditure amounting to at least 0.5 per cent of GDP will need to be appropriated on the expenditure side of the 2006 budget. As meeting NATO liabilities have been ineffective in the recent years, the meeting of earlier undertaken GDP-proportionate liabilities were not reckoned with when quantifying our risk-based path.

It is worth mentioning that beyond quantifiable determinants further risks may threaten the 2006 budget year, e.g. the provision of the 2005 Budget Act regarding the carry-over funds to be formed at end-2005. The high stock of carry-overs may cause tensions in the fiscal path, if the assumed budget adjustment is attained through a further reduction in the expenditure level of budgetary units. To this assumed situation budgetary units may respond with spending their carry-over funds burdened with liabilities, which would result in an increase in the deficit.

4. 3 Developments in external balance

The current account deficit reached EUR 1.73 billion in Q3, while the surplus in the capital account balance amounted to EUR 170 million. Taking into account data revisions, the cumulated current account deficit in the first three quarters corresponds to our forecast in the previous *Report*. The assessment of external financing developments is made very difficult by the fact that prior to the EU accession the corporate sector increased its imports and made significant inventory investments in goods with a higher import burden within the EU. Consequently, imports grew faster in Q1 and then slower than could be expected based on fundamental developments. The seasonally adjusted external financing requirement modified by the above effect exceeded 9.5 per cent in Q3 as a proportion of GDP.

The level of external financing requirement is still attributable to the high level of the financing requirement of consolidated general government. Examining the shortfall of VAT on imports and the accrual based general government deficit data adjusting the effect of lower-than-usual VAT payments due to tax inspections we found that in 2004 the sector's net borrowing requirement did not fall significantly.

Households' seasonally adjusted net financial savings rose to 2 per cent of GDP in Q3, consistent with our expectations. The increase in net financing capacity was accompanied by asset growth remaining flat and by declining borrowing. The growth in net financial savings, however, has declined considerably. Seasonally adjusted borrowing has fallen, while the share of foreign currency-based borrowing facilities has continued to increase further.

Table 4.8 Current account and financing by sectors
(as a per cent of GDP)

	2001	2002	2003	2004	2005	2006

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 the available extra EU resources as additional sources for programmes.

	estimate			forecast		
I. General governments	-5.2	-9.2	-8.8	-8.2	-8.3	-7.5
II. Private sector (=1+2)	-0.5	2.3	-0.2	-0.3	0.2	0.3
1. Household sector	5.2	2.6	0.1	1.9	2.4	2.6
2. Corporate sector	-5.7	-0.4	-0.3	-2.2	-2.2	-2.3
Financing requirement (=I+II)	-5.6	-6.9	-9.0	-8.6	-8.0	-7.2
Current account balance	**-6.3**	**-7.2**	**-9.0**	**-8.9**	**-8.7**	**-8.0**
- EUR billion	3.6	5.0	6.6	7.2	7.7	7.6

In line with accounting for interest in the current account on an accrual basis, accounting for interest in the general government sector was also based on accruals.

The corporate sector's behaviour was examined on an accrual basis, similarly to that of the general government. Allowing for the distortion effect of the imports brought forward due to the EU accession, the sector's seasonally adjusted net financing requirement continued to increase in Q3, which is in line with the dynamic growth in investment demand according to GDP statistics. In parallel with the faster increase of capital formation expenditure direct investment became increasingly dominant in financing this sector in the first three quarters of 2004.

With the financing requirement of the general government decreasing moderately and the net financing requirement of the private sector increasing slightly Hungary's GDP-proportionate external financing requirement is expected to decline by only 0.4 percentage points in 2004. The GDP-proportionate current account deficit is likely to stand at 8.9 per cent, approximately at the level forecasted in our previous *Report* representing a deficit of EUR 7.2 billion.

In 2005 the GDP-proportionate financing requirement of the consolidated general government is expected to remain flat based on available information. With the slowing expansion of capital formation expenditure the GDP-proportionate net financing requirement of the corporate sector is not expected to increase further, while households' net financial savings may grow slightly. The GDP-proportionate external financing requirement is likely to fall by nearly 0.6 percentage points that may represent a growth in the capital account surplus, as well as an increase in the current account deficit to EUR 7.7 billion.

In 2006 a pre-condition for the decline in external financing requirement is a restrictive fiscal policy on the level of the entire general government, while the GDP-proportionate financing requirement of the private sector is expected to remain flat.

4. 3. 1 Financing the current account deficit

In 2004 Q3 the structure of external financing was shifted to a favourable direction from the point of view of risk assessment. The net inflow of foreign direct investment exceeded EUR 1.2 billion, while non-debt generating financing as a proportion of current account was higher than 70 per cent. This proportion was above 40 per cent in the first nine months of the year representing a significant year-on-year growth even compared to the considerable outflow of foreign direct investment in 2003. Nevertheless, the outstanding growth of estimated reinvested earnings attributable among other factors to settlement techniques also contributed to the dynamic growth of foreign direct investment in Q3.

Chart 4.4 Composition of the financing (per cent of GDP)
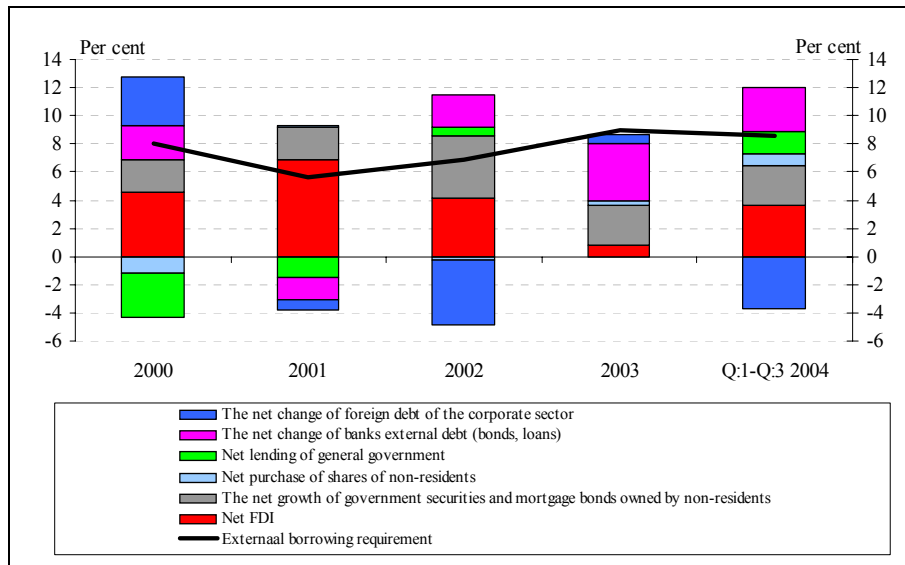
As far as debt generating financing is concerned, following the selling wave in Q2 foreigners significantly increased their stock of government securities as a result of the more favourable international investment sentiment. In line with the growing inflow of foreign direct investment and asset purchase by foreigners net foreign debt of the private sector have significantly declined. The corporate sector's net foreign borrowing fell by EUR 1.3 billion, while the net foreign debt of the banking sector remained practically flat following a significant increase in Q2.

