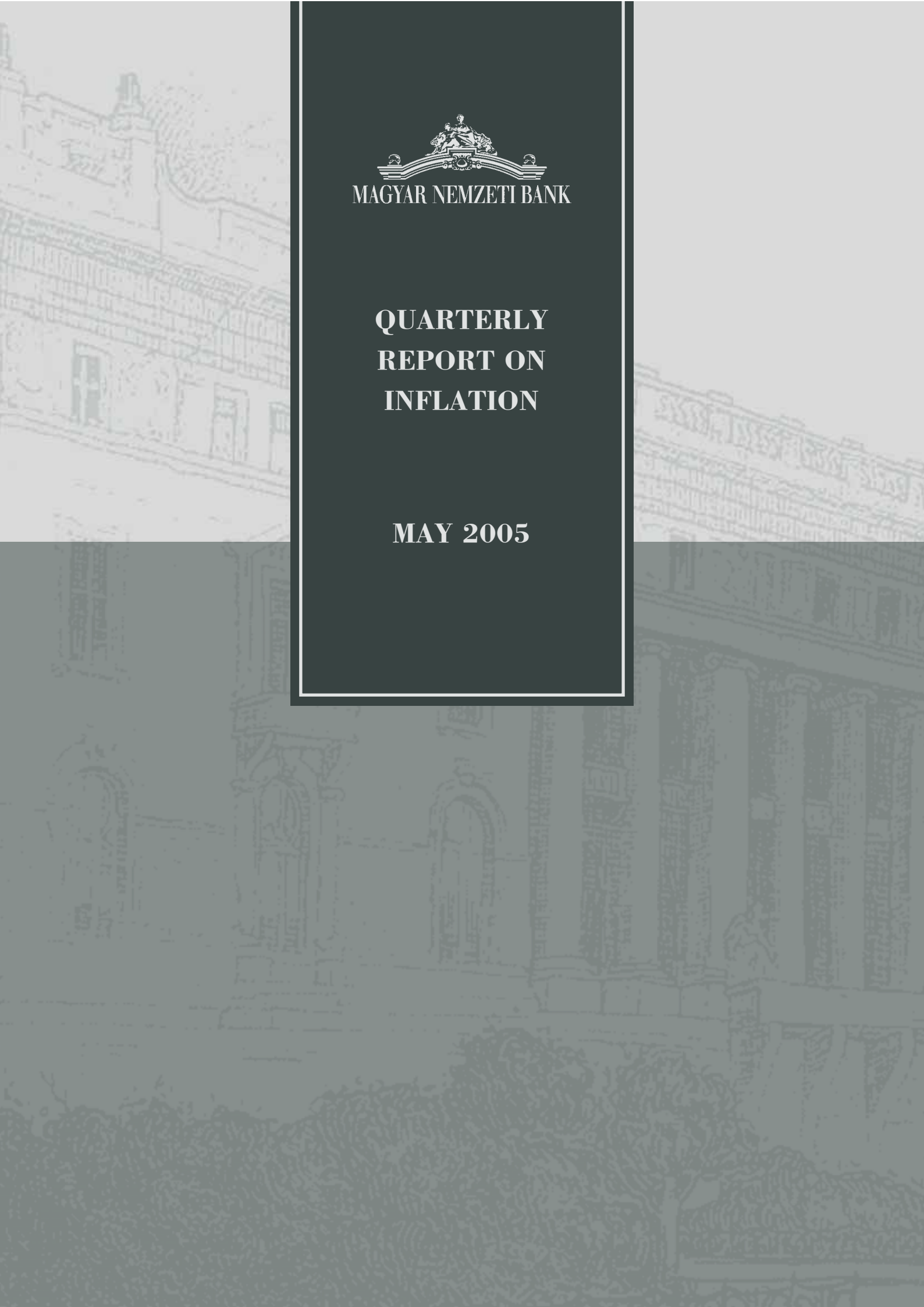

MAGYAR NEMZETI BANK

QUARTERLY REPORT ON INFLATION

MAY 2005

Quarterly Report on Inflation

May 2005

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

Using an inflation targeting system, the Bank seeks to attain price stability by implementing a gradual, but firm disinflation programme over the course of several years. The Monetary Council, the supreme decision-making body of the Magyar Nemzeti Bank, performs a comprehensive review of the expected development of inflation every three months, in order to establish the monetary conditions that are consistent with achieving the inflation target. The Council's decision is the result of careful consideration of a wide range of factors, including an assessment of prospective economic developments, the inflation outlook, money and capital market trends and risks to stability.

In order to provide the public with a clear insight into the operation of monetary policy and enhance transparency, the Bank publishes the information available at the time of making its monetary policy decisions. The Quarterly Report on Inflation presents the forecasts prepared by the Economics Department for inflation, as well as the macroeconomic developments underlying the forecast. The forecasts of the Economics Department are based on certain assumptions. Hence, in producing its forecast, the Economics Department assumes an unchanged monetary and fiscal policy. In respect of economic variables exogenous to monetary policy, the forecasting rules used in previous issues of the Report are applied.

The analyses in this Report were prepared by the Economics Department staff under the general direction of Ágnes CSERMELY, Head of Department. The project was managed by Barnabás FERENCZI, Deputy Head of the Economics Department, together with Attila CSAJBÓK, Head of the Monetary Assessment and Strategy Division, Balázs VONNÁK, Deputy Head of the Monetary Assessment and Strategy Division, Mihály András KOVÁCS, Deputy Head of the Conjunctural Assessment and Projections Division, and Zoltán M. JAKAB, Head of the Model Development Unit. The Report was approved for publication by István HAMECZ, Managing Director.

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The Report incorporates valuable input from the MNB's other departments as well as the Monetary Council's comments and suggestions following its meetings on 2 May and 23 May 2005. However, the projections and policy considerations reflect the views of the Economics Department staff and do not necessarily reflect those of the Monetary Council or the MNB.

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Overview

Low inflation environment expected to persist

Recent macroeconomic developments have confirmed the assessment presented in the February Report, according to which disinflation could persist, if the interest rate and exchange rate assumptions in the forecast are met. An important contributing factor in this respect is that, over the period ahead, growth in unit labour costs in the corporate sector is expected to be significantly slower than earlier. In addition, lower household consumption growth relative to the previous years and increasing market competition are also likely to support a decline in inflation. All of these factors point to longer-term inflation between 3–3.5 per cent.

Rapid disinflation continued in early 2005

The rapid fall in inflation, which characterised 2004 H2, continued in 2005 Q1. In addition to the base effects engendered by tax increases last year, trend inflation indicators also kept slowing strongly. Confirming our expectations, March and April data marked the beginning of a period of more moderate disinflation, after the dramatic decline in inflation which started towards end-2004.

Declining inflation now affects the prices of a wide array of goods and services

In 2004, the fall in inflation was reflected mainly in tradables prices. By contrast, 2005 Q1 data suggest that disinflation also affected product groups covered by the core measure of inflation. Most recent data reveal that inflation in the services sector has reached a historically low level, and disinflation has also continued to affect tradables. After adjusting for seasonal variation, inflation in the tradables and processed food sectors fell in 2005 Q1.

Slowing wage growth and increasing labour market reserves contribute to disinflation

Significant inflationary pressure, caused by labour market trends, started to ease gradually in 2004 H2. Available data show that the labour market has begun to adjust to a low inflation environment. Accordingly, a significant slowdown is discernible in the rate of wage growth. This has been induced by firms' subdued labour demand, which was prompted by a downturn in the business cycle in Hungary and abroad as well as by high labour costs.

Meanwhile, in a downward correction to the expansion of previous periods, employment levels in the public sector have started falling. Simultaneous declines in corporate and government sector labour demand have resulted in a pick-up in unemployment, which is likely to further ease wage growth pressure.

Our projection is based on the assumption that the interest rate and exchange rate that prevailed in April remains unchanged

Consistent with earlier practice, our projection is conditional on several assumptions simultaneously. In this regard, special attention must be paid to the assumption of unchanged interest rates and exchange rates at April levels over the entire forecast period. More specifically, our projection reflects future macroeconomic developments anticipated against a background of a central bank base rate of 7.5 per cent, a long-term interest rate of approximately 7 per cent and an exchange rate of EUR/HUF 248. Another major assumption is that, based on futures quotes, oil prices will decline gradually from their high level in April and remain slightly above USD 50 over the forecast period.

Currently, there are several of factors of uncertainty potentially influencing the expected future path of inflation outlined above. Here, the persistence of stronger market competition, i.e. the question of the degree to which the disinflation impact of sharper competition will make itself felt and how long it will last, is of special importance. The extent to which the current rise in unemployment will relieve pressures caused by wage growth is also a factor of significant uncertainty, as no similar labour market situation has ever occurred during the period forming the basis of our analyses. Any further increase in oil prices would likely boost inflation, as would any future fiscal policy that is looser than assumed in terms of its impact on demand. However, inflation may also be lower than projected, due to a downturn in foreign demand relative to the main scenario.

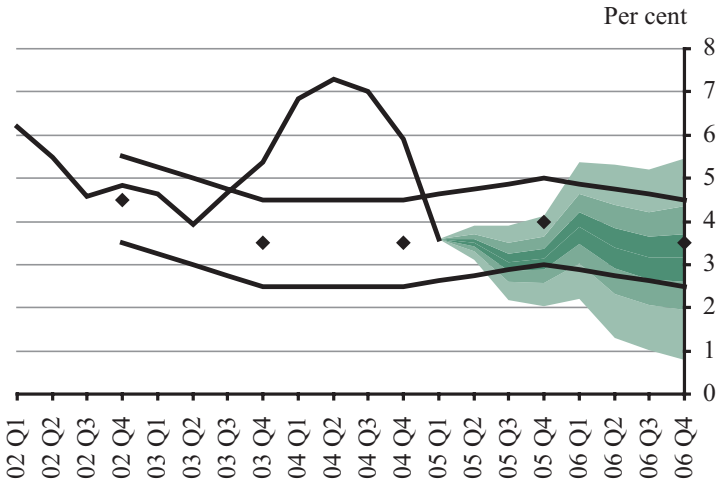
If the interest rate and exchange rate conditions prevailing in April remain unchanged, inflation will, most likely remain within the target range

Allowing for the above risks and assuming that the interest rates and exchange rates remain unchanged at April levels, our forecast is for inflation to most likely remain within the 3.5 ± 1 per cent target range at end-2006, with a 30 per cent likelihood that inflation will be below the target range and an approximately 20 per cent likelihood that it will be above it.

The rate of economic growth will stabilise around 3.5 per cent

Economic growth may slow down slightly, following the pick-up in 2004. Based on data adjusted for calendar effects, after last year's 3.8 per cent growth it will stabilise at around 3.5 per cent over the forecast horizon, consistent with a slower increase in external demand and steady growth in domestic absorption. Fixed capital formation is likely to be less robust than last year, and household consumption, which reached unsustainable proportions in earlier years, is likely to continue to adjust downwards. This is expected to result in slower import growth, leading to a positive net export

The inflation fan chart



contribution to GDP growth, despite the restraining effect of the global business cycle on exports.

In 2006, perceptible improvement in the external equilibrium will require a decline in general government borrowing

Hungary's GDP-proportionate external financing requirement may fall by 0.5 percentage points in 2005. The GDP-proportionate borrowing requirement of general government, including quasi-fiscal activities, is expected to remain broadly unchanged. With the sluggish expansion of capital expenditure, the GDP-proportionate net financing requirement of the corporate sector is unlikely to grow further, while, against a backdrop of lacklustre household fixed investment activity and subdued consumption, households' net financial savings may increase slightly. Although the external financing requirement is expected to improve perceptibly, the current account deficit is likely to decline only slightly for reasons of methodology applied to the settlement of EU transfers.

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

The budget deficit target is unlikely to be met in 2005 unless further measures are taken

Due to greater uncertainty, a projection for fiscal trends in accordance with ESA-95 is difficult to provide. The main explanation for this is that, in total, items that have not yet been classified according to the Eurostat methodology may amount to 0.5-1 per cent of GDP. As for this reason no reliable estimate of the deficit on the ESA-95 basis can be provided, our assessment is based on the methodologically more reliable cash (GFS) and national accounts (or SNA) indicators.

The current projection is based on the assumption that non-open-ended expenditure appropriations will materialise in 2005 and the freezing of reserves will be effective. Even if these assumptions materialise, the budget deficit target will only be met in 2005 if further government measures are taken. The reason for this is that, in our view, tax revenues will prove lower than planned. It should also be borne in mind that the risk of excess expenditure is also significant.

A reduction in the deficit planned for 2006 is only feasible through major adjustments

In preparing our central projection, we continued to assume a 0.6 per cent reduction in the budget deficit as provided for in the Government's convergence programme. However, our calculations indicate that without further measures the ESA deficit would rise significantly in 2006.

Turnaround in global capital market trends

March saw a change in global risk assessment which had been improving for almost a year. Although the global financial climate is still benign, uncertainty has increased in financial markets. The changes in foreign investors' risk appetite affected the entire CEE region, which was reflected in similar developments in the regional exchange rates and government securities prices.

Declining short-term yields, but considerable long-term uncertainty persists

The forint exchange rate appreciated in the period to mid-March, before weakening to last year's average. Improving prospects for inflation led to a rapid fall in short-term forint yields; however, in contrast with other countries in the region, the longer end of the HUF yield curve was hardly affected by rising demand. This suggests that foreign investors' assessment of the Hungarian economy's equilibrium position and convergence prospects remains less favourable.

Summary table of the main scenario

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

	2003	2004	2005	2006
	Actual/Estimate		Projection	
Consumer price index				
December	5.7	5.5	3.3	3.2
Annual average	4.7	6.8	3.3	3.4
Economic growth				
External demand (GDP-based)	0.5	1.8	1.5	2.2
Household consumption	7.6	2.8	2.1	2.8
Gross fixed capital formation	3.4	8.3	4.5	5.2
Public consumption	5.4	-2.1	2.5	1.0
Domestic absorption	5.4	3.3	3.1	3.4
Exports	7.6	15.7	8.5	9.6
Imports	10.4	14.0	7.7	9.0
GDP	3.0	3.8 (4.0)*	3.5 (3.3)*	3.6
Current account deficit				
As a percentage of GDP	8.7	8.9	8.6	8.2
EUR billions	6.4	7.1	7.5	7.6
External financing requirement				
As a percentage of GDP	8.7	8.5	8.0	7.4
General government				
Cash (GFS) deficit	5.9	6.5	5.6	n/a
ESA deficit	7.2	5.4-6.0**	5.0-5.8**	4.4-5.2***
Deficit according to the national definition[1]	6.2	4.5-5.1**	3.9-4.7**	n/a
Augmented (SNA) deficit[2]	8.5	8.1	8.5	n/a
Demand impact[3]	-0.4	-0.3	0.1	n/a
Labour market				
Whole-economy gross average earnings[4]	10.9	6.1	8.4	6.3
Whole-economy employment[5]	1.2	-0.5	-0.5	0.5
Private sector gross average earnings	8.7	9.3	7.0	6.6
Private sector employment[5]	0.7	-0.3	-0.1	0.8
Private sector ULC	6.5	3.1	2.9	1.8
Household real income	5.3	4.0	3.4	2.7

Our projection is based on data with a cut-off time of 17 May 2005. For details on changes in our forecasts relative to the February issue of the Report or a comparison with other forecasts, see Section 4.1. [1] Correction of ESA deficit with payments into and from private pension funds. [2] Cash deficit of the general government excluding certain extraordinary revenue and expenditure, and including quasi-fiscal activities recorded outside the general government. [3] Calculated from the so-called augmented (SNA) type indicator; a negative value denotes narrowing of aggregate demand. [4] 13th-month salaries carried over from 2004 to January 2005 in the public sector cause a downward bias of the 2004 wage growth indicator and an upward bias of that in 2005. [5] Consistent with the CSO labour force survey.
** In 2004, the leap-year effect may have caused an upward distortion in GDP of some 0.2 percentage points, i.e. instead of the 4.0 per cent headline GDP-growth the underlying figure adjusted for calendar effects was probably around 3.8 per cent. In 2005 the distortion is in the negative direction. Our 3.5 per cent growth projection is consistent with the underlying 3.8 per cent growth estimated for 2004. ** The range indicates the uncertainty in the application of the ESA methodology in Hungary *** Assumption, based on the 0.6 per cent deficit reduction target in the Convergence Programme of the Government, relative to our 2005 projection.*

1. Financial market developments

1. 1 Foreign interest rates and risk assessment

In the case of small open economies, such as Hungary, which allow for the possibility of free capital flows, the relevance of international trends to domestic financial markets is outstanding. Yields on major international markets and global risk appetite, which influences the risk premium expected on Hungarian financial assets, combine to constitute the starting point of an analysis of the domestic financial market.