Table 4.9 External financing requirement (EUR millions)

	2003				2003	2004		
	Q1	Q2	Q3	Q4		Q1	Q2	Q3
	quarters					Quarters		
1 External financing requirement	**-1,650**	**-1,806**	**-1,407**	**-1,745**	**-6,608**	**-1,758**	**-1,797**	**-1,559**
1.1 Current account balance	-1,559	-1,815	-1,419	-1,783	-6,576	-1,695	-1,878	-1,729
1.2 Capital account balance	-91	9	12	38	-32	-63	81	169
2 Financing	**4,336**	**194**	**1,605**	**1,005**	**7,140**	**1,624**	**2,199**	**1,527**
2.1 Direct investment	-194	266	20	470	562	410	513	1,219
2.1.1 Direct investment abroad	-481	-158	-68	-750	-1457	-251	-99	45
2.1.2 Direct investment in Hungary	286	423	89	1220	2018	661	611	1,174
2.2 Borrowing by consolidated general government	1,563	-208	1,166	-136	2,385	905	91	1,354
2.2.1 Borrowing from the MNB	-116	-541	-771	-421	-1,849	-738	-25	-60
2.2.2 Borrowing by the Government (excluding securities issue)	951	70	1,076	415	2,512	861	691	450
2.2.3 Purchases of government securities by non-residents	728	264	861	-130	1,722	781	-575	964
2.3 Net borrowing by private sector	2,923	44	321	642	3,930	166	1,559	-1,057
2.3.1 Borrowing by credit institutions	2,642	-168	390	349	3,214	314	1,938	107
2.3.2 Portfolio investment (shares)	208	39	148	-173	223	326	98	95
2.3.3 Net borrowing by companies abroad	73	173	-217	465	494	-475	-477	-1,259
2.4 Balance of errors and omissions	45	92	98	29	263	143	37	11
3. Change in international reserves (1+2)	**2,686**	**-1,611**	**198**	**-740**	**532**	**-133**	**402**	**-32**

4. 4 The performance of the MNB forecasts for December 2004

With regard to inflation developments at end-2004 the rapid slowdown of the twelve month price increase in the last months of last year surprised both market analysts and the MNB. While at the longer term time horizon of over one year relevant for monetary policy the MNB's forecast was closer to average expected inflation, the consensus of market analysts had smaller average errors within the one year time frame.

In line with our practice over the last few years we prepared the assessment of our forecast for inflation at end-2004 this year too.[32] In this *Report* we aim to evaluate the accuracy of our forecast from two basic dimensions: on the one hand we examine the MNB's forecasts vis-à-vis the forecasts of market analysts polled by Reuters, while on the other we try to divide our forecast errors into two groups: errors caused by technical factors (exchange rate, oil prices) and errors caused by exogenous factors (unprocessed food and regulated price dynamics), as well as other forecast errors not attributable to these variables. In the case of the latter a similar decomposition was used as a basis for comparison as the one applied in our forecast for December 2003.

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[32] Prevously we prepared such an analyses in the February 2004 *Report*. There we focused on the forecasts for 2003 end-year inflation.

Before assessing specific results we would once again like to emphasise that the MNB's forecasts are provisional and as such are only comparable to the unconditional forecasts of market analysts to a rather restricted extent.

Comparing the accuracy of the MNB's forecast with that of the Reuters survey

Forecasts were included in our comparison only from the date when both circles of analysts prepared a forecast. Thus the first comparable projections were made in January 2003[33]. The assessment of the period under analysis is made more difficult by the fact that in the course of 2004 indirect taxes increases had a significant effect on consumer price inflation developments. As the majority of these tax changes was only announced in July 2003 the forecasts prepared up to this date had continuously and significantly underestimated actual inflation. At the same time, however, following the incorporation of indirect tax increases both the MNB's and the market's average projections permanently exceeded actual inflation. On the whole, therefore, following the publication of indirect tax increases the inflation path of last year remained below the expectations of both the MNB and the market participants.

Chart 4.5 The MNB's and Reuters survey forecasts for inflation in December 2004*
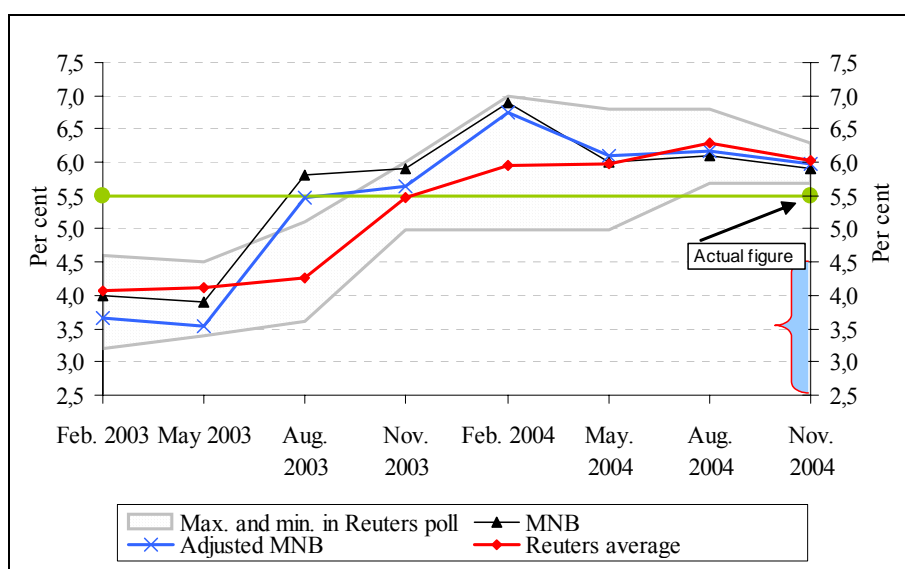
*The adjusted MNB time series indicates the MNB's forecast presuming the use of Reuters poll exchange rate expectations based on consensus as a technical assumption.