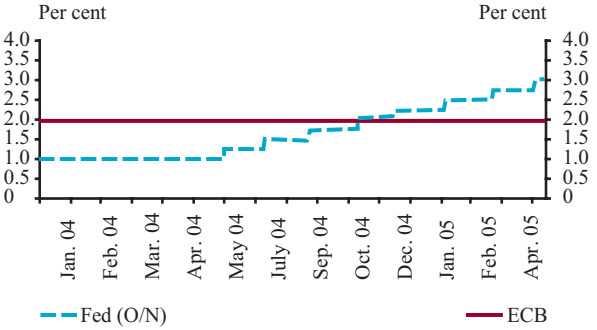
Since early 2005, global capital market trends have affected the risk assessment of forint assets more than previously, with country-specific factors playing a less influential role. Historically speaking, global risk appetite is still high. Nevertheless, the extremely benign climate which characterised 2004 H2 has changed over the past few months, and uncertainty has been rising in global markets since mid-March.

It was primarily news and fresh data on the US economy's business cycle and the equilibrium position that influenced global risk appetite by way of expectations for the interest and exchange rate of the US dollar. The tightening cycle which began last June continued. Maintaining its measured pace of 25 basis point rate raises, the Federal Reserve increased its policy rate to 3% in two steps in March and May. Despite the predictability of the Federal Reserve's steps, uncertainty surrounding the path of official interest rates increased, mostly due to changes in the assessment of the anticipated business cycle and inflation, which in turn was related to oil prices to a great degree.

Given the process of convergence leading to the introduction of the euro, euro yields play a dominant role in the Hungarian government securities market. The ECB's key rate has remained unchanged for nearly two years now and is currently 100 basis points lower than the Federal funds rate as a result

Chart 1.1

Federal Reserve and ECB key rates

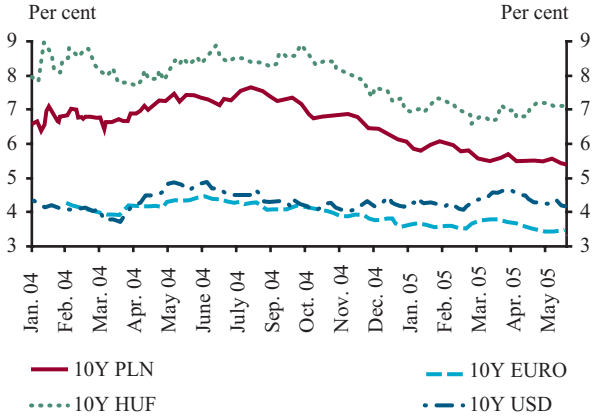


of the Federal Reserve's steady rate increases. The underlying reason that the ECB's key rate has remained unchanged and that expectations of rate increases have been postponed until 2006 Q1 is the deteriorating outlook for the real economy. Risks to inflation have also declined in line with this development. Notwithstanding high oil prices, inflation has not increased over the past few months and is likely to remain around the 2% target set by the ECB for the rest of the year.

These developments are also reflected in long-term yields. Although, overall, rate increases in the US have translated into a 200-basis point tightening at the short end of the yield curve, the Fed found long-term US dollar yields unreasonably low in early February. Compared to early February, 10-year yields had risen by approximately 60 basis points by mid-March, when they began to fall again. In essence, differences in longer-term business cycle perspectives are reflected in the fact that, while long-term euro and dollar yields have generally moved in parallel, the gap between long-term yields, which opened up in the previous quarter, has persisted. This affects the assessment of long-term forint yields and the interest differential that investors take into consideration.

Chart 1.2

10-year government bond yields

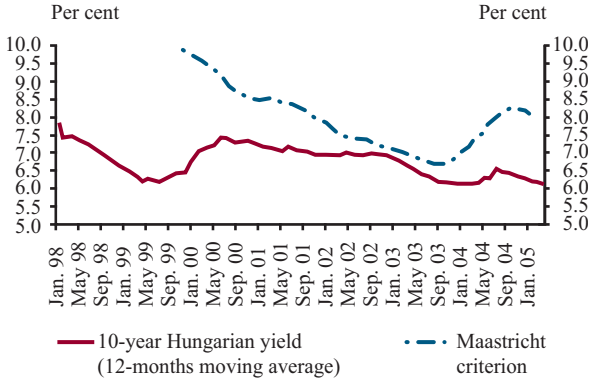


The 12-month average yield on 10-year Hungarian government securities has been declining since autumn 2004. Nevertheless, in March 2005 it was still 170 basis points higher than the Maastricht interest rate criterion, which stood at 6.1%. The gap between yields on 10-year government securities and the interest rate criterion has not narrowed to the same extent as forint yields have fallen, due to the fact that yields have also declined in EU Member States recently.

By historical standards, global risk assessment remained extremely favourable until mid-March. Risk indicators, which had been declining for a period of almost one year, continued to fall.

Chart 1.3

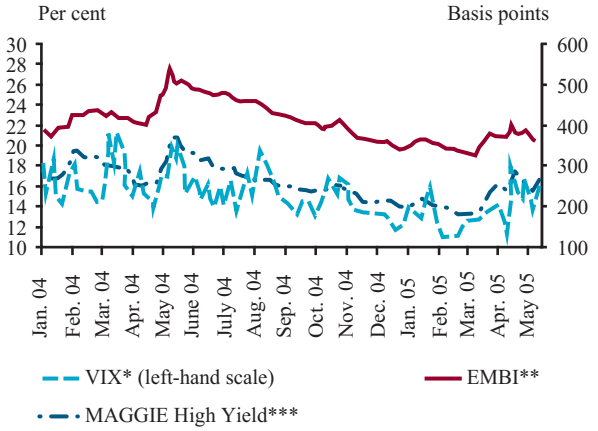
Long-term government yields and the interest rate criterion



Capital flows into emerging markets were vigorous during this period. Mid-March was a turning point, however, as risk indicators reflecting trends in fixed investment market and the stock exchange rose sharply in a short time. The higher volatility in risk indicators observed in recent weeks is attributable, in large part, to growing uncertainty over the assessment of US macroeconomic trends.

Chart 1.4

Global indicators of risk

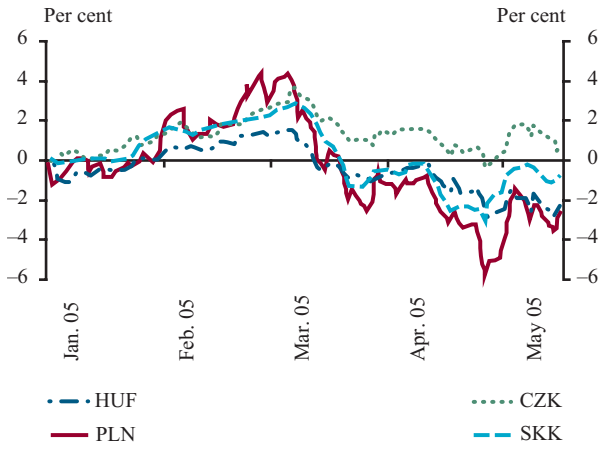


** VIX – Implied volatility derived from options for the S&P500 share index.*
*** EMBI Global Composite – interest premium index of sovereign and quasi-sovereign issuers' US dollar-denominated bonds, as calculated by J.P. Morgan-Chase.*
**** MAGGIE – the index (bp) of euro-denominated government, corporate and mortgage bonds as calculated by J.P. Morgan-Chase.*

Global trends also influenced risk assessment significantly in Hungary's closer regional context. As global developments were dominant, co-movement between the Czech, Polish, Slovak and Hungarian markets became stronger, which was also reflected in interest and exchange rate developments. It is, however, important to stress that in recent months macroeconomic trends have been more favourable in other countries of the region than in Hungary, and the increase in risk appetite was consistent with equilibrium indicators and the improving prospects for such indicators in these countries.

Chart 1.5

Changes in the exchange rates of the currencies in the region against the euro since 2 January 2005



Inflation expectations for this year have fallen throughout the region, and, except in Hungary, last year's general government deficit did not exceed the level set in the convergence programme in any of these countries. In the Czech Republic, for example, despite the unstable domestic political situation, GDP-proportionate general government deficit was nearly 1 percentage point lower than expected. The current account deficit in these three countries was also significantly lower in 2004 than in Hungary. In the coming years, sustained growth in the deficit is only expected to occur in Poland, where its current level is low, amounting to 1.5% of GDP.

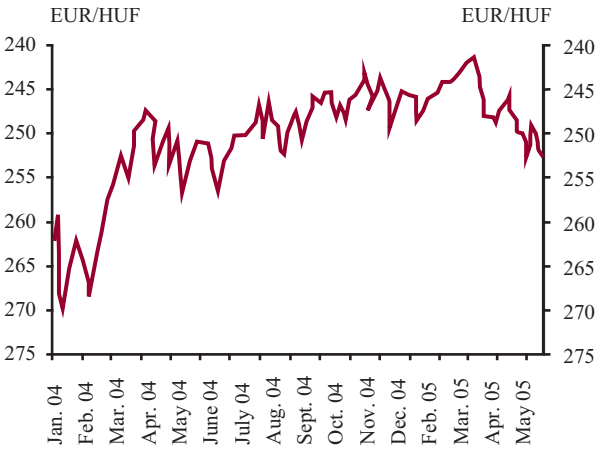
In the case of Hungary, as the currently close regional correlation might weaken, risk assessment may again depend to a larger extent on domestic fundamentals, which carry significantly higher risks than those in the other countries in the region. Thus, waning global risk appetite may result in a more significant adjustment in Hungary than in the region as a whole.

1. 2 Exchange rate and yield developments

Trends in domestic financial markets have been determined by changes in the global risk appetite and the faster-than-expected fall in inflation since January 2005. Changes in foreign investors' willingness to take risks have affected the entire region and been reflected in similar movements of exchange rates and government bond yields. However, while the improving inflation outlook has led to a rapid reduction in short-term forint yields, increasing demand has affected the longer end of the yield curve less strongly, suggesting that foreign investors' assessment of the convergence outlook for the Hungarian economy continues to be unfavourable relative to that of the other countries in the region.

Chart 1.6

EUR/HUF exchange rate



In terms of exchange rate and yields developments, the period since January 2005 can be divided into two distinctly separate phases: from mid-January to mid-March and from mid-March to the present. The first phase was characterised by favourable investor sentiment and rising risk appetite. Consistent with this, the forint clearly followed a path of appreciation. The rise in non-resident demand for forint-denominated assets was clearly reflected by the increase in the volume of the government securities portfolio held by non-residents. The unchanged stock of swap contracts against a backdrop of a larger volume of government securities suggests that non-resident investors did not hedge the HUF exchange rate

Chart 1.7

Benchmark yields in the government securities market

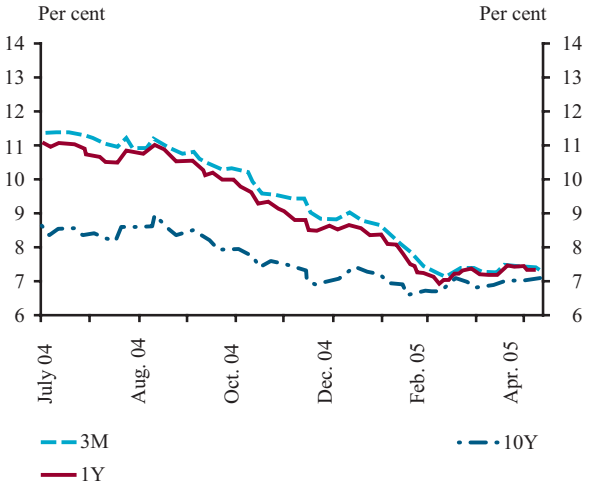
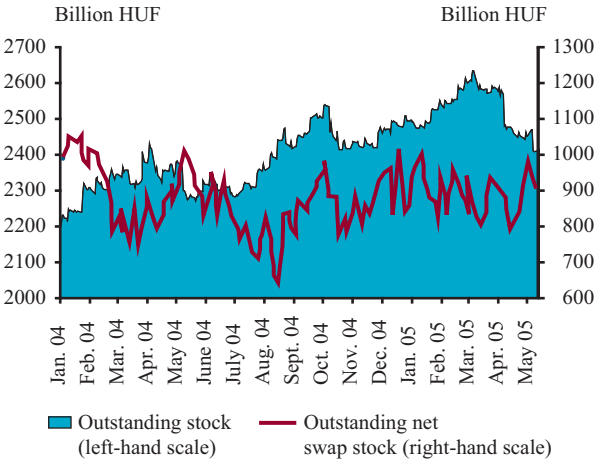


Chart 1.8

Government securities and net outstanding swaps held by non-resident investors*



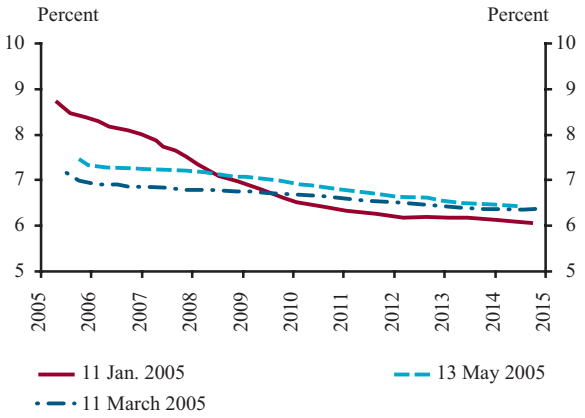
** The decline in April 2005 was attributable to fact that a large amount matured at that time.*

risk posed by their government bond position, i.e. on the whole, they increased their HUF exchange rate exposure.

During the same period the yield curve flattened out, i.e. short-term yields fell significantly, while long-term ones declined only slightly. In keeping with this, the implied forward curve sloped down at 5 years' maturity and had practically flattened out by early March. The fact that the yield curve is less inverse indicates that conflicting trends affected investors' behaviour and expectations at various horizons before mid-March.

Chart 1.9

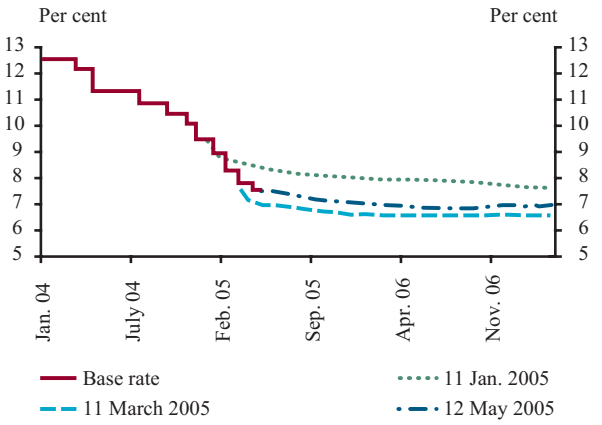
Implied forward yields at various points in time



Short-term benchmark yields on government securities were approximately 150 basis points lower in mid-March than in early January. During the same period the key policy rate was also lowered by a total of 125 basis points. The fact that no material changes occurred in short-term benchmark yields at the time of the rate cuts suggests that market participants had already priced in these steps by the central bank. Therefore, the steep fall in yields was attributable to a faster-than-expected decrease in inflation rather than a change in the assessment of monetary policy. Inflation in both January and February was 0.5 percentage points lower than Reuters analysts' consensus forecast, which is considered to be a

Chart 1.10

Anticipated path of the central bank base rate calculated from the forward yield curve



good approximation of expectations. Accordingly, there was a downward shift in the expected path of the key policy rate relative to January. Global investor sentiment that had boosted forint demand changed in mid-March, triggering an increase in risk premia on riskier assets. This increased risk aversion was reflected in both the depreciation of the exchange rate of the forint and a decline in the government securities position taken by non-resident investors. Changing investor sentiment manifested also itself in the upward co-movement of short-term and long-term yields during this period. As market sentiment became more uncertain and the exchange rate of the forint weakened, the anticipated path of the policy rate moved upwards.

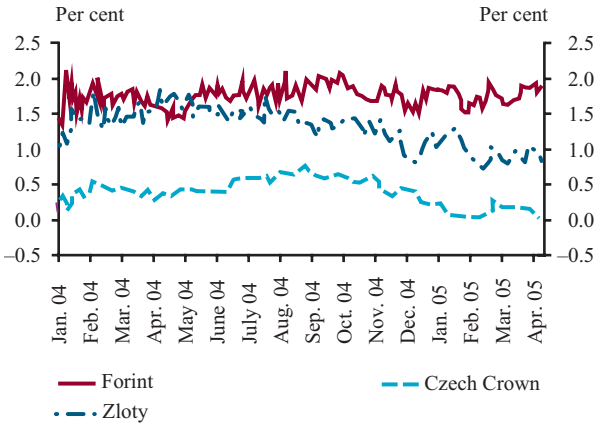
Exchange rate and yield movements can also be ascribed to shifts in market participants' exchange rate expectations. Whether or not this is the case can be checked against the Reuters survey of macro analysts. The April survey reveals hardly any change in macro analysts' expectations, relative to January. Compared to the exchange rate prevailing at the time of the survey, market participants only anticipate slight weakening until end-2005, amounting to a couple of forints. Based on

the expectations, the exchange rate will remain unchanged in 2006. All this points to the fact that, considering the period under review as a whole, the exchange rate of the forint and yields were influenced primarily by risk premia, rather than exchange rate expectations.

Relative to short-term yields, long-term yields changed less markedly during the period as a whole. As euro yields have a significant influence on forint yields, a more reliable picture of the assessment of long-term convergence can be obtained if their impact is excluded. Developments in implied 5-year forward rate differentials 5 years ahead indicate that, although changes in risk appetite affected the CEECs similarly, the long-term assessment of the economic fundamentals of the individual countries varies considerably. The long-term HUF forward rate differential has been fluctuating within a narrow band for over a year now, while premia on the Polish zloty and the Czech koruna relative to the euro have been declining since the early autumn of 2004. This gap suggests that, in contrast to neighbouring countries, investors' assessment of Hungary's convergence outlook has not improved. The Reuters survey also reflects unchanged expectations for the country's entry into the euro area. Over the past 12 months, macro analysts continued to deem 2010 as the most likely date for the introduction of the euro in Hungary.

Chart 1.11

5-year implied forward rate differentials 5 years ahead



1. 3 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 rate is the more important channel. The following provides a brief outline of recent changes in these two indicators, and of market participants' view of future developments in such. In providing an approximation of market expectations, we rely on the Reuters survey, which – although it is not a representative sample of all economic participants – presumably provides a good approximation of trends.

Real exchange rate

The real effective exchange rate calculated with the CPI appreciated by approximately 3 per cent between January and April. This real appreciation was attributable to a rise in price level that was faster than abroad, which is a customary phenomenon early on in the year. No significant change occurred in the nominal effective exchange rate during the period under review.

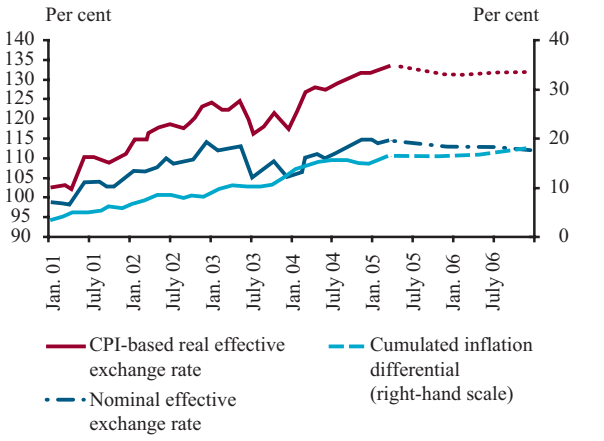
The real exchange rate path, calculated on the basis of market participants' expectations for the nominal exchange rate and inflation, however, no longer suggests any further real appreciation before end-2006. The extent of the depreciation of the nominal exchange rate, expected to materialise before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

Real interest rates

Unlike the real exchange rate, the real interest rate one year ahead, which is crucial to monetary policy decisions, has eased over the past few months. Its current 3-4 per cent level can be considered as

Chart 1.12

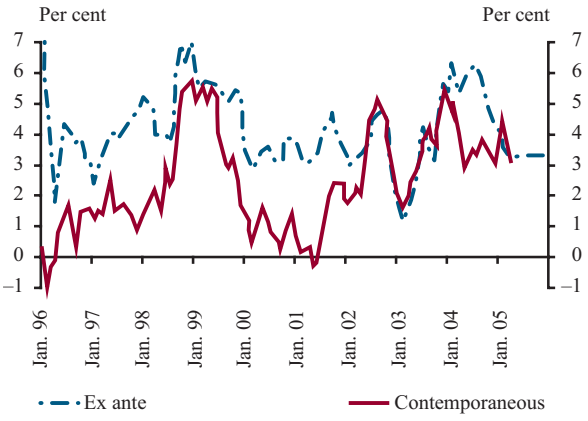
Monetary conditions: the CPI-based real exchange rate*



** Real effective exchange rate: year-2000 average = 100 per cent. Higher values denote real appreciation. Our estimates of expectations for end-2005 were based on a Reuters analysts' consensus on inflation and the exchange rate. We assumed that, relative to a year-on-year average, inflation in trading partner countries would not change 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.*

Chart 1.13

Monetary conditions: the real interest rate*



** Monthly averages of one-year government securities 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 December 2006 were calculated using Reuters analysts' consensus on inflation and one-year yields.*

average over a longer period. This decline is still attributable to the fall in nominal interest rates. Analyst expectations in April suggest that forward-looking real interest rates may decrease slightly prior to end-2005, since analysts project a smaller decrease in inflation than in yields.

A rise in the contemporaneous real interest rate in January and February was ascribable to a rapid fall in inflation. By end-Q1, however, it had returned to the 3%–4% range, prevalent since mid-2004. Thus, in essence, it is identical to the forward-looking interest rate.

2 Inflation and its determining factors

2. 1 Economic activity

Developments at the end of 2004 present contradictory signs regarding the future strength of economic activity which accelerated in early 2004. Although the slowdown in external demand is primarily attributed to uncertainties surrounding oil prices and thus most analysts expect it to be temporary, foreign business sentiment indices do not give reason to be optimistic about a renewed fast recovery. As it is closely linked to the foreign business cycle, domestic corporate economic activity also slowed down significantly at end-2004 and this carried over to early 2005 as well. Together with the long-standing decline in household demand this suggests that the pace of economic growth will continue to slow.

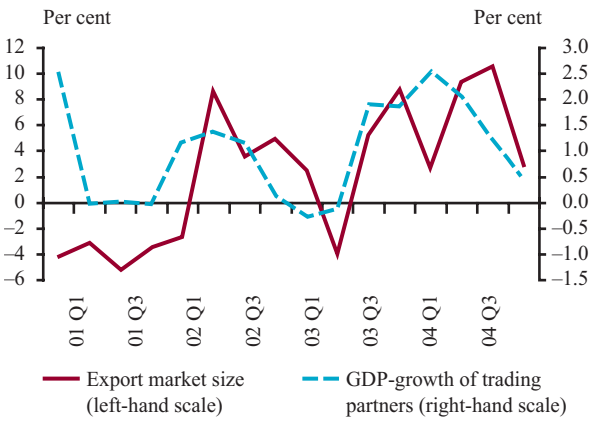
2. 1. 1 External demand

Looking at the whole of last year, both GDP and imports by our most important foreign trading partners grew at the fastest pace in the last four years. GDP growth amounted to 1.8 per cent, while imports expanded at a rate of 6.0 per cent weighted with country shares in Hungarian exports. Average economic growth in euro area countries was around 2 per cent, in line with the estimated figure generally accepted for the potential economic growth of the euro area. Therefore, 2004 was the first year when the external business cycle showed clear signs of a robust recovery, following the end of recession in the world economy at end-2001.

The European business cycle, which is of key importance for Hungary, however, was far from even during last year. In H1, net exports, the main engine driving the upturn, remained strong while internal demand factors (household consumption and fixed investment) continued to be weak. In H2, net exports of the euro area fell significantly, partly due to the growth in imports prompted by massive stockbuilding and possibly to the effect of the strong euro and high oil prices, and its contribution to growth turned negative. This effect was somewhat counterbalanced by more dynamic growth in fixed investment from Q3 and rising consumption from Q4. Despite this, however, the pace of GDP growth slowed down from Q3. Due to the strengthening of uncertainties surrounding oil and commodity prices, the rate of foreign trade growth has decreased both globally and in the euro area. Thus, although growth in both GDP and the import-based external demand was outstanding for the year as a whole, this was accompanied by a slowdown in growth in Q4.

Chart 2.1

Size of Hungary's export markets* and GDP in its major foreign trade partner countries
(Annualised quarter-on-quarter growth rates)



** Weighted average of imports of Hungary's major foreign trade partner countries.*

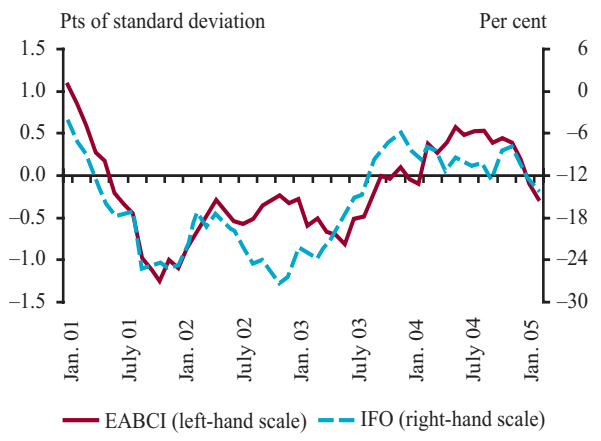
The slowdown can be seen even more clearly in the case of Germany, which constitutes more than

40 per cent of Hungary' export markets, as GDP stagnated in Q3 followed by a clear decrease in Q4 with economic growth reaching a scant 1 per cent in 2004. By year-end, German industrial output and the momentum in goods exports and imports tapered off and, in terms of data on economic activity, a mild upswing was only detectable in new orders. In light of this, the actual data of 2005 Q1 seem surprisingly good: the first estimate for German GDP growth stands at 1 per cent quarter-on-quarter. The general outlook, however, remains mixed, since business confidence indices (first and foremost the IFO business climate index) indicate continued deterioration in corporate managers' sentiment, and as this deterioration is even greater with respect to expectations than with respect to the current business situation, German economic activity may continue to be sluggish throughout 2005.

As far as Hungary's total export market is concerned the picture seems similar: based on preliminary estimates, economic growth in the euro area in 2005 Q1 reached 0.5 per cent. Deteriorating business confidence, however, is prevalent in a number of euro area countries and thus the possibilities of a new recovery are uncertain.

Chart 2.2

Business confidence index of the European Commission (EABCI) and for Germany (IFO)



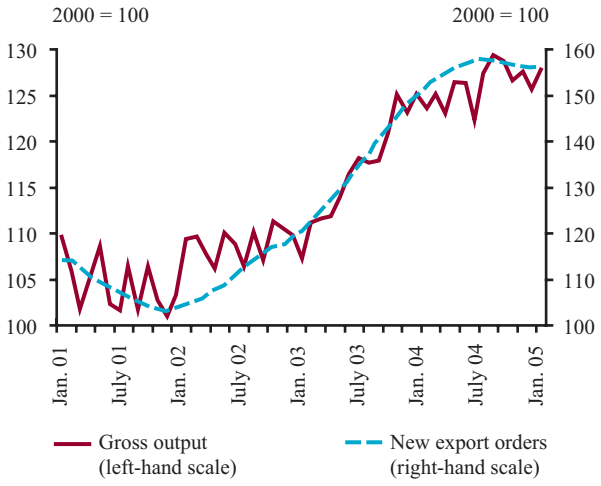
2. 1. 2 Output

With regard to output developments, last year the Hungarian economy was characterised by an unexpectedly robust expansion in agriculture, dynamic growth in manufacturing and construction and a slower increase in services.

Manufacturing output, which is most sensitive to the business cycle, clearly moved in line with external demand. In 2004, the sector's gross output grew by 9.5 per cent: thus, similarly to external demand, last year's growth was the highest yearly rate since the global recession in 2001. Its dynamics within the year were similar to those seen in the external business cycle: output slowed down significantly in Q3 and although it accelerated again temporarily in Q4 (due to an upsurge in export sales), according to monthly data available since early 2005 it has fallen further. With new export orders remaining flat, no new upward trend can be expected. In addition to the development of the external business cycle the robust deceleration of productivity in early 2004 has also played an important role in the weakening economic activity in manufacturing. This slowdown is further confirmed by surveys on domestic business

Chart 2.3

Seasonally adjusted time series of gross manufacturing output and the trend of new export orders in manufacturing



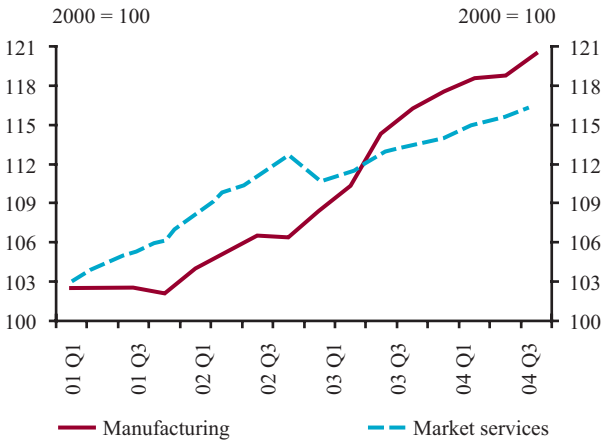
activity, which clearly indicate a more unfavourable outlook.

In terms of value added, last year's growth in manufacturing output fell somewhat behind that of 2003 (5.8 per cent as opposed to 6.4 per cent in the preceding year) as there was a widening gap between the data on gross output and value added from Q2. The gap between the two types of data on manufacturing output widens from time to time, usually followed by a narrowing the next year: based on past data, therefore, it is possible that the massive slowdown in gross output in early 2005 will not be followed by a similar decline in value added.

Market services were affected by two contrasting developments in 2004: the pace of growth was bolstered by the strong external business cycle, but hampered by the slowdown in household consumption. This is confirmed by the fact that the growth rate for transport and telecommunications services, which are more exposed to the impact of external business activity, increased by nearly 2 percentage points relative to 2003, while the growth rate for retail services, which is linked more so with the development of household consumption, fell to a similar extent. It seems more and more likely that the trend of a slower increase in value added in market services started in 2003 is becoming more permanent.

Chart 2.4

Value added in manufacturing and market services



Agriculture, which barely accounts for 5 per cent of whole-economy GDP, grew by 36.3 per cent in 2004, recording a nearly 2 percentage point contribution to economic growth last year. Although this exceeds the usual pace of growth of agriculture it is difficult to draw any conclusions at this stage regarding the sustainable component of the growth outlook, in part due to methodological uncertainties[1].

In 2004, construction grew by 7 per cent on gross output basis, and by more than 5 per cent on a value added basis, being generally characterised by stable growth throughout the year. Moreover, the first two months' data on gross output by the construction sector suggest further recovery. The good economic activity in construction may be attributed to acceleration in infrastructure developments (primarily to motorway construction) on the one hand, and to continued vigorous home building (due to the high number of previously issued housing permits) on the other hand, despite the tightening measures on mortgage lending at end-2003. Despite the favourable Q1 data, however, continuation of the current upturn in construction activity is uncertain since only a very small percentage of the whole year's construction output is realised in this period and thus the time series describing the trends in economic activity may well change.

[1] See more in Section 2.1.6.

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

Following the exceptionally high growth rates in 2002-2003, household consumption slowed down significantly in 2004 as had been expected. Growth for the year as a whole came to 3.5 per cent, on the heels of a 8.1 per cent rise in 2003.

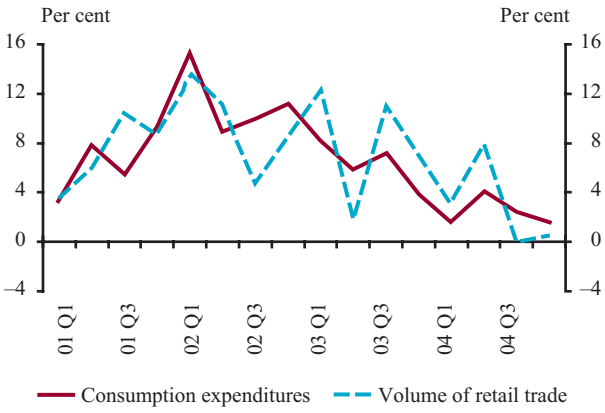
Although last year's household consumer demand growth clearly slowed down relative to its earlier level, it was nevertheless still higher than most analysts expected. Lower expectations were due to the fact that the real net wage bill remained flat or even decreased slightly instead of increasing. At the same time, households' net financial savings increased by nearly 2 per cent of GDP and, according to our estimates, households' fixed investment expenditures may also have grown significantly, reaching a rate of more than 10 per cent even in real terms. These pieces of information are rather difficult to bring in line with the stagnation in net real wages[2].