The order of magnitude of the forecast errors in the whole sample was identical in the case of both analyst groups (average absolute error was 0.8–0.8 percentage points in both cases). While due to the appropriate quantification of the indirect tax shock and its quick incorporation into the projections the MNB' forecasts had typically smaller errors over a time horizon longer than a year (a time frame relevant from the point of view of monetary policy), in the case of forecasts of less than a year's time horizon the market

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[33] As a basis for comparison we chose the Reuters survey of the month preceding the publication of our *Report on Inflation* as due to our working hours the MNB's forecasts are also finalised in these months.

consensus was closer to the actual value at year end on average. Although the MNB's forecasts for a period of less than a year only play a role in the assessment of longer term inflation developments when making decisions on monetary policy it is worth mentioning that a significant part of our forecast errors in 2004 could be attributed to our February 2004 projections.

The February 2004 forecast is of special importance as at that time both the MNB's exchange rate assumptions and the market analysts exchange rate expectations indicated a significant decline of nearly the same proportion (around 4 per cent) compared to the previous quarter. At the same time market analysts increased their forecast to a much smaller extent compared to November 2003 than the MNB, also shown by the adjusted MNB forecast calculated on the basis of market analysts' exchange rate expectations: only a small part of the difference between the forecasts of the market and the MNB can be explained by the difference between exchange rate assumptions.

Looking at it separately, however, the February 2004 increase in the MNB's inflation forecast can mostly be attributed to the weakening of the exchange rate assumptions. As the market did not raise its forecast to the same extent this could indicate the difficulty in applying the exchange rate pass-through by the MNB, which is a weaker exchange rate pass-through. The situation, however, is not this simple as the forint significantly strengthened later and then stabilised at a strong level. As regards the 'actual' parameters of the exchange rate pass-through the February 2004 episode does not offer a point of reference as the exchange rate did not remain in the permanent 260–270 forint interval. Thus we cannot establish what would have really happened in the case of a permanent weakening of the exchange rate, that is if monetary policy had been looser. On the contrary, in the light of the strong forint the subsequent inflation developments in 2004 (e.g. the strength of the tradables disinflation) indicate strong exchange rate effects as opposed to weak ones.

Apart from this our forecasts correspond to the market consensus and in the second half of the year they were gradually lower than the forecasts of the market.

The main factors determining the accuracy of the MNB's forecast

The MNB's forecasts showed a nearly 10 per cent higher dispersion than the consensus based on market analysts' projections. This difference was partly due to the greater variance of the technical assumptions applied in the MNB's forecast (exchange rate, oil prices, government measures) and partly to the one-step incorporation of indirect tax increases. Among the main exogenous variables used for our forecast government tax measures and the change in oil prices had the most significant impact on the result until November 2003, while after this period the high fluctuation of the exchange rate between November 2003 and May 2004 and the changes in world oil prices became the main driving factors in modifying our projections.

Table 4.10 Changes in the main exogenous factors applied in the MNB's inflation forecasts

	2003				2004				Fact
	Feb	May	Aug	Nov	Feb	May	Aug	Nov	Dec 2004
EUR/HUF assumption	245.0	245.6	264.0	255.5	264.6	252.8	253.0	252.0	251.8
Oil prices (in Euro)	29.4	23.0	22.2	21.8	23.4	26.6	29.4	31.4	31.1
Government measures	-	-	*Publication of VAT changes*	*Taking into account other tax changes*	-	*Freezing the prices of pharma-ceuticals*	-	-	

Our forecast showed the greatest average deviation in projecting fuel and market energy prices determined by world market developments that are difficult to predict, while our forecast for core inflation had the smallest error. Almost over the whole of our analysis horizon we significantly overestimated the changes in the prices of unprocessed foods, while our projections for the expected inflation in regulated prices proved to be rather accurate in all our *Reports* disregarding effects of unforeseeable one-off government measures (e.g. changes in indirect taxes, freezing the price of pharmaceutical products).

Table 4.11 The errors in the MNB forecasts regarding the December 2004 CPI
(error = forecast – actual)

	Weights	2002	2003				2004				*Average abs. error*
		Nov	Feb	May	Aug	Nov	Feb	May	Aug	Nov	
Core inflation	67.6	-1.5	-1.6	-1.5	0.2	0.4	1.7	0.8	0.7	0.1	*0.9*
Unprocessed foods	6.0	4.8	4.8	5.3	6.9	4.4	5.7	1.2	0.9	1.3	*3.9*
Regulated prices	20.2	-1.5	-2.0	-2.7	1.3	1.5	1.5	0.7	0.2	0.2	*1.3*
Fuel+market energy	6.2	-4.4	-5.0	-6.8	-9.3	-8.5	-7.1	-5.7	-0.5	2.4	*5.5*
CPI	**100.0**	**-1.3**	**-1.5**	**-1.6**	**0.3**	**0.4**	**1.4**	**0.5**	**0.6**	**0.4**	***0.9***

The forecast error can be decomposed not only on the basis of our errors made in the case of disaggregated items. From the point of view of modelling and grasping the changes in inflation pressures present in the economy a decomposition into three main groups may be of much more interest. First we determine to what extent the deviation of the factual data of the key input variables (exchange rate, oil, tax rates) differed from our regular basic assumptions. These are called the forecast errors from the basic assumptions. The remaining errors, however, are attributable to the accuracy of our forecast system in the case of a given input variable. These latter errors are also worth dividing into two factors. The errors made in forecasting non-core inflation items (unprocessed foods, regulated prices) are less emphatic as they are partly attributable to items falling outside the scope of monetary policy, partly are much more volatile than could be justified by the business cycle of the economy and a part of them could be due to discretional intervention by the authorities. It is primarily the 'filtered' errors made in

core inflation items and not the errors arising from our basic assumptions that show the extent to which our forecast system reflects the inflationary pressures in the economy.