Nevertheless, based on the data above, we can conclude that if households' consumption and fixed investment expenditures grew simultaneously with households' net savings, the increase in households' real income containing social transfers in cash and other mixed income is likely to have been higher than shown by net real wages. As at the time of preparing this analysis we have actual data on these other income sources going back only as far as 2002 we must rely on estimates. These suggest implicitly that last year – in addition to the real growth of social transfers in cash of slightly more than 3 per cent – the real increase in other income must have also been considerable[3].

Looking at the intra-year pattern of household consumption based on quarterly indices it can also be seen that – despite the annual growth rate of 3.5 per cent – the overall trend clearly slowed down in 2003 and 2004, although there were significant fluctuations. Moreover, the data available for early 2005 suggest a further slowdown in households' consumption growth. Both consumer confidence indices and retail trade and car sales figures available for early 2005, as well as the deceleration of lending to households indicate flagging household consumption demand.

Chart 2.5

Retail trade turnover and consumption expenditure
(Annualised quarter-on-quarter growth rates)



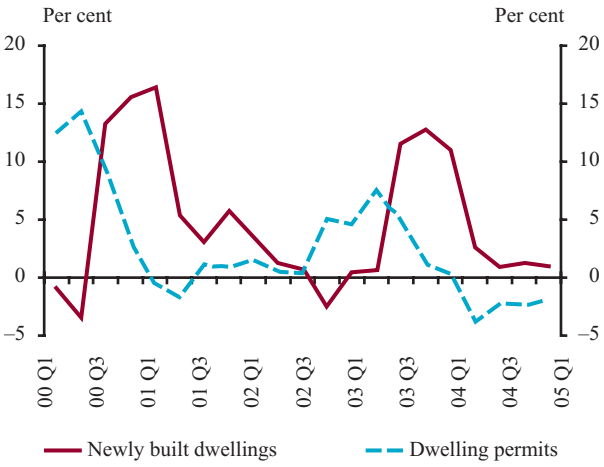
In respect of household investment, although the number of new mortgage loans is decreasing, the number of valid housing permits remains high. The number of new completions still showed remarkable growth in Budapest; there was, however, a marked drop outside the capital. Households' fixed investments are likely to have started to decline after Q1, a development already foreseen as a result of the tightening of housing subsidies at end-2003.

[2] See Section 4.5 of the November 2004 Report for more details.

[3] According to the information avaliable, the robust increase in other income - in addition to the favourable performance of securities markets in 2004 - could have been caused by the fact that agricultural and other subsidies from the EU and the Hungarian Ministry of Finance were accounted for here. Furthermore, last year's output of the sectors accounting for most mixed income (e.g. construction and agriculture) was also considerable.

Chart 2.6

Number of newly built dwellings and dwelling permits (Quarter-on-quarter growth rates)*



** Three-quarter moving averages.*

2. 1. 4 Corporate investment and stockbuilding

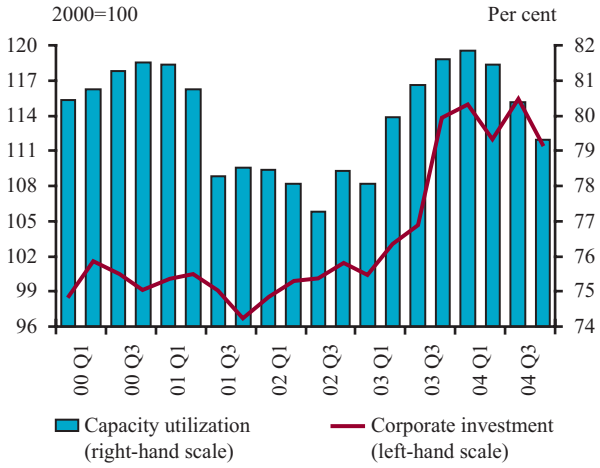
In line with the external and domestic business activity corporate investment[4], was vigorous in 2004, even though it was rather volatile within the year. The fluctuation in investment activity was especially strong at year-end: a third quarter with dynamic growth was followed by a surprisingly sharp decline in the fourth quarter.

Disregarding quarterly fluctuations, however, trend growth of corporate investment started to flatten out relatively quickly in 2004. All of this was in line with our expectations as capacity utilisation started to decline following Q1, falling by nearly 3 per cent relative to its value a year earlier. The decline in Q4, however, and especially its magnitude was unexpected, primarily due to the fact that the investment cycle in the euro area started to recover from 2004 H2 following a longer period.

With regard to the yearly growth rate of investments, economic activity in this area was most brisk in manufacturing and the transport-telecommunications sectors (disregarding mining, which has a very small weight), but the deceleration at year-end was strong in both sectors as well. Business activity surveys on manufacturing suggest that the percentage of managers judging their existing capacity as sufficient to fulfil possible future orders is growing and thus in 2005 H1 investment in manufacturing is not expected to rise strongly again, most likely having an effect at the whole corporate level.

Chart 2.7

Corporate investment and capacity utilisation*



** Corporate investment: MNB estimate. Seasonally adjusted times series at constant prices. Capacity utilisation: Kopint-Datorg business cycle survey, seasonally adjusted by the MNB.*

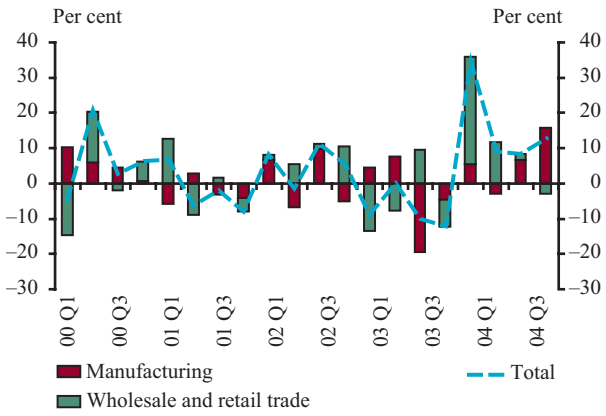
Based on inventories, the least we can assume is that no further decline can be expected in manufacturing fixed investment. This is due to the fact that by the end of Q4 manufacturing inventories grew more markedly, while based on earlier experience this could be partly attributable to unfinished fixed investments to be activated in early 2005. In line with the slowdown in consumption, commercial stocks also started to decline. Overall, inventory levels went up last year.

[4] The breakdown of whole-economy investment by sectors is calculated by the MNB based on coefficients estimated from sectoral data on fixed capital formation. As detailed data on annual fixed capital formation are available with a delay of nearly a year and a half, estimated sectoral data may be revised even for two years retrospectively before publication.

Chart 2.8

Inventories

(Change in end-of-quarter stocks at constant prices for total; Growth contribution for manufacturing and retail stocks)



2. 1. 5 Foreign trade and competitiveness

In 2004, spurred in particular by the trend at year-end, foreign trade data in national accounts outline a significant upturn in net exports, as imports grew by 14.0 per cent against a 15.7 per cent rise in exports last year. Net exports improved in parallel with deteriorating terms of trade: the increase in import prices exceeded that of export prices by 0.7 per cent in 2004. This deterioration is mainly due to developments in the product group of machinery and equipment which accounts for a large share, while the other product groups neutralized the changes in each other's terms of trade.

GDP-based export and import data, however, do not correctly reflect the direction of foreign trade developments, as these statistics also contain individual effects experienced in 2004 (including purchases brought forward due to EU accession in May and the imminent release of goods imported from the EU and stored in public warehouses described in detail in our earlier Reports), leading to a distortion of the information on business activity.

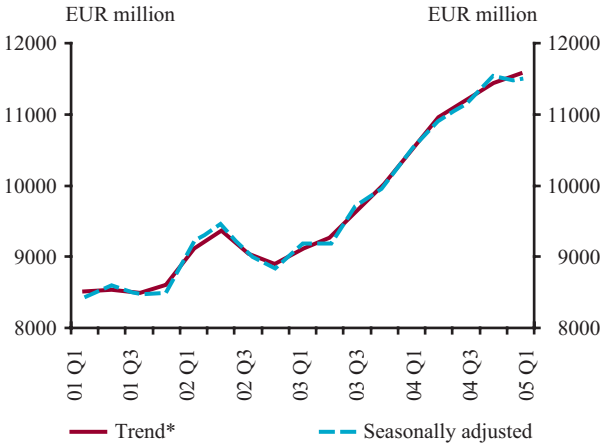
Thus, we seek to capture permanent trends of foreign trade turnover on the basis of the foreign trade time series on goods only at current prices. Consequently, with regard to the export of goods we arrive at a picture corresponding to external business activity: the trend of this process indicates a slowdown from 2004 Q3 and that a further deceleration took place in 2005 Q1. The trends in the imports of goods not only show a decline, but a straight stagnation from 2004 H2. The loss of pace in the growth of the factors of high import content characterizing domestic absorption (i.e. household consumption and fixed investment) can partly explain this, but with regard to the preliminary nature of March foreign trade data, caution should be exercised in interpreting this stagnation.

Given the present tendencies in goods exports and imports, the trade balance may continue to improve in early 2005, even if a data revision may still occur due to the preliminary nature of the data. Owing to the slightly smaller deterioration of the change in the terms of trade, it is likely that net exports will show a weaker improvement based on current price data than at constant prices.

Chart 2.9

Exports of goods

(At current prices)

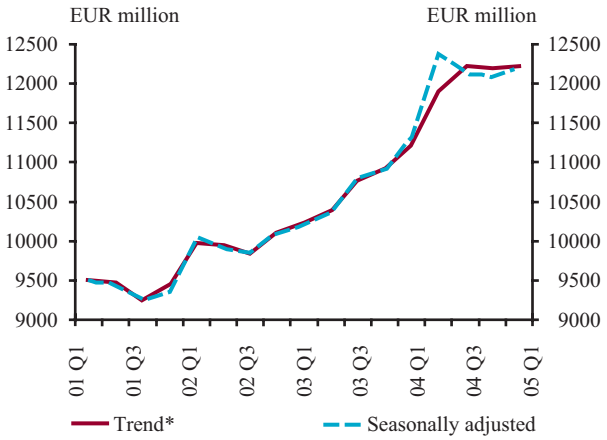


** Time series excluding transitory effects.*

Chart 2.10

Imports of goods

(At current prices)



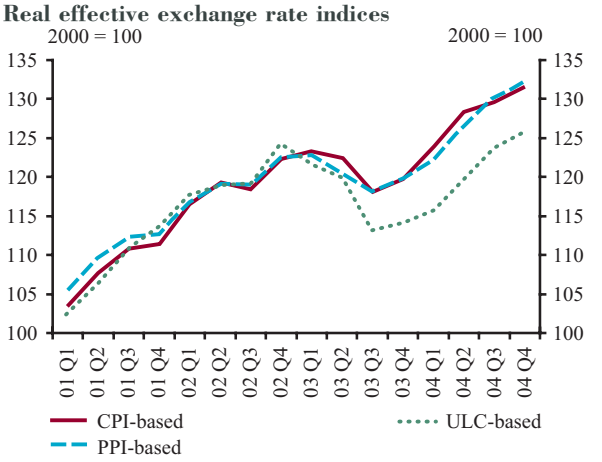
** For 2004 we have made adjustments to the trend data series for import purchases brought forward and for the public warehouse effect. The former adjustment meant deducting an amount of EUR 350 million from growth in imports in March and April 2004, which distributed evenly from May, was added to growth during the rest of the year.*

Adjustment in the latter case meant deducting a total amount of EUR 419 million from the value of (the c.i.f. value) of imports during the period between May and July 2004. The value of the public warehouse adjustment was taken out from the data series for goods.

Although real exchange rates can also indicate changes in competitiveness, in a broader context it is advisable to take into consideration changes in market share and export performance, in order to obtain a more accurate picture of a country's competitiveness.The real effective exchange rate index based on the manufacturing unit labour cost (ULC) used as a cost-based indicator of competitiveness showed a further increase in Q4, primarily due to the continued nominal strengthening of the forint. Relative unit labour costs also strengthened the real exchange rate, because although the growth of domestic labour costs came to a halt by the end of the year, the decline of unit labour costs characteristic for 2004 as a whole continued in Hungary's major foreign trade partner countries. In the whole of 2004, the exchange rate of the forint strengthened by 3.2 per cent on ULC basis.

Chart 2.11

Real effective exchange rate indices

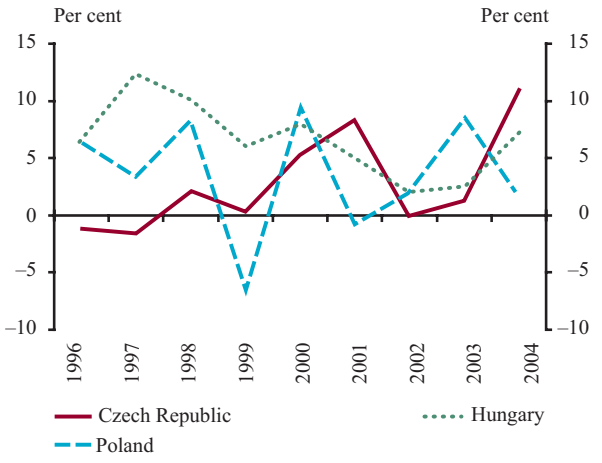


CPI: Consumer Price Index; PPI: Producer Price Index; ULC: manufacturing unit labour cost index. Real appreciation is shown by higher values.

The OECD publishes comparable export performance data for a number of countries[5]. These data show that in 2004 Hungary's export performance was as strong as it was in 2000. In 2004, the Czech Republic showed an even more robust improvement in export performance than Hungary, while it is surprising that Poland's export performance was weak, similarly to what was seen during the last recession in the world economy.

Chart 2.12

Export performance in the Czech Republic, Poland and Hungary*



** Based on the growth of export markets and exports calculated by the OECD. Source: OECD Economic Outlook, Spring 2005.*

[5] Export performance shows the changes in the exports of a given country in relation to the growth of its export market constituted by its major foreign trade partners. The indicator stands in direct relationship with market share, as a positive value means that the growth in exports by a given country exceeds that of the total imports to the export market in question, meaning that the country's share is growing in the market in question.

2. 1. 6 Economic growth

In 2004, GDP grew by 4 per cent annually. As we have already pointed out in the analysis of production processes in addition to the momentum of manufacturing and construction output, exceptionally robust agricultural output contributed to this expansion to a great extent.[6] Growth in market services was much more subdued.

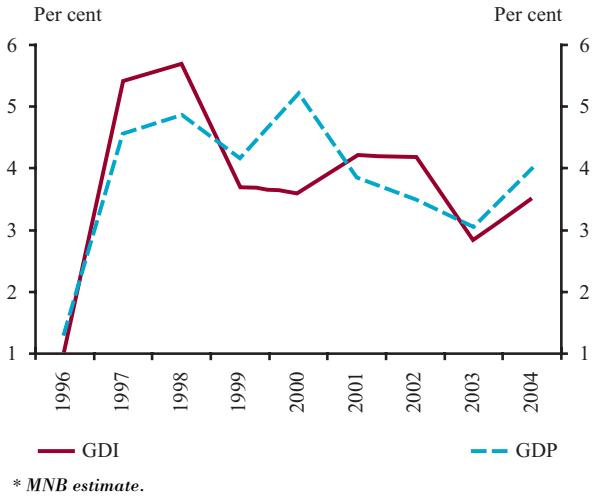
On the uses side, GDP-growth was mainly fuelled by the somewhat higher-than-expected consumption (despite a slowdown following the high growth rates in the last few years) and fixed investment which, despite weakening in Q4, nevertheless increased strongly for the year as a whole. Furthermore, following its negative contribution in 2003 net exports were also conducive to growth especially through their expansion in the second half of the year. In contrast to the growth in the stock of inventories (see 2.1.4) this item of GDP resulted in a negative contribution, due to the fact that non-specified uses, which is also contained under this heading, exhibited a sharp drop in 2004.

As mentioned earlier, in 2004, net exports improved simultaneously with deteriorating terms of trade. The indicator of the Gross Domestic Income (GDI)[7] is arrived at by adjusting real-GDP by the changes in the terms of trade, an indicator more suited for assessing changes in the external balance of the real economy than real-GDP when examining domestic absorption. Following such adjustment we can indeed see that due to the deterioration in terms of trade GDI growth fell behind that of the GDP in 2004, only increasing by 3.5 per cent.

Chart 2.13

GDI* and GDP

(Percentage changes on a year earlier)



** MNB estimate.*

As the GDP data for 2004 Q1 (and, subsequently, 2004 as a whole) was positively distorted by the leap-year effect, there is a negative distortion in the 2005 year-on-year indices due to the statistical base effect. That is, the 2004 Q1 headline GDP growth was biased upwards by some tenths of a percentage point. This year, the distortion is in the opposite direction, i.e. the headline GDP data may be smaller than the underlying figure reflecting business cycle developments (adjusted for calendar effects). We estimate that of the headline 4.0 per cent GDP growth in 2004, the leap-year effect may have added some 0.2 percentage points, i.e. the figure adjusted for this factor would have been around 3.8 per cent.[8]

In 2005 Q1, due to the slower growth primarily on the output side at the beginning of the year, we assume a slowdown in the GDP growth rate, which is also justified by the expected changes

[6] Based on the information currently available at the present it is impossible to determine what the extent of growth of the GDP last year could have been 'without' the outstanding contribution of agriculture. On the one hand, it is not clear to what extent last year's GDP data concerning agriculture can be regarded final as they may be revised later. On the other hand, last year the uses side of GDP (excluding the line stocks + error) exhibited faster growth than the production side which was counterbalanced by the negative value of the stocks + error line. And finally, another extraordinary item was also present: the item 'balance of financial services and product taxes' ('FISIM') was negative last year, which partly counterbalanced the large positive contribution of agriculture.

[7] See: *Manual to Hungarian Economic Statistics* (MNB 2002).

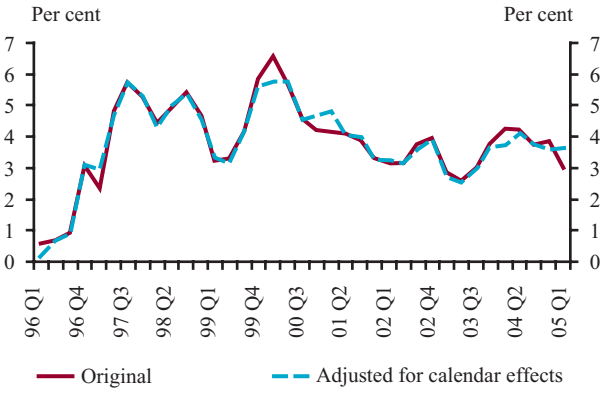
[8] See our August 2004 Report (p. 29). Please note that while the leap year effect was significant at the level of the GDP, we were not able to detect it in any of its components. That is, currently we do not know which productions or uses side component could have caused the effect.

in the items on the absorption side. A decline in consumption is expected on the basis of retail trade data, and fixed investment is not likely to increase due to the decline in capacity utilisation which has been going on for a year already. At most, net export developments may be favourable owing primarily to weak imports at the beginning of the year as opposed to the intensive expansion of exports. On 17 May, Ecostat published its so-called flash estimate for 2005 Q1 GDP. This shows an annual 3 per cent increase in GDP, which is in line with our projections with the provision, that this is biased downwards from the growth rate consistent with the current business cycle situation, due to the leap-year effect. The GDP of the Czech Republic (similarly to that of Hungary) grew by 4 per cent in 2004 as a whole, with a basically even increase in the course of the year. Similarly to Hungary's business cycle, however, Poland's economy slowed down somewhat in 2004 H2 still growing by 5.4 per cent. In 2005 Q1, according to expectations and data already available, GDP growth might have decelerated in the region's economies similarly to that of Hungary.

Chart 2.14

GDP*

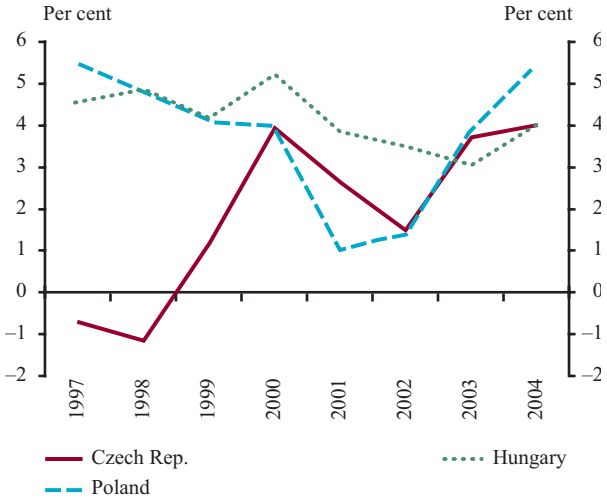
(Year-on-year growth rates)



** 2005 Q1 data is Ecostat's flash estimate. Calendar effects: the effects on GDP of the changing number of working days and the leap year.*

Chart 2.15

Annual GDP growth in the Czech Republic, Poland and Hungary



2. 2 Labour market

Early 2005 data provide evidence that labour market tightness continues to ease further.[9] In 2004 H1, the labour market was characterized by wage growth of around 10 per cent, rising employment and low unemployment which in our assessment led to the labour market tightness of growing labour demand and an increase in wage inflation pressures. From mid-2004, however, as we pointed out in our Report last November, growth in labour demand slowed down gradually. In the last few months, labour use has remained flat in the private sector, wage inflation has fallen further and the unemployment rate has continued to increase. In our view, two factors can explain these developments. On the one hand, the stagnation in labour use is due to the weakening dynamics of labour demand, corresponding to signs of a weaker business cycle. On the other hand, the decline in wage inflation may indicate the beginning of corporate wage adjustment to a lower inflation environment.

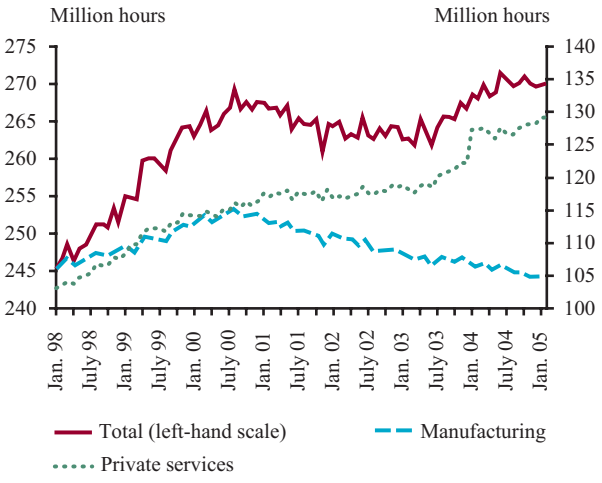
2. 2. 1 Labour use

In early 2005, labour use in the private sector fluctuated around the level typical for end-2004. Based on the latest data, it seems that the dynamic increase in labour use that started in mid-2003 came to a halt last year, as there was no further growth in the last half of the year. In our view, this stagnation of labour use stems from the fact, that due to the impact of the slowdown in external economic activity, corporate labour demand has stopped expanding at the earlier rate. Labour use in the private sector, however, does not show a uniform picture: in manufacturing, which is affected more strongly by the slowdown in external demand, labour use is continuing to decline, while it is growing in the segment of market services.

Similarly to previous *Reports* changes in labour use are monitored with the help of statistics on total hours worked, showing the number of employees and labour intensity (average hours

Chart 2.16

Total hours worked



[9] Regarding the concept of labour market tightness there is no consensus in the literature. According to the definition of the Bank of England for example the 'tightness' or 'looseness'of the labour market is determined by the difference between labour demand and labour supply (Bridgen A. - Thomas J. (2003), 'What does economic theory tell us about labour market tightness?', Bank of England Working Paper no. 185.). As the difference between demand and supply cannot last in the long term the concepts of 'tightness' and 'looseness'only temporarily characterise the labour market, i.e. in periods when the economy falls outside the long term equilibrium. In this framework it is the real unit labour cost that could be considered an adequate measure of the labour market. If the labour market is 'tight' ('loose') real unit labour costs increase (decrease). (In case of 'tightness' real wages grow faster than productivity.) The increase (decrease) of real unit labour costs also indicates the increase (decrease) of inflationary pressure. However, the above framework is somewhat simplified and only holds if certain technological assumptions prove to be correct. If the assumtions prove to be false real unit labour costs provide a distorted picture of labour market 'tightness'. Consequently, the concepts of labour market 'tightness' and 'looseness' are taken in a broader sense making a combined assessment of data on labour demand, unemployment and wages. We consider the combined presence of the fall in labour demand, the decrease of wage inflation and the growth of unemployment as an ease of labour market tightness.

worked) simultaneously. In earlier Reports we predicted a decline in the growth rate of total hours worked, and recent data reveal that total hours worked in the private sector did not increase considerably in the last half year. The halt in the growth of total hours worked was due to the slowdown in the trend of both the number of employees and labour intensity.

The stagnation in private sector labour use can be explained by various developments in the sector. The decline in total hours worked in manufacturing continued at the same rate in early 2005. The long-term downward trend which started in early 2000 is partly due to the decline in the textile industry. On the other hand, the stagnation in the manufacturing employment excluding the textile industry shows that – on the whole – no significant employment expansion took place in these sectors even during the economic recovery. In our earlier analyses we explained this with the assumption that corporations substituted labour with capital, in part due to the increase in unit labour costs in earlier years.

According to our assumptions, in addition to the factors described above the decline in manufacturing labour use in the last few months also stems from weaker external demand. On the one hand, this is confirmed by the number of average weekly working hours which reflects the changes in the labour market most rapidly; the rise in this indicator also came to a halt at end-2004. Furthermore, with regard to the machinery and equipment sector, which is sensitive to external economic activity, data from early 2005 also reveal a moderate slowdown in the expansion of employment (which had previously exhibited strong growth rates) and a stagnation in average working hours.

Chart 2.17

Average manual working hours and employment in manufacturing

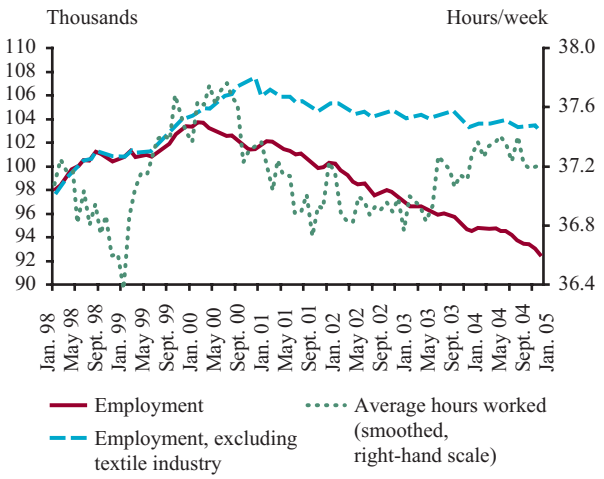
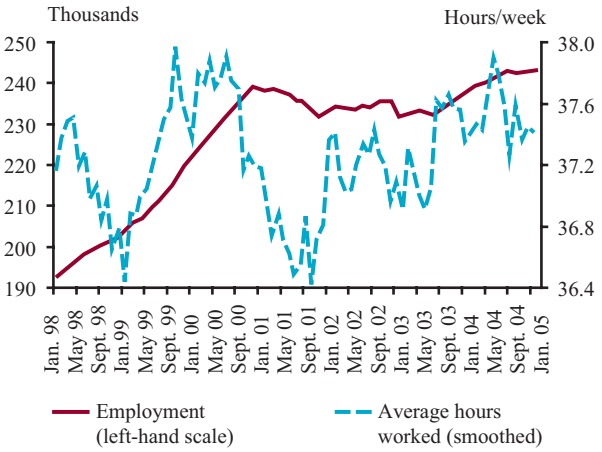


Chart 2.18

Employment and average working hours in machinery and equipment

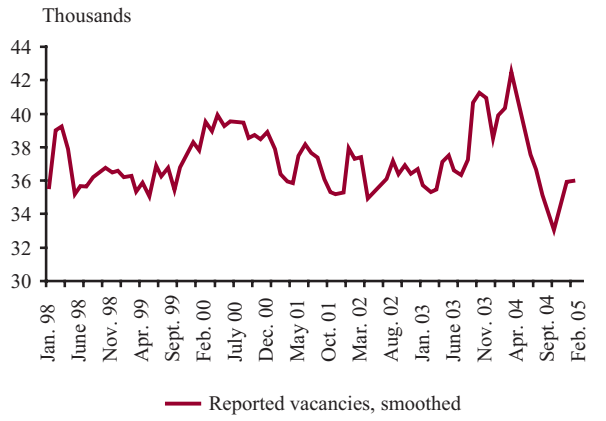


Finally, the number of vacancies announced recently also confirms the fact that corporate labour demand has grown more subdued in recent months. Following the upturn in mid-2004, the number of recently announced vacancies returned to its 2002 level.

In contrast to the manufacturing sector, labour use continued to rise in market services. Employment in market services increased by nearly 10,000 employees in the first two months of 2005 compared to the end of 2004. More than half of this growth occurred in the sector 'real estate, renting and business activities', particularly in the field 'business activities' which has the largest weight within the sector. Growth in retail employ-

Chart 2.19

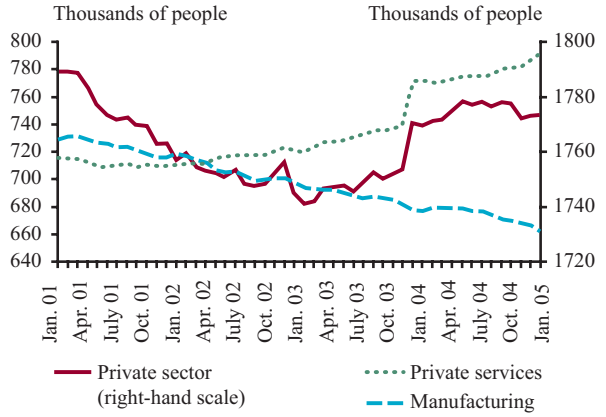
Recently announced vacancies



ment continued at the former moderate rate in early 2005.[10] Over the last few months, the increase was mainly focused in the wholesale trade sector and as such it cannot be directly attributed to the appearance of new retail trade networks.

Chart 2.20

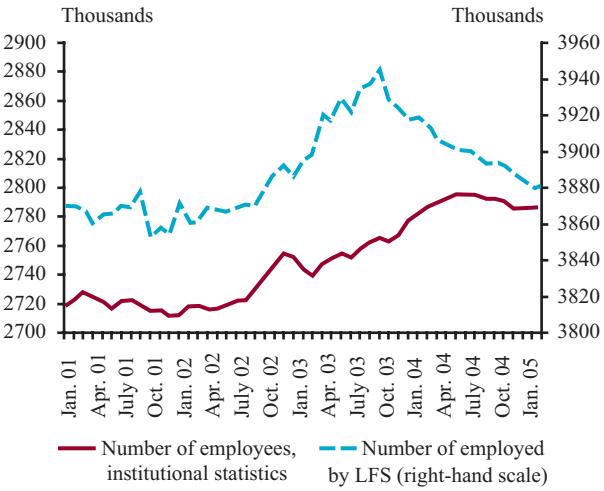
Full-time employment in the private sector



As a result of the above effects, private sector employment has remained flat in the last few months. Due to the fact that since mid-2004 the government sector has dismissed more than 20,000 employees, whole-economy employment declined in the last half of the year. We expect that the decline in government employment will continue this year as well and that a further modest decline in the whole-economy employment is likely in 2005, as weak external demand will not lead to a significant increase in private sector employment.

Chart 2.21

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



2. 2. 2 Labour market reserves and tightness

The decline in employment has led to an increase in the rate of unemployment in the past months. In the first quarter, the number of unemployed was 45,000 higher than registered a year earlier, and the unemployment rate has risen to over 7 per cent. Most recent data reveal that unemployment has been growing steadily since early 2004 and, although the rise in number of the registered unemployed came to a halt in January–February 2005, we expect unemployment to increase further dynamically in the first half of the year. This growth in unemployment corresponds to our assumption regarding the easing of the labour market tightness.

[10] Measurement of retail sector employment is rendered more difficult by the January 2004 increase of 20,000 employees in the time series calculated on the basis of institutional statistics. As the LFS statistics do not indicate this growth spike - indeed, employment even fell in 2004 Q1 - in our view, the shift in levels in the time series was due to the methodological changes in institutional statistics in early 2004.