The chart below shows that two thirds of the underestimation of the inflation to May 2003 was due to the fact that the indirect tax increases of early 2004 were not known at the time. The remaining forecast errors were mainly caused by our assumption of oil prices that was lower than the facts. From November 2003, after learning about practically all the indirect tax increases, we made around 0.3–0.5 percentage point forecast errors.[34]

The mere fact that following the announcement of indirect tax increases our non-explained or 'filtered' errors increased or had a systematically positive sign could indicate the difference between the inflation pressure affected by the indirect tax shock and the inflation pressure indicated accurately by our formerly well 'functioning' methods. This difference could typically be attributed to the impacts of factors perceivable only with difficulty or in the long term in our forecast systems especially in 2004, in particular if we take into account the disinflation impact of increased market competition and the rapidly moderating inflation expectations following the indirect tax shock in early 2004.

Chart 4.6 Decomposition of our forecast errors for December 2004 by main explanation factors *

Error=forecast-actual
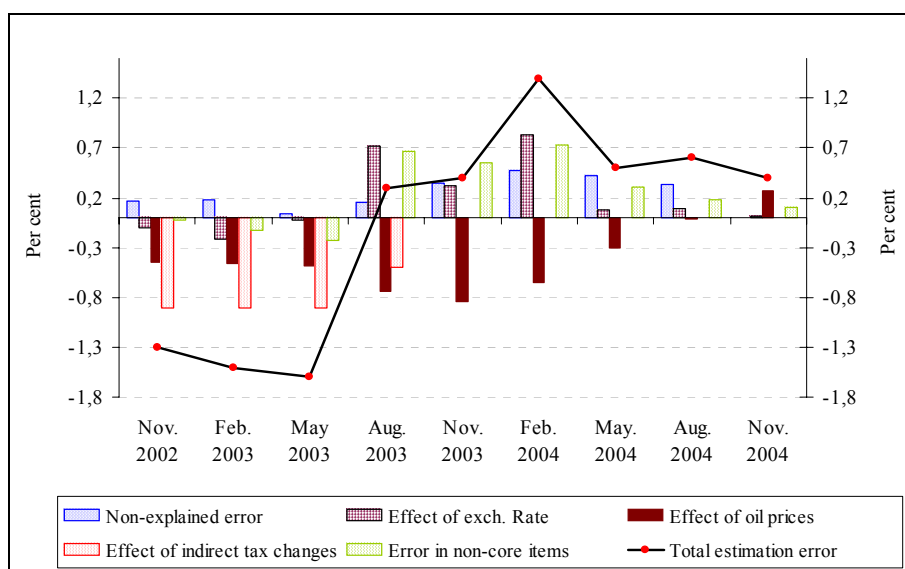
* Positive values indicate forecasts exceeding the facts and in the case of our basic assumptions (exchange rate, oil) they show the impact of the assumption differing from the fact on inflation.

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[34] Here we consider the estimation of the direct impact of indirect tax increases zero as to our knowledge our estimation of the impact of the indirect taxes was rather accurate. Our estimate for the technical impact of indirect tax increases was also included in the calculations of the Central Statistical Office. It is another issue how much of this technical impact was transferred to the consumers by the producers. Although according to our estimates the order of its magnitude could be as much as we expected, the extent of this transfer over the fact time series is rather uncertain and thus we cannot make very definite statements. On the whole in principle we can assume that the increase of the error in February 2004 was partly due to the fact that producers transferred indirect tax increases to a less extent than we expected, although our calculations do not justify this assumption.

We may arrive at the same result if we compare the above mentioned 'not explained' errors in our forecasts given for December 2003 and December 2004. Although our average absolute error was more than 0.1 percentage point lower in our forecast for December 2004, our projections for end-2003 did not include a series of errors similar to the above mentioned systematic difference.

Chart 4.7 Not explained errors in our forecasts for the end of 2003 and 2004 *
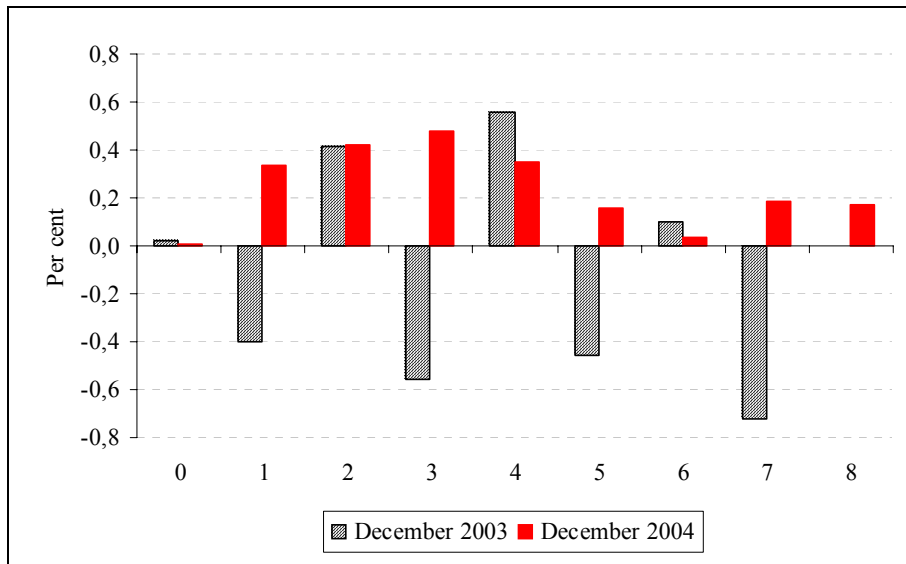
** Positive values refer to an error resulting in a forecast higher than the actual. The
horizontal axis shows the forecast horizon (in quarters ahead).*

Despite the above mentioned uncertainty factors the accuracy of the MNB's inflation forecasts can be considered good by international standards, even including the relatively more problematic forecasts for 2004. The Magyar Nemzeti Bank has been publishing its inflation and real economy projections since August 2001. Looking at the differences of these inflation forecasts from the actual developments we see that on the whole the average absolute errors of the MNB's forecasts given for the time horizon relevant for monetary policy (4–6 quarters) exceeded the errors of the ESCB's forecasts for the euro area given for similar time horizons only by a few tenths of one percentage point. Taking into account that the Hungarian economy had an inflation rate fluctuating between 4 to 10 per cent in this period (as opposed to the inflation rate fluctuating around 2 per cent in the euro area) and that the inflation developments were influenced by significantly stronger one-off shocks (e.g. the indirect tax shock of nearly 2 percentage points) we consider our above mentioned errors acceptable.