Chart 2.22

Number of registered unemployed and unemployment based on the LFS

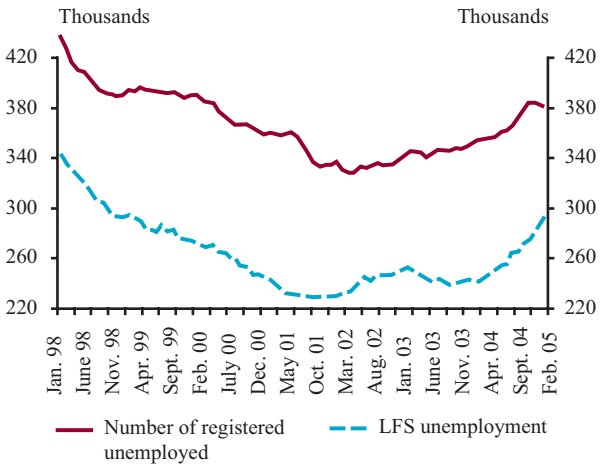
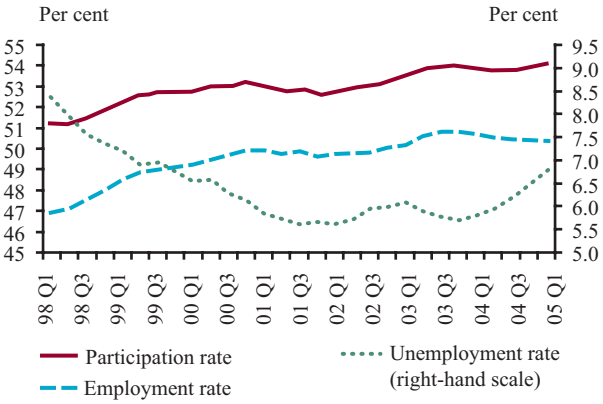


Chart 2.23

Economic activity, employment and unemployment



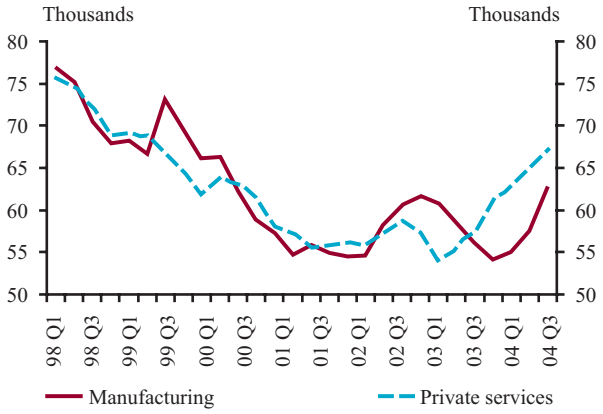
The rise in unemployment is a process that has been on-going for over a year now and is primarily attributable to reasons associated with labour demand. This is also revealed by the aggregate rates: in 2004, the unemployment rate fell by 0.5 per cent, while the participation rate – an indicator of labour supply – did not change significantly. As mentioned in the preceding section, the recent decline in whole-economy labour demand is partly due to the reduction of government employment and partly to subdued economic activity affecting the private sector. Consequently, the rise in unemployment can also be attributed to cyclical effects to a certain degree.[11]

Looking at the aggregate unemployment time series, however, the cyclical behaviour of unemployment is not self-evident. Following 2001, unemployment continued to decline in the years of economic downturn and only rose temporarily in 2003. This rise in unemployment, however, took place during a phase of economic recovery.

In our earlier *Reports* we attributed this counter-cyclical trend to individual factors (i.e. the significant rise in government employment in 2002 and the robust increase in market services) as opposed to the lack of cyclical effects. Indeed, if we look at the number of unemployed laid off in the manufacturing sector, the cyclical fluctuation is clear.[12]

Chart 2.24

Number of unemployed dismissed from manufacturing and market services (based on the LFS)



From the point of view of our forecast, it is of key importance whether unemployment will behave cyclically in the future. Will unemployment return to

[11] See Section 4.5 for more analysis.

[12] Developments shown by the chart are mostly determined by the movement of two sectors: machinery and equipment and trade. It is important to note that employment and unemployment grew paralelly in both sectors indicating major restructuring.

its earlier level when the business cycle strengthens? The possibility that a significant part of the labour force which has been dismissed in recent months may not find appropriate jobs even if labour demand increases (that is if unemployment becomes permanent) may have two consequences. On one hand, the number of persons potentially competing for jobs may fall leading to a stronger wage bargaining position for employees and an increase in wages. On the other hand, the decrease in the available potential labour source may deteriorate the long-term outlook for the growth of the Hungarian economy.

2. 2. 3 Wage inflation

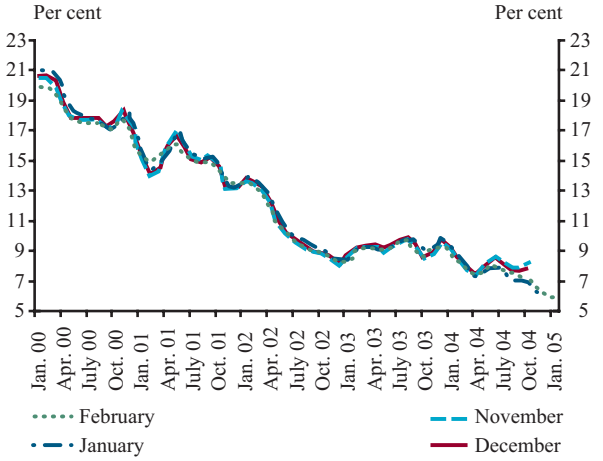
Based on the most recent data, it appears that the wage inflation in the private sector continued to fall at the beginning of the year. According to our assumption, this decline in wage inflation is attributable to two factors. On the one hand, it seems that in recent months the adjustment of wages to a lower inflation environment has continued. On the other hand, the stagnation of labour demand in the private sector may also have reduced wage inflation. Thus, declining wage inflation is also consistent with our assumptions for the easing of labour market tightness.

In our February *Report,* we indicated that we were uncertain in the assessment of the pace of the decline of wage inflation in early 2005. Based on the data on the first few months of 2005 wage adjustment seems to be accelerating. This is confirmed by the fact that the trend of wage inflation has been revised downwards retrospectively, based on supplementary data released most recently. At the same time, however, the month-by-month 'revision' of the end of the time series underlines the large degree of uncertainty inherent in monthly data.

Chart 2.25

Effect of information received since our February Report on the trend time series of wage inflation in the private sector*

(Month-on-month indices)



** The chart indicates the sensitivity of seasonal adjustments to the inclusion of new data points, not the revision of the original data.*

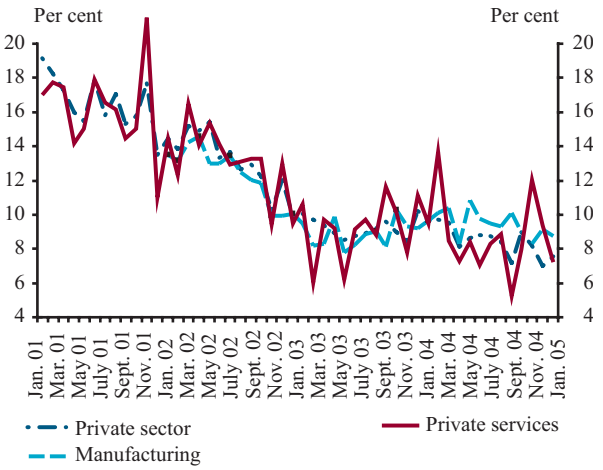
Wage inflation in both manufacturing and market services declined in early 2005. Although the time series is distorted by a number of outliers due to the uneven seasonality of bonus payments, it seems that the decline in wage inflation was somewhat stronger in manufacturing, a phenomenon in line with the fact that this sector is more sensitive to the changes of external economic activity. On the whole, we assume that following 2004, when manufacturing wage inflation exceeded that of the market services by about 1 percentage point, the difference in growth rates between the two sectors has already declined by early 2005.

The dynamics of unit labour costs – one of the most dominant cost-side factors of inflation – has decreased significantly since 2001. The decelerating growth of unit labour costs was caused in part by the gradual slowdown in the growth rates of average labour costs: a clear indication of the start of corporate wage adjustment to a lower inflation environment following the minimum wage shocks. In addition to this, the slowdown in the growth rate of unit labour costs was also caused by stronger

Chart 2.26

Private sector wage inflation

(Same period of the previous year=100)

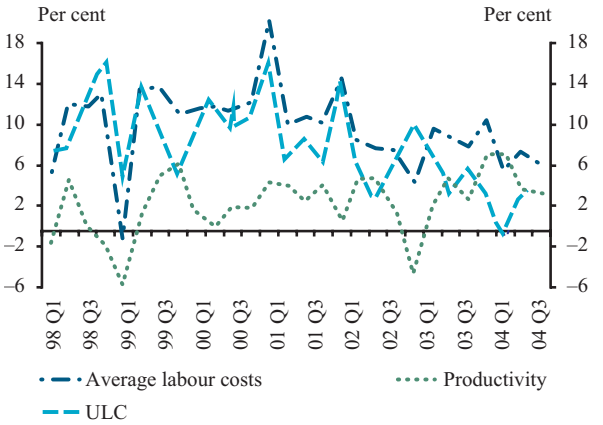


growth in productivity. The decline in unit labour costs was almost unbroken, except for a brief stop in 2003 when in line with 'sticky' inflation expectations the fall in average labour cost came to a halt and productivity growth also slowed down.[13]

Chart 2.27

Nominal unit labour cost (ULC), productivity and wages in the private sector*

(Annualised quarter-on-quarter indices)

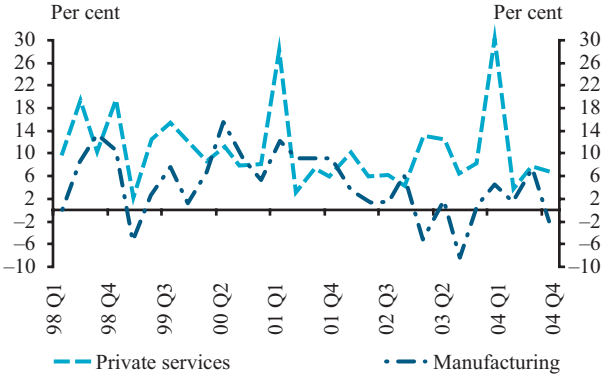


In 2004, unit wage costs declined further. At the beginning of the year as a result of the decline in employment (typically among the self-employed), productivity grew significantly leading to a fall in unit wage costs in the private sector. At end-2004, the growth rate of unit labour costs stabilised at around 4 per cent: the rate identical with that of the sales prices proxied by the GDP-deflator.

Chart 2.28

Nominal unit labour costs in manufacturing and market services

(Annualised quarter-on-quarter indices)



The difference between the growth rates of sales prices and unit labour costs can be considered an indicator of the inflationary pressure on the wage side. Assuming nominal rigidities, prices and unit labour costs grow at the same rate only in a long-term equilibrium, while in the short term the growth of prices and wages may differ from each other. In a period of disinflation a decline in corporate profitability on the labour side forces companies to restrict wage growth. At the same time, however, the growth of unit labour costs cannot exceed that of price inflation permanently as the decline of corporate profitability may force price rises if other input side costs cannot be reduced. The effect of disinflation, therefore, can only be permanent if unit labour costs grow at the same rate as prices.[14] Real unit labour costs directly indicate the difference between unit labour costs and prices (if the

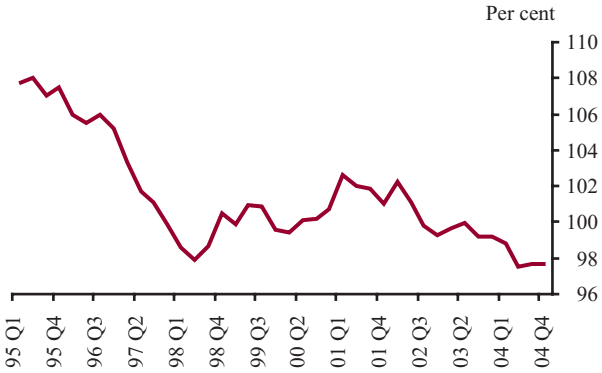
[13] As we indicated in our February *Report* the halt in productivity was due to significant data revisions on the production side of the GDP. As these figures are not final, the growth of productivity of early 2003 - a fact difficult to explain by economic terms - can become smoother.

[14] This of course holds true only in a relatively simplified theoretical framework. In the case of non-unit capital-labour substitution elasticity for example the substitution leads to labour costs - price growth rate different from 1 even in the long term (see Kátay et al. (2003): 'Some interrelationships between national and international wage shares', *Report on Financial Stability,* MNB, June 2004).

growth rate of unit labour costs is higher than that of inflation real unit labour costs increase, while they decrease in the opposite case). The chart on Hungarian real unit labour costs shows that since mid-2002 the difference between prices and unit labour costs has been gradually diminishing, indicating that wage adjustment has become more and more flexible in parallel with the reduction of the effect caused by minimum wage increases. On the whole, in 2004, real unit wage costs fell to below the level preceding the minimum wage increase, a possible indication of the greater adjustment of wages and easing inflationary pressure.[15]

Chart 2.29

Level of real unit labour costs in the private sector* (2000 = 100)



** Sales prices were proxied by the GDP-deflator.*

[15] The stagnation of real unit wage costs in the last quarter is difficult to assess owing to the strong volatility of nominal unit wage costs, and thus we have not evaluated it for the time being.

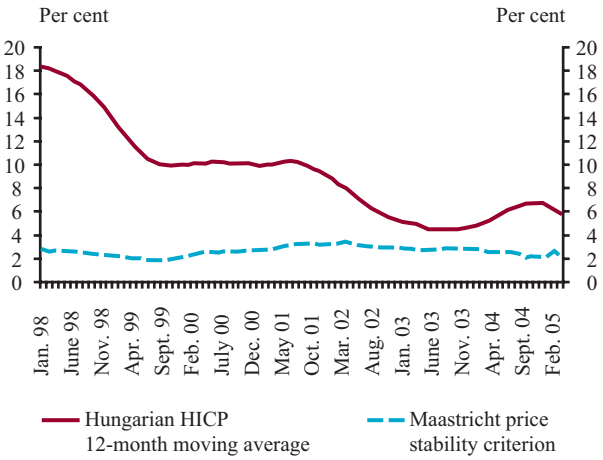
2. 3 Inflation developments

In the first months of 2005, the decline in inflation that started in mid-2004 continued. Based on the data, in Q1 consumer prices were up 3.6 per cent on average compared to the same period of the previous year. The considerable decline of the annual index relative to 2004 was caused by the combined effect of the incorporation of the indirect tax increases in the base and the sustained impact of the disinflation trend that started around mid-2004. The annual index of core inflation came to 3.2 per cent in the first three months of the year. Analysing the monthly developments together with the quaterly ones, it is clear that the inflation data in March showed a correction to the rapid disinflation which was seen in the previous months. This correction was justified by the April data as well.

Looking at inflation developments in the context of Europeran inflation convergence, following the increase in the gap which was characteristic of last year, since early 2005 the 12-month average of the Hungarian harmonised index of consumer prices started to come closer to the value of the Maastrict criterion on inflation, which stood at sligthly over 2 per cent in March of 2005.

Chart 2.30

Hungarian HICP and the Maastricht criterion on price stability*



** The definition of the criterion on price stability includes 'inflation' and thus we have disregarded Member States with a negative 12-month average inflation rate when calculating the criterion on price stability. The same practice was followed by the European Central Bank in the 2004 Convergence Report as well. Since the European Union expanded to 25 Members on 1 May 2004 we chose the three countries with the lowest inflation from these 25 Member States from this date.*

The major macroeconomic variables which are key to the disinflation process seen in 2004 H2 pushed down inflation in the first three month of 2005. Disinflation continued to be most prevalent in the relatively stable exchange rate (based on

Table 2.1

Main inflation indicators in 2004
(Annual percentage changes)

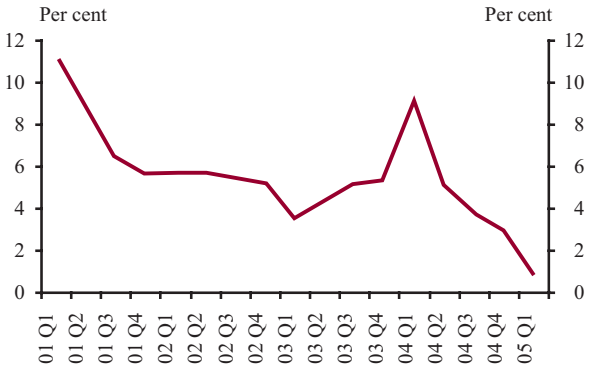
	2004					2005
	Q1	Q2	Q3	Q4	Annual average	Q1
Core inflation	6.0	6.2	5.9	5.3	*5.8*	3.2
Unprocessed foods	4.9	8.0	11.9	1.5	*6.6*	-2.2
Vehicle fuel and market energy	1.0	7.8	7.6	10.0	*6.6*	6.4
Regulated prices	11.7	10.1	8.3	7.2	*9.3*	4.8
CPI	6.8	7.3	7.0	5.9	*6.8*	3.6

the data from the last nine months, the relative deviation of the EUR/HUF exchange rate did not reach 1 per cent) and in the circle of products affected by import competition. At the same time, the continued gradual slowdown in market services prices is a new phenomenon. The slowdown in inflation seen in the services sector since mid-2004 points to the growing presence of disinflation effects on the demand side, reflected by the drop in consumer demand and to the permanent nature of lower inflation. Lower inflation expectations characteristic of almost every economic sector have also contributed to falling inflation. The positive effect on the consumer price index of the gradual slowdown in core inflation in Q1, particularly in March, was only slightly offset by rises – driven mainly by global price developments – in a

Chart 2.31

Core inflation

(Seasonally adjusted, annualised quarter-on-quarter growth rates)



Box 2.1 Alternative measures for assessing underlying inflation developments

The measure of core inflation is often used in our Reports as a variable best expressing inflation trends in the economy. The international literature, however, uses a number of other inflation measures which also accurately describe economic price developments.