4. 5 Structural challenges related to the adoption of the euro: fiscal policy

A paper on the challenges relating to fiscal policy was published in the MNB's series of background papers.[35] The calculations ending in November 2004 projected the rule-based fiscal path quantifying the existing determinations usually contained in our analyses until 2008. Compared to our assumptions in November considering the starting fiscal situation in 2004 we found no significant difference regarding underlying developments.

According to our calculations the interest balance could improve the deficit with 0.5 per cent of GDP. Between 2004 and 2008 the primary balance would deteriorate by 1 per cent of GDP provided we use the determinations known at end-2004 and the expected balance of EU accounts as a starting point and assume no further fiscal measures. Determinations include measures set for several years ahead by law or in agreements with the National Council of Interest Reconciliation (e.g. the gradual introduction of the 13th month pension and the phasing out of health contributions). The phasing out of the effect of temporary measures also had to be taken into account. Such an one-off adjustment was for example the slowdown of the payment of VAT refunds until the statutory deadline in 2003 or the temporary slowdown of paying the refund at end-2004 after the deadline and the shift of the payment of the 13th month salary to 2005.

As the combined effect of interest savings and the deteriorating primary balance the deficit would deteriorate by 0.5 of GDP until 2008. Accordingly, in order to achieve the 2.8 per cent deficit targeted by the convergence programme updated in December 2004 the primary balance should be improved by approximately 3 per cent of GDP. If this measure is realised through the reduction of expenditure savings equalling 4 per cent of GDP should be achieved taking into account the automatic shortfall of taxes as well.

In order to assess the results of the calculations it is necessary to review the uncertainties and the risks related to the assumptions applied.

Lacking consistent macroeconomic forecasts one of the assumptions was that general government revenues would not change as a percentage of GDP apart from the items quantified separately (determination, EU accounts). Considering, however, that the structure of economic growth is not likely to be favourable from the point of view of major tax bases, the present level of revenues could decline by 0.6 per cent of GDP as presumably wages and consumption would not grow faster.

The improvement of the interest balance by 0.5 per cent was estimated on the basis of the January 2005 forward yield curve and assuming an even decline in deficit. If the decrease in deficit was not even but gradual interest savings could be smaller. If, however an especially optimistic scenario was to be realised and the forint-euro yield differential was to be phased out completely the decline in expenses could reach 0.9 per cent of GDP by 2008.

The EU transfers seem to indicate risks pointing to greater deficit. If the size of the EU transfers to the budget was greater than our cautious estimate it would not improve the

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[35] Gábor, Kiss – Péter, Karádi – Judit, Krekó „Structural Challenges with respect to Euro adoption: Fiscal Policy" MNB Background Studies 2005/1.

deficit on average as it would mean additional expenditure in the whole of the period coming up against the limits of additionality. Principle of additionality means that the EU structural funds cannot replace general government expenditure or other equivalent structural expenditure of the member states. The average size of this has not been established for the period 2007–2012 yet, but its increase could further deteriorate the balance. In addition to this the deficit is immediately increased by the extra expenditure of the required co-financing. This effect, however, will be somewhat moderated by the possible surplus from tax revenues.

Another assumption was that the liabilities related to quasi-fiscal activities would not be included in the official deficit until 2008. This, however, represents a two-way risk as far as the size of the necessary adjustment is concerned. If the impact of former quasi-fiscal activities (e.g. the losses of state-owned enterprises) appears in the official deficit as well (e.g. in the form of debts taken over) this would call for greater-than-expected fiscal adjustments in order to achieve the fixed objectives. On the other hand if traditional government expenditure was outsourced from the official deficit (e.g. in the PPP solutions included in the 2005 Budget Act) this could lessen the need for adjustment in the short term. The paper emphasises that the increase of quasi-fiscal expenditure and the application of other accounting measures would only decrease the budget deficit in the statistical sense but does not improve neither long-term sustainability, nor the external balance and thus does not represent an effective and lasting adjustment.

The paper points out the determining significance of the quality of consolidation as opposed to the use of temporary measures. It would be favourable if structural measures (i.e. sustainable, quality improving measures enhancing long-term growth) became the major factor of adjustment. On the other hand institutional solutions improving the transparency, the predictability and the control of fiscal developments and thereby contributing to the permanence of the results of consolidation are necessary. It would be of special importance for example to account for quasi-fiscal items (e.g. the losses of state-owned enterprises, outsourced government expenditure). Concurrently with this the introduction of a fiscal rule limiting the increase of expenditure would facilitate the planning of reliable medium-term budget framework. At the same time the appropriate operation of this rule assumes an internal pact to be made with local government.

4. 6 Stylised facts in consumer price statistics: communication price developments

Beginning with this *Report* we shall examine the price developments of a certain group of products or services in the 'Special Topics'. The chosen group of products will be looked at from three points of view in the studies of this series. First the price developments of the given group of product or service in Hungary will be discussed with special emphasis on the most important factors affecting these developments. Then Hungarian price developments will be compared to those of the EU member states, in particular with the changes in prices in the countries of our region. Finally, a comparison will be made at relative price levels as well.

It is not our aim to offer an exhaustive analysis of international data. We would like to point out certain interesting phenomena in our thought-provoking studies. The first part of our series is on the price developments of the telephone service.

Communications price developments in Hungary

When examining the price developments of the telephone service[36] the last decade can be divided into two main well-defined phases.