One common characteristic of all of these measures is that they all attempt to establish a new measure based on the price changes of the disaggregated items of the overall CPI by way of certain well-defined statistical transformations. In order for the price indices created in this manner to be of assistence in economic policy decision-making, a number of other useful properties are expected of them: first and foremost, they should exhibit lower volatility than the overall consumer inflation time series; they should follow the current trend changes of inflation and should thus provide information on expected inflation developments at the time horizon relevant for economic policy.[16]

The measures of inflation which fulfil these criteria best can be divided into three groups, typically distinguished by the methods of calculation: a) core inflation measures which permanently filter out certain price effects; b) so-called Edgeworth type CPIs weighted by backward-looking variance; and c) trimmed averages.

The core inflation indicator which is calculated by the CSO in Hungary is the most obvious example of the first measure. In the case of this measure, items in respect of which the prices are not determined by the demand and supply relations of the economy are simply disregarded. The prices of these disregarded products are primarily affected by world market effects (the prices of crude oil and other commodities), weather conditions (unprocessed foods) and administrative measures (regulated prices). In addition to the fact that it is simple to calculate, our use of this measure may also stem from the fact that owing to its manner of calculation core inflation mainly includes items which are best influenced by monetary policy. The greatest disadvantage is the mechanical nature of the calculation method, resulting in the problem that certain products are excluded from core inflation the prices of which

[16] For more details on this see Barnabás Ferenczi, Sándor Valkovszky, János Vincze: *What are consumer price statistics good for?* (MNB Working Paper Series, 2000/5) and Juan-Luis Vega, Mark A. Wynne: *An evaluation of some measures of core inflation for the euro area* (ECB Working Paper Series, April 2001).

are already determined by the demand and supply position of the market.

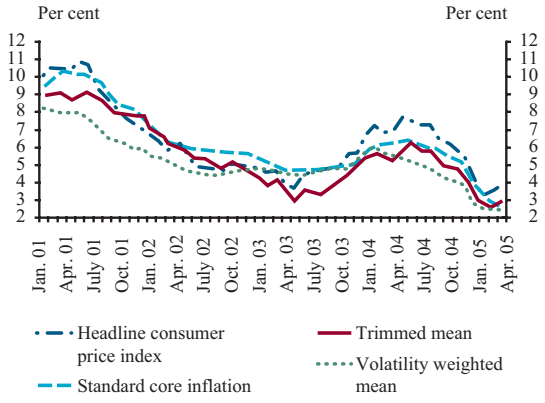
By adjusting the weighting of the data, the Edgeworth type price index, which is weighted by variance, attributes smaller significance to price developments with higher volatility than to developments with more stability over time. In the case of the Edgeworth type price indices, the weights used when calculating the aggregate measure are calculated from the past variance of a given item (typically over the last 24 or 36 months). As the weights are inversely proportional to variance, the items with higher past volatility may have a smaller weight, while items with lower volatility may have a larger weight. The advantage of this measure is that it is based on the largest possible set of information with the aggregate measure showing every change in the prices. Its disadvantage, however, is that it may lead to strong distortions in various cases. Such cases include indirect tax modifications with the indirect tax changes of certain products distorting the relative variance proportions otherwise present among the products. Managing products with price changes restricted only to a few time intervals in a year may present another problem as the weight of these products is overrepresented due to the low variability of price changes. Solving this problem requires arbitrary intervention.

The calculation of trimmed average is partly similar to the calculation of the first type core inflation measure. The difference is that in this case items are not arbitrarily and permanently disregarded in the calculation of the average, but rather the products or services with the most extreme price changes are 'trimmed off' at the lowest or the highest end of the distribution. The advantage of the calculation of this measure is that it captures underlying inflation developments in the economy using the statistical properties of price changes, while its determination requires much more calculations – especially finding the optimum size of trimming – than in the case of the other two measures.

Calculation of the aforementieond indices for Hungarian price developments leads us to draw the following conclusions: according to all the measures, after last year's indirect tax changes the economy has been characterised by strong disinflation processes since 2004 H2. At the same time, it is also clear that this process of rapid disinflation slowed down significantly in March and April of 2005.

Chart 2.32

Indicators of underlying inflation
(Year-on-year indices)



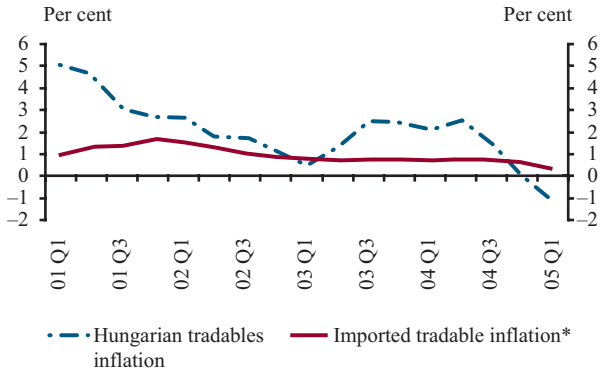
few price categories excluded from the core measure of inflation.

On average, prices of tradables fell in 2005 Q1. Apart from a few periods of significant exchange rate weakening, the downward trend in the price of consumer durables has been continuous since band widening. One new phenomenon however, was that – following a continuous decline in growth rates over three quarters – prices of non-durables also fell in the first three months of 2005. The stable development of the exchange rate may have increased the possibility of exchange rate pass-through to the prices of both product groups. In addition to this, the decline in tradables prices was also enhanced by the slower inflation in the markets of Hungary's major foreign trade partners. Weaker inflation in imported goods (driven by exogenous price and exchange rate develop-

ments) may also have had a dampening effect on the price-setting decisions of domestic companies competing in the market with these goods. Stronger market competition in the market of tradables following the EU accession is another disinflation factor which has an effect not only on the price-setting decisions of producers but of retailers as well.

Chart 2.33

Hungarian and imported inflation
(Seasonally adjusted, annualised quarter-on-quarter growth rates)



In early 2005, inflation in market services continued declining, in line with the trend which started in the second half of last year. In our February Report we deemed the above developments uncertain, but events taking place since then have confirmed a scenario which was only viewed as one of the possible explanations in the past, according to which the gradual disinflation which has started in market services could indicate the sustainable nature of the disinflationary path. Labour market developments since mid-2004 justify a lower inflation environment than previously, both on the demand and on the supply side. In the services sector, the decline in wage inflation which started in mid-2004 may have contributed to the slowing pace of price increases in market services on the cost side, while the decelerating growth characteristic of all sectors may have had the same effect on the demand side. The price decisions of economic agents active in this sector may also have been restricted by inflation expectations which have been continuously declining since mid-2004.

Chart 2.34

Inflation of market services
(Seasonally adjusted, annualised quarter-on-quarter growth rates)

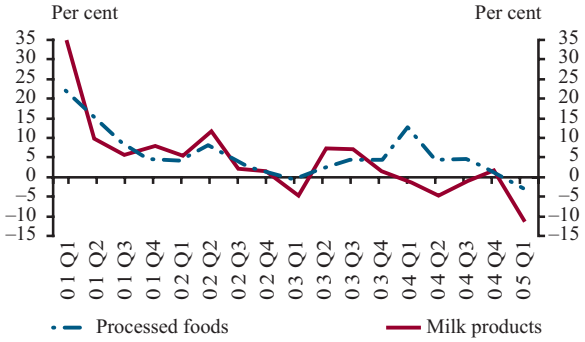
Similar to the second half of last year, prices of processed foods have continued to fall in 2005. We consider the price increase subdued at an annual level as well: the 1.8% rate in increase registered in the first quarter was just marginally higher than the lowest rate which was recorded in mid-2003, due to both lasting and temporary effects. Following Hungary's EU accession, stronger import competition contributed to persistently lower price increases affecting sales as well as production.[17] Simultaneously with this, last year's favourable harvest may also have pushed down the cost-side inflationary pressure on processed foods via the purchase price of unprocessed foods. Strong market competition coupled with the stable exchange rate may also have contributed to the pricing behaviour of these goods, in an adjustment to the low inflation environment typical on the international markets of processed foods. Looking at disag-

[17] For more details see Section 4.6.

gregated price developments, we see that, although the growth rate of prices fell in the whole product group, disinflation in milk and dairy products was above average: the prices of these products have been falling for months.

Chart 2.35

Prices of processed foods and dairy products in particular
(Seasonally adjusted, annualised quarter-on-quarter growth rates)

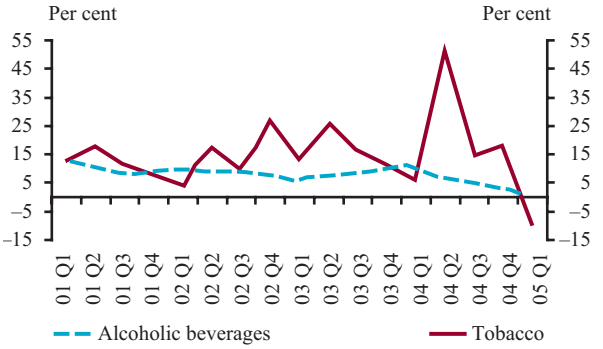


Following indirect tax increases in 2004 H2, increasingly keen market competition, which was partly generated by growing import competition as well, influenced the development of alcohol and tobacco prices. To a certain degree, these price-dampening effects remained strong in 2005 Q1. As a result of the competition in the tobacco market at end-2004 prices started to fall this year following depletion of old stocks. In the same period alcohol prices remained flat which is a typical resultant of two contrasting price effects. While in the first months of 2005 the prices of all alcoholic products fell, in March the price of beer having the largest weight increased. The latter development could be due to the direct inflation effects of the introduction of the product fee and to the inflation effects appearing through the temporary easing of market competition as a result of the higher fee burden on cheaper (canned) beers.

In the previous quarter, the more volatile items of the consumer price index boosted the total consumer price index to a small extent. As mentioned earlier, the prices of unprocessed foods

Chart 2.36

Alcohol and tobacco prices
(Seasonally adjusted, annualised quarter-on-quarter growth rates)

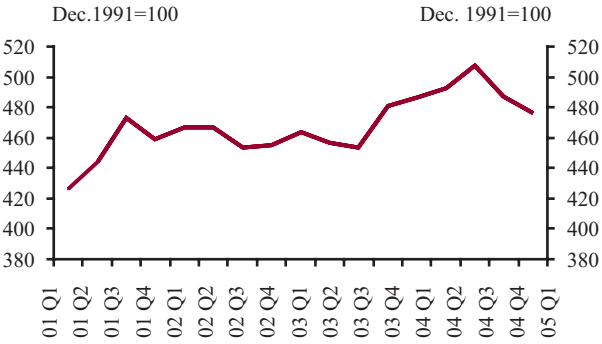


mitigated inflation from the point of view of both primary and secondary effects, whereas fuel and regulated prices grew more rapidly than overall inflation.

The prices of unprocessed foods have been falling for the second consecutive quarter. Deflation in this product group was due to the impact of last year's very favourable harvest on prices, a development also seen in neighbouring Central and Eastern European countries, not only in Hungary. Although the decline in prices can be considered a general phenomenon, the prices of a few products (e.g. vegetables) increased.

Chart 2.37

Prices of unprocessed foods
(Seasonally adjusted data)

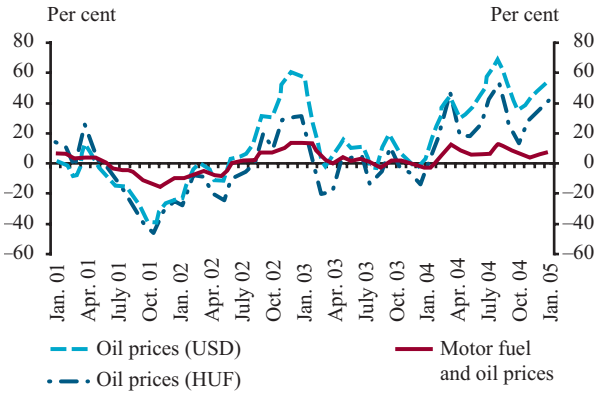


World market prices for crude oil have increased significantly over the past quarters. Although the

price increase was partly caused by regional problems and speculative factors, it was primarily due to the fundamental rearrangement of the world supply and demand for oil. This is confirmed by the fact that last year' average world market crude oil prices were 45 per cent higher than in the preceding twelve months. The impact of commodity price increases on vehicle fuel was dampened by several factors in Hungary: the increase in oil prices expressed in US dollar was counterbalanced by the strengthening of the forint vis-à-vis the dollar, while the degree of inflation realised in petrol prices is significantly reduced by the high (two-thirds) tax content of the fuel prices typically defined in forints. Although this year the amount of tax on vehicle fuel was no longer reduced by the government, actual price increases could be considered subdued in comparison to world market developments.

Chart 2.38

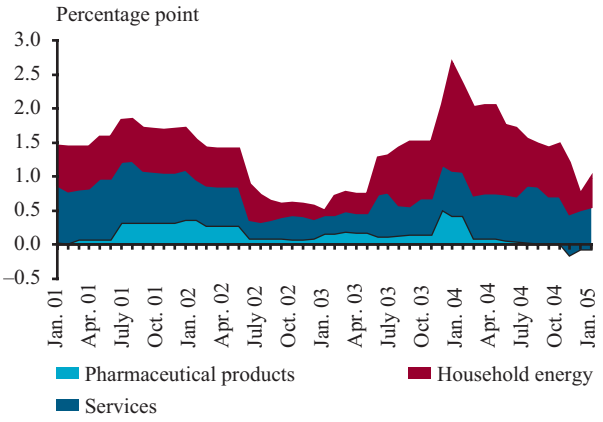
World market crude oil prices and the consumer price of petrol
(Year-on-year changes)



Following last year's indirect tax increases, the inflationary pressure caused by products and services with regulated prices continuously declined until February 2005. Weaker annual growth was prevalent in almost all items, with an especially spectacular drop in the prices of energy and pharmaceutical products. The annual indices of pharmaceuticals prices was consistently negative in 2005, due to the base effect caused by the freezing of subsidised pharmaceuticals prices in April 2004. Inflation data in March showed a slight increase in inflationary pressure caused by the significant price hikes in electricity and gambling.

Chart 2.39

Contribution of regulated prices to year-on-year inflation*



** Contribution to the year-on-year index of regulated prices.*

2. 3. 1 Inflation expectations

As we repeatedly underlined in our analyses prepared over the last one and a half years, inflation expectations are one of the key factors contributing to the success of the disinflation developments following the indirect tax shock. Examining the developments of 2005 Q1 and 2004 H2 we can conclude that the permanent incorporation of the one-off price rising effects of indirect tax increases into inflation expectations was successfully averted in Hungary. Accordingly, inflation expectations have played a key role in the rapid disinflation process since mid-2004. In 2005 Q1 both professional analysts and households' expectations regarding the development of inflation moved towards a lower inflation environment.

Enterprises

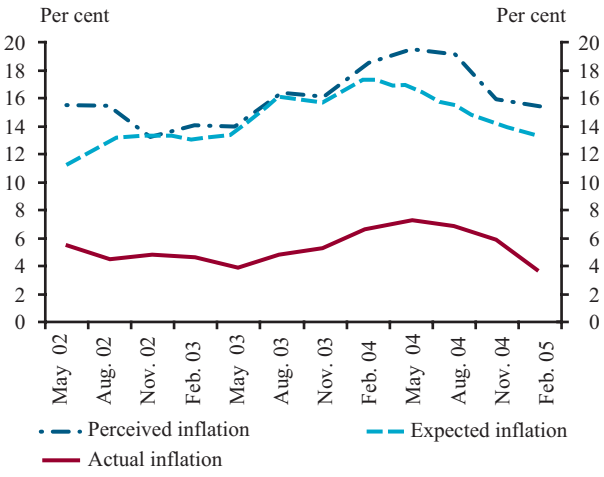
We have received no new information on corporate managers' perception of inflation since our last Report and thus we can only repeat what we wrote in our February Report in this regard. Data on corporate managers' perception of inflation confirm our assumption that the one-off direct tax shock has not been permanently built into corporations' pricing and wage-setting behaviour. This hypothesis may also be confirmed by the fall of wage inflation in early 2005.