Until December 1999

In this period only the land-line telephone service was included in the consumer basket examined by the Central Statistical Office. The telephone service was one of the services with regulated prices typically associated with marked price increases at the beginning of each year. Telephone prices remained flat during the year.

From January 2000

Mobile telephone services have been included in the group of telephone services since 2000 and play a more and more important role. Including mobile telephone services in the 'basket' brought about the following changes: on one hand marked price changes were replaced by more frequent smaller price changes. On the other hand the price of mobile telephone services, similarly to that of other information technology services, showed a continuous decline from the initial high levels partly counterbalancing the continued increases of land-line telephone prices.

Since 2000 we have witnessed two significant price cuts. In our view the price cuts in the spring of 2000 were caused by the decrease of land-line telephone prices, in particular by the introduction of new favourable price packages targeting small consumers. The main reason for the price cuts in 2003 was probably the fact that favourable price packages became available for a wider user group.

Over the whole of the first period and at the beginning of the second period Matáv was in a monopolistic situation in the land-line market. The lack of market competition could have contributed to the sustained rate of high price increases.

Currently stronger market competition is reflected by the appearance of new service providers and price packages. In the light of communication market moves seeming lively on the basis of news (special rates, the appearance of new price packages, etc.) we find it interesting that the price index of telephoning practically remained quasi unchanged in 2004.[37] This could be explained by the fact that due to the basis period weighting applied in the calculation of the consumer price index new participants and more favourable price packages cannot be shown in the price index of the telephone service during the year. The actual price cuts of the group could only be shown by a cost of living index with a weighting for each period in question.[38]

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[36] The prices of telephone sets do not belong to the group.

[37] Prices only changed in January 2004. In this month the monthly price increase was 0.3 %.

[38] See: Ferenczi-Valkovszky-Vincze: What are Consumer Price Statistics Good for? *MNB Working Papers* 2000/5

Chart 4.8 The telephone price index in Hungary
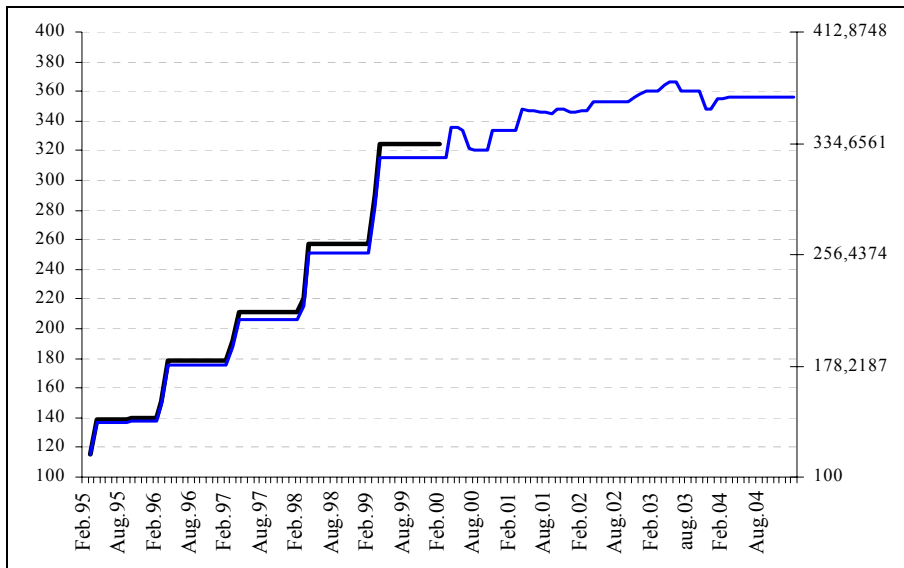
The index containing only land-line services is marked in bold.

The price changes of the communication service from a European perspective

The international comparison of the harmonised consumer price indexes of the communication[39] group points out that in the first years of the millennium the communication prices decreased in developed EU countries and in several new member states joining in 2004 as opposed to price increases in Hungary still continuing after 2000.

While prices fell by 10 per cent on average in the 25 EU member states between January 2000 and the end of 2004, a price increase of the similar size was experienced in Hungary. Among developed EU member states the prices of the service group fell by nearly 15 per cent in Germany and by 10 per cent in France.

The increase of Hungarian communication expenses, however, cannot be considered outstanding within the region. Latvia had a price cut nearing the EU average, while Hungarian price increases were exceeded by the Czech, the Slovak, the Polish and the Slovene communication price indexes. Nevertheless, we find it likely that the marked price increases in Poland, Slovakia and Slovenia were caused by administrative measures (VAT increases).[40]

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[39] The content of the group is nearly completely identical with the 'telephone' group of the 156 line group of the Central Statistical Office.

[40] In the chart we could only filter out the impact of the price increase caused by the 15 per cent indirect tax increase in January 2004 in the Czech Republic.

Chart 4.9 The communication price index in some newly joined EU member states
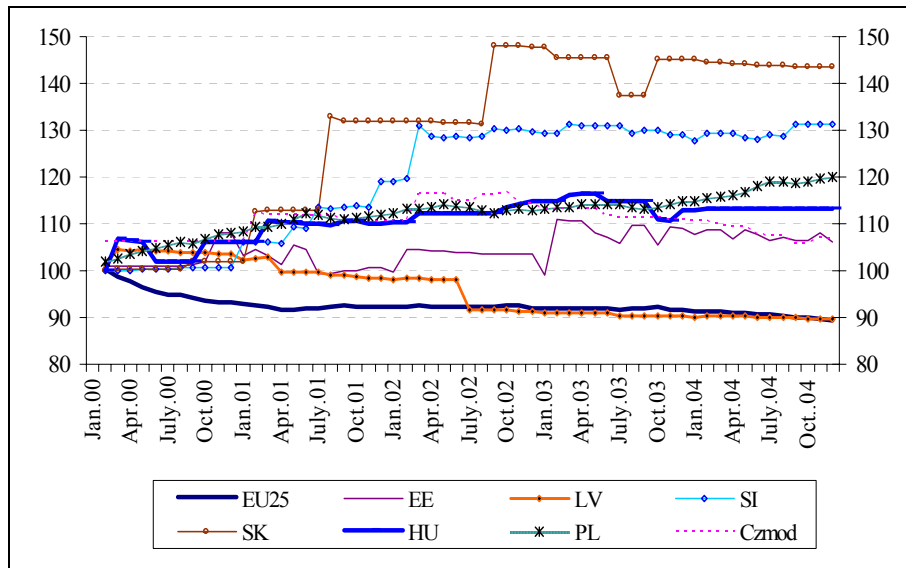
Relative price level

Comparative price levels published by Eurostat were used for our analysis. The statistics reveal how much certain product or service groups cost on average expressed in a common currency in a given member state.[41]

Communications play a special role among non-tradable services (less exposed to international market competition). On the one hand as a technological service it is characterised by strong market competition in several countries resulting in the decrease of the price level. The markets of several member states, however, are not liberalised yet and thus the service provider having a monopolistic position can keep the prices high. The liberalisation of the market, therefore, could lead to the decrease of the relative price level. This latter phenomenon could explain why we find three newly joined countries among the most expensive ones in the line of EU member states set up according to the relative price level of communication while the relative communication price level of the most developed newly joined Slovenia is one of the lowest.

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[41] Using the ESA95 nomenclature's grouping. The average of the 25 EU countries=100.

Chart 4.10 The relative price levels of the communication group in 2003 in the EU countries EU25=100
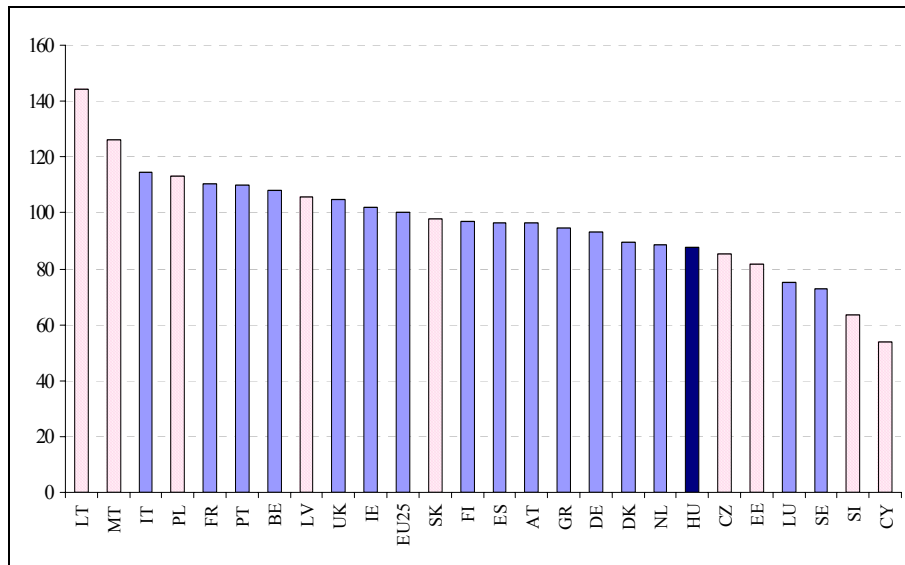
New member states marked in a different colour.

At first sight it seems that communication prices in Hungary are relatively low: in 2003 relative communication costs were more than 12 per cent lower than the price level of EU25. At the same time, however, if we look at household final consumption expenditures we see that the Hungarian relative price level comes to only 58 per cent of that of the 25 member states of the EU. This means that in Hungary the relative communication price level is considerably higher than the total relative price level. We have calculated the quotient of household final consumption expenditure and the communication relative price levels for all the member states and we called this figure the 'internal' relative price level of communication. This indicator shows how the relative price level of communication is related to the average relative price level in a given country.

Looking at this internal relative price level (see Chart 4-11) we can see that relative communication costs compared to the total level of prices are the highest in 8 newly joint countries. In more developed EU member states the relative price level of communication is low compared to the total relative price level which is presumably due to a stronger market competition.

Chart 4.11 The relative internal price level of communication in EU member states in 2003 EU25=100 *
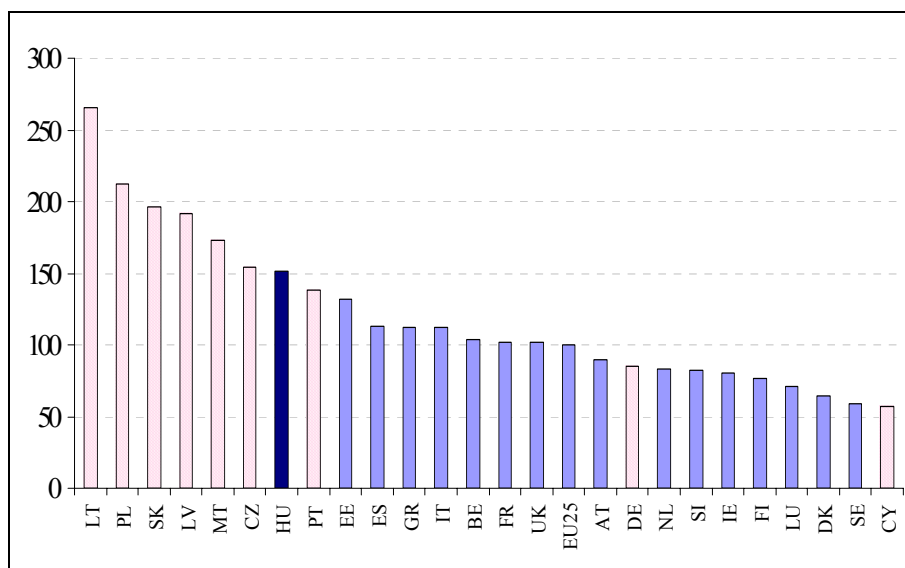
This indicator is above 100 in a given country if the domestic price level of communication compared to the total price level is relatively higher than the EU25average. New member states are marked in a different colour.

(The abbreviations used in the charts: AT = Austria, BE = Belgium, CY = Cyprus, CZ = Czech Republic, DE = Germany, DK = Denmark, EE = Estonia, ES = Spain, FI = Finland, FR = France, GR = Greece, HU = Hungary, IE = Ireland, IT = Italy, LT = Lithuania, LU = Luxembourg LV = Latvia, MT = Malta, NL = the Netherlands, PL = Poland, PT = Portugal, SE = Sweden, SI = Slovenia, SK = Slovakia, UK = United Kingdom.)

4. 7 How does interest rate policy affect economic growth and inflation? Results from a VAR approach

When forming the economic policy, a key aspect is how the interest rate policy affects the economy and, within that, inflation and growth particularly. Consequently, it is extremely important for decision-makers to be aware of the monetary transmission mechanism. Due to the lack of good-quality macroeconomic time series, earlier in Hungary it was not possible to apply certain estimation techniques. With the currently available data of 10–15 years it is feasible to attempt to estimate a so-called vector autoregressive (VAR) model, popular in international literature since the 1990s. We present such an approach in our new publication.[42]

Results from VAR estimates complement our knowledge about the Hungarian transmission mechanism based on existing models and other estimates in the MNB. The advantage of the method is that it directly quantifies the effect of short-term interest rates, which may be considered as monetary policy instruments, on price level and output. Other finished and ongoing research projects investigating particular channels of

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[42] Balázs Vonnák: 'Estimating the Effect of Hungarian Monetary Policy within a Structural VAR Framework', MNB Working Paper 2005/1

monetary transmission help to obtain detailed picture about particular stages of the mechanism.

Our findings show that a surprise hike of 25 basis points in the interest rate appreciates the forint exchange rate by one per cent in the first year. As a consequence of higher interest rates and a stronger exchange rate, output declines and the level of consumer prices decreases. The annual growth rate of the industrial production declines by 0.2–0.3 per cent in the first year, but it returns to its original level by the end of the second year. The impact on 12-month inflation is slower; it evolves most at the end of the first year and in the second year. The biggest impact on inflation of the 25 basis point tightening is an 0.1 per cent decline 5 quarters after the measure has been taken.

The results are broadly identical with the effects on developed countries estimated in international literature. The fall in output is temporary, and it precedes the decrease in the price level, which, on the contrary, seems to be persistent. The phenomenon that the adjustment of prices is slower than that of production indicates the slowness of pricing and the 'stickiness' of prices. The evidence of slow repricing is also confirmed by a survey of the pricing behaviour of Hungarian companies.[43]

There are two major problems when applying this technique with Hungarian data. One of them is the selection of the sample period. The aforementioned results are valid for the period of 1995–2004. Estimates for longer time series (going back to 1992) result in partly different and more difficult-to-understand dynamics. The reason of the difference is attributable to the change in the underlying economic processes and more specifically to the introduction of the new monetary policy framework in 1995. Based on similar considerations we may come to the conclusion that the results for the 1995–2004 period are not uniformly applicable to the periods preceding and following the introduction of the inflation targeting, wide intervention band regime in 2001. However, it is hard to assess *a priori* in what direction the responses of the examined variables to monetary policy may have changed.

The other crucial question is the identification of autonomous steps of monetary policy and their separation from those changes in the interest rate that are attributable to economic shocks of some other origin (demand, risk premium etc.). These latter impulses have direct impact on output through various other channels as well, thus the responses of production and prices may be different even if the interest rate effect is the same. Due to the decisive role of the exchange rate and of foreign investors' risk premium expectations the identification methods which are most widespread in literature cannot automatically be applied to Hungary. The study presents two alternative approaches which take into account Hungary's peculiarities: in one case we suppose that the unforeseen monetary tightening will result in higher short-term interest rate and more appreciated exchange rate for a year. The other approach is based on the fact that the biggest surprise easing between 1995 and 2004 was the exchange rate devaluation in early 1995, while the most significant unexpected tightening was the widening of the intervention band in 2001, which resulted in a marked appreciation of

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[43] István János Tóth: 'Pricing behaviour of medium-sized and large Hungarian companies and the affecting factors', MNB Working Papers, forthcoming.

the forint. Although the two approaches try to capture the effect of monetary policy from totally different aspects, the results differ only slightly, which indicates their reliability.

Chart 4.12 Responses of industrial production and inflation to an unexpected, 25 basis point rate hike (VAR impulse responses)

Per cent   Per cent

(Chart showing two series over quarters 1 to 17:
- y/y inflation (open circles)
- Annual growth of industrial production (filled squares)
Y-axis from -0,4 to 0,1 on both sides, x-axis labelled "quarters")
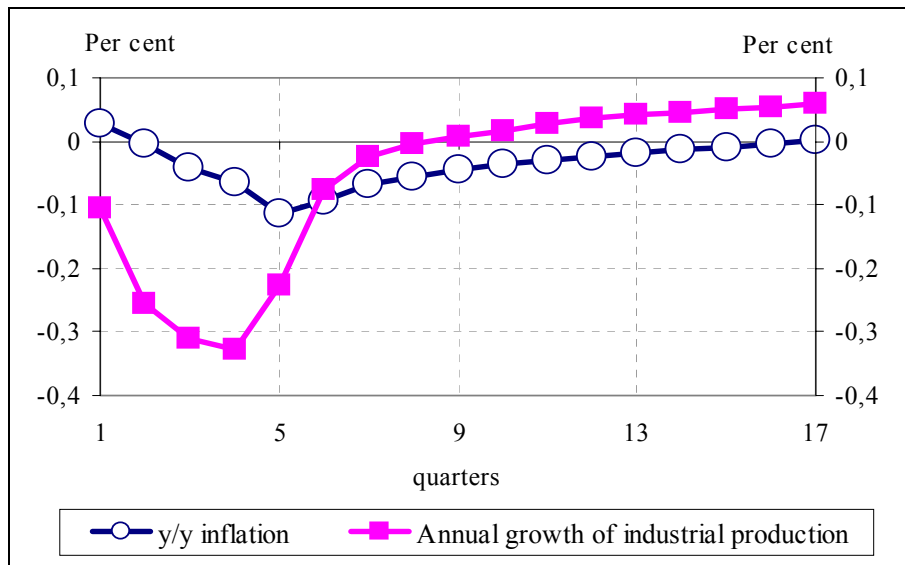
Boxes and Special topics in the *Quarterly Report on Inflation 1998 - 2005*

* The recurring analysis are not listed here.