Households

In early 2005, households also assessed the perceived and expected changes in inflation developments more favourably than in the preceding quarter. Following the indirect tax shock households' inflation developments returned to the values of 2003 H1 which were characterised by favourable inflation outlook.

Chart 2.40

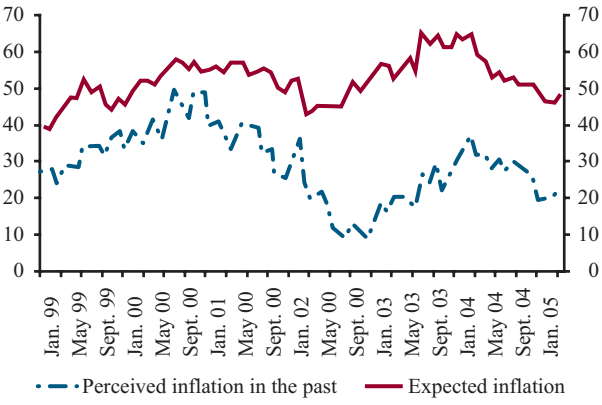
Inflation perceived and expected by households*
(For the past and the next twelve months)



** Based on the TÁRKI Survey.*

Chart 2.41

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



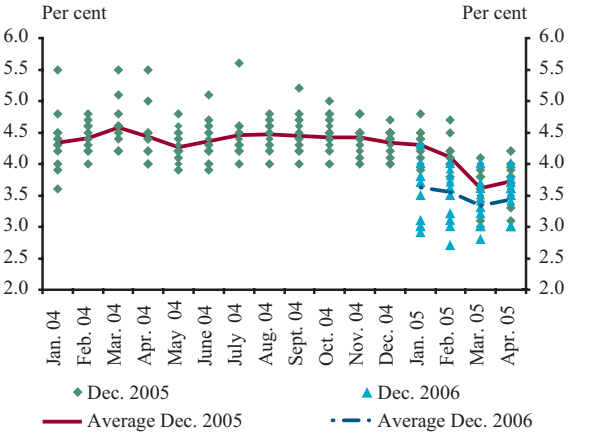
** Balance indicator: the shift to the positive (negative) direction indicates the increase (decrease) of inflation perception or expectations.*

Professional analysts

Analysts surveyed by Reuters were surprised by the rapid decline in inflation in early 2005. The much better-than-expected actual data appeared most clearly in the March survey as is usually the case when assessing long-term inflation developments.

Chart 2.42

Inflation forecasts of professional analysts in the Reuters survey
(annual changes)



In effect, analysts adjusted their inflation projections for 2005 and 2006 downwards. At the same time, however, the fact that they made greater adjustments to their projections with shorter time horizon may indicate that in their perception strong effects considered temporary may have played a role in the recent decline in inflation. According to analysts the inflation targets of monetary policy seem to be feasible in the current macroeconomic environment in both 2005 and in 2006.

3 Inflation outlook

3. 1 Overview of the projection

Over the forecast horizon, assuming a central bank base rate of 7.5 per cent, a nominal exchange rate of roughly 248 HUF/EUR (as prevailed in April 2005) and that all other, technical assumptions apply, the consumer price index is expected to be between 3–3.5 per cent at the end of 2005 and 2006. In general, our current projection reinforces the inflationary outlook described in the February *Report*. The major difference between this and the last projection is that now we forecast a more marked slowdown in core inflation, while factors not affected by monetary policy point to slightly higher inflation.

In our forecast, longer-term effects foreshadow a stable, low-inflation environment. At the beginning of the forecast horizon, as a result of factors that may be considered temporary, a further slowdown in core inflation is expected, with trend inflation then gradually approaching its longer-term path.

In our projection, amongst the domestic factors affecting inflation, developments in unit labour costs and the strength of market competition must to be underlined. An increase in labour market reserves and the adaptation of companies' labour demand to the prevailing business conditions will lead to a decline in wage inflation. We expect market competition to grow even stronger in certain market segments.[18] In our projection, demand-side factors tend to be neutral or moderately point towards lower inflation. Moderate increase in household consumption will dampen demand-pull inflationary pressure especially in market services.

Another fundamental determinant of inflation developments is imported inflation. If our exchange rate assumption is realised, inflation of foreign origin will have a reducing effect on core inflation over our entire projection horizon as well. Prices of traded products of our major trading partners are expected to rise only slightly. On the other hand, the current stable nominal exchange rate and import competition, which is becoming more fierce at international level as well, dampen the domestic effects of imported inflationary pressures originating in energy and commodity markets.

In our previous *Reports*, the direct effects of exchange rate were considered the most important factor determining disinflation. In addition to this, in our current projection secondary effects, i.e. loosening of labour market conditions and declining wage growth play a key role. The above developments are considerably facilitated by the notable dampening of inflationary expectations, which will play a major role in the future reduction of wage inflation as well.

Disinflation commenced in 2004 H2 and strengthened further in 2005 Q1. However, the decrease in inflation at the beginning of 2005 is partly attributable to temporary reasons. This means that there are several underlying developments which may mainly be interpreted as a shift in price level, and when adjustment to the new price level is achieved, the effect of these factors will not be reflected in the inflation index any more.

The stable forint exchange rate of the previous period resulted in a reduction of tradable goods prices. Over the longer run, however, if the assumed exchange rate path is realised, the price change of this product group will approach the slightly positive pace of price change of imported products measured in foreign currency. In addition to the above, the decline in the prices of tobacco and some alcohol products, the considerable decrease in car

[18] A sector like this, for example, is retail trade, where market structure alteration attributable to the EU accession as well may stimulate competition in a more lasting manner, thus reducing the profit margin.

prices of late and the import competition in certain product groups following EU-accession are considered transitional. These developments are gradually losing their importance, although the duration of this process is uncertain. Therefore, despite the fact that inflationary trends are creating an environment of lower inflation, the exclusion of temporary effects from the base indicates that inflation will stagnate for the first part of our projection horizon, and then rise slightly.

According to our risk assessment, if our assumptions on interest rates and exchange rates apply, at end 2006, the time horizon relevant from a monetary policy aspect, there is a high probability that inflation will fall in the target range of 3.5 ± 1 per cent. The probability of inflation being lower than the target range is somewhat higher (30 per cent) than that of it being higher than the target (around 20 per cent).

According to our evaluation, the most important uncertainty factor surrounding our central inflation projection is whether the increasingly fierce market competition will result in a temporary or a more permanent decline in inflation. In our central projection, we assume that market competition is going to become keener only in certain market segments over the longer run. However, it is conceivable that the increase in competition will become more and more perceptible in other market segments as well, which may result in lower corporate price mark-ups than the current path, consequently, leading to lower inflation.

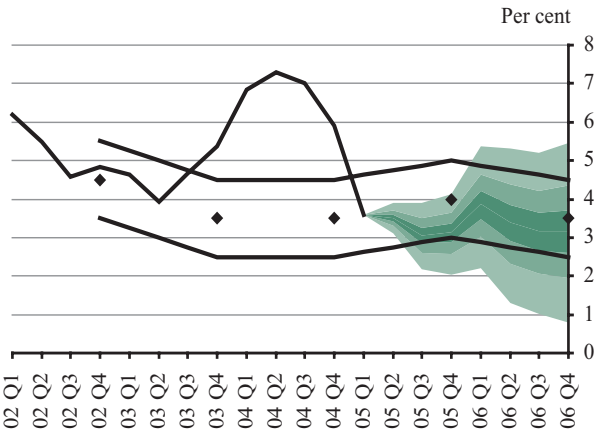
Another important uncertainty factor is the actual extent of labour market looseness and the reduction in wage inflation resulting from the increase in unemployment. An increase in frictional unemployment may also play a role in the rise in unemployment. A longer duration for job searches may result in higher unemployment for a longer period of time. However, in this case increasing unemployment would not imply an improvement in employers' bargaining positions or a deterioration in that of employees. Moreover, tightening of labour sources may dampen potential output, which may make demand-pull inflationary pressure more important and may also boost cost-push inflationary pressures. As our central projection assumes a loosening of the labour market, we consider this effect as a risk towards higher inflation.

In terms of developments in external demand, there is high probability of a scenario which is even less favourable than the scenario set forth in the central projection. Thus, this represents an uncertainty factor pointing more towards lower inflation. Since there is a fairly significant difference between our fiscal assumption for 2006 and the risk-based path (which takes account of existing fiscal measures and trends only), our evaluation suggests that relative to the central projection the demand effect of fiscal policy may imply risks slightly pointing towards higher inflation. We think that the usual uncertainty of oil and energy prices also points towards higher inflation.

Chart 3.1

Inflation fan chart*

(Percentage changes on a year earlier)



** The fan chart represents the uncertainty around the central projection. Overall, the coloured area represents a 90 per cent probability. The central, darkest area – containing our main scenario as the mode of the distribution – refers to 30 per cent of the probability. The end-year points denote the announced inflation targets, while the two lines denote a tolerance interval of ±1 per cent assigned to the targets.*

3. 2 Details of the main scenario

The projection depicted in this *Report* is conditional. This conditionality means that in this Report the underlying assumptions are that the following conditions remain unchanged: 7.5 per cent central bank base rate, roughly 7 per cent long-term interest rate and the average April exchange rate of HUF 248.2 per EUR. Our projection also assumes gradually declining world market prices for oil (but generally speaking, still above 50 USD) until end-2006, based on futures prices and a stable EUR/USD exchange rate.

3. 2. 1 Expected trends in the business cycle

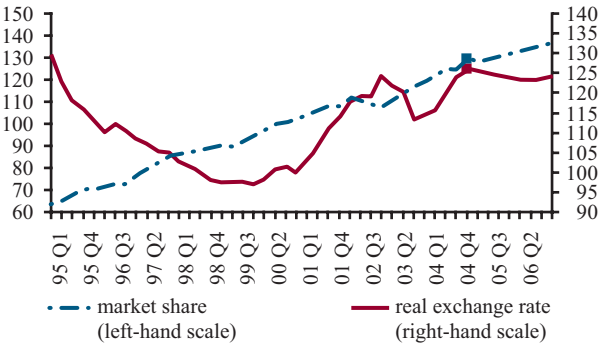
As presented in sub-section 2.1, our assessment of the external business cycle is based on a variety of information. While at the beginning of our forecast horizon confidence indicators and data on stock of existing orders foreshadow a weaker external import demand, later – in accordance with other forecasting institutions' projections – domestic demand and consequently also import demand of Hungary's partners starts to increase again. Although global oil prices are expected to decline, they stand at a high level, which has a negative effect on Hungary's external import demand as well. Our projection may be considered conservative in the sense that we expect a more moderate upswing than other forecasting institutions.

According to our projection, after a temporary stagnation of one or two quarters Hungarian exporters' market share will return to its earlier longer-term positive trend, deriving from foreign trade integration. As will later be presented, the corporate sector and especially export sensitive

Chart 3.2

Expected trends in the export market share and the real exchange rate*

(2000=100)



** Market share = goods export/weighted import demand; real exchange rate: manufacturing ULC-based real exchange rate (increase means appreciation).*

Table 3.1

Major assumptions determining the main scenario

	2005	2006
Central bank base rate (per cent)**	7.5	7.5
5-year yield (per cent)**	7.0	7.0
HUF/EUR exchange rate (forint)*	247.4	248.2
USD/EUR exchange rate (cent)*	129.9	129.5
Brent oil price (US dollar/barrel)**	54.0	51.5

** Annual average on the basis of the April 2005 averages.*

*** End-year figures.*

Table 3.2

Trends in external demand*

(Percentage changes on a year earlier)

	2004	2005	2006
	Actual/estimate	Projection	
MNB	5.9	5.3	5.7
OECD	5.9	5.4	7.4
European Commission	6.2	6.2	6.3
IMF	6.0	6.4	6.9

** External demand: weighted import demand of Hungary's major export partners.*
Source: own calculations based on IMF World Economic Outlook, OECD Economic Outlook, EC Economic Forecasts.

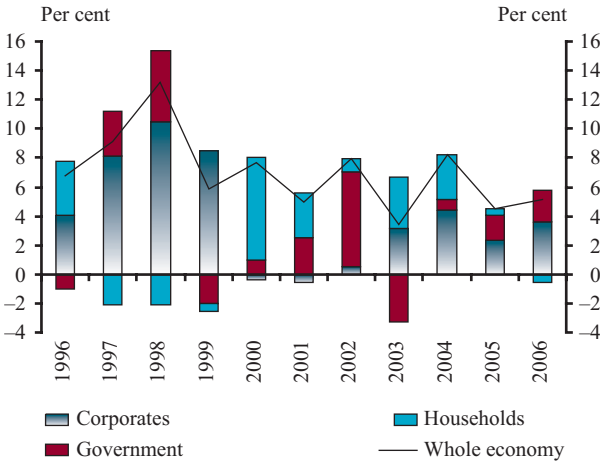
industries (manufacturing) will adapt to the somewhat less favourable external demand by reducing their labour demand and thus by tempering wage inflation. Consequently, we expect a stagnation of the ULC-based real exchange rate, which best reflects competitiveness. Overall, the growth rate of Hungary's exports is expected to increase between by 8 – 10 per cent in 2005 and 2006 as well.

Following the 2004 Q4 slowdown, which we deem as a temporary phase, corporate investments will pick up again. In 2006, investment activity is expected to be more balanced, in accordance with the developments in external business conditions and economic growth. Corporate investment growth is to amount to 4 per cent in 2005, while a more dynamic upswing exceeding 6 per cent is anticipated for 2006.

Looking ahead, dynamic expansion in public investment is expected, while household fixed investment is projected to continue to decline. The latter is caused by delayed effects of earlier changes in housing subsidies. Consequently, household fixed investment will contribute to the whole economy total investment only to a lesser extent or subtract from it, while corporate and public investment will become increasingly important. Overall, compared to year 2004, all of these processes will result in a slowdown in whole economy gross fixed capital formation and an approximately 4.5–5 per cent growth in both years.

Chart 3.3

Investments by sectors*



** Individual sectors' contribution to total investment.*

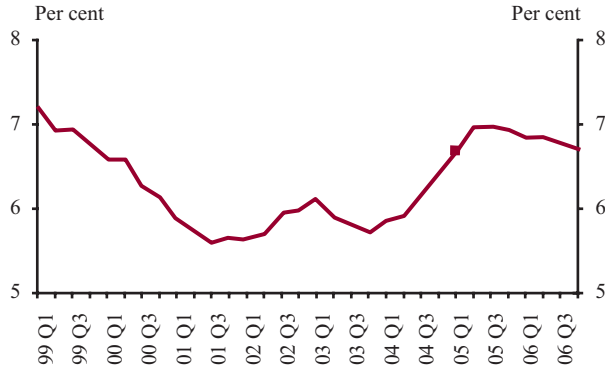
As external and domestic business conditions become somewhat less favourable, the corporate sector will be compelled to adjust itself to this situation. Latest labour market information suggests that the adjustment of the private sector's labour demand to the prevailing business conditions has resulted in a decline in the demand for labour and thus a rise in the unem-

ployment rate. The decline in labour demand may also lead to the assumption that the tightness deriving from the shortage of skilled labour may have eased as well.

Current data for the beginning of this year indicate that the private sector's labour demand is dropping due to the slowdown in business activity. According to our projection, this will be followed by a gradual, modest increase in the future. As far as the sectoral composition of this modest increase is concerned, market services more sensitive to domestic demand will continue to absorb labour, while employment in manufacturing will further decline in 2005. Later, however, the number of employed will slightly grow in this latter sector as well. Private employment will stagnate in 2005, while growth of slightly below 1 per cent is projected for 2006. We assume that the number of employed in the public sector will continuously decline over our forecast horizon. Unemployment is projected to temporarily increase to 7 per cent, then later start declining gradually, falling to between 6.5 – 7 per cent at end 2006.

Chart 3.4

Development of unemployment rate*



** CSO labour force survey. Unemployment rate: the ratio of unemployed to active (employed + unemployed) population.*

Easing inflationary pressure from the labour market and more modest inflationary expectations in general will have an effect on wage bargaining as well. Short-term information also confirm the slowdown in private wage inflation. In our projection, wage inflation in the private sector will slow significantly; to 7 per cent and 6.6 per cent for 2005 and 2006, respectively.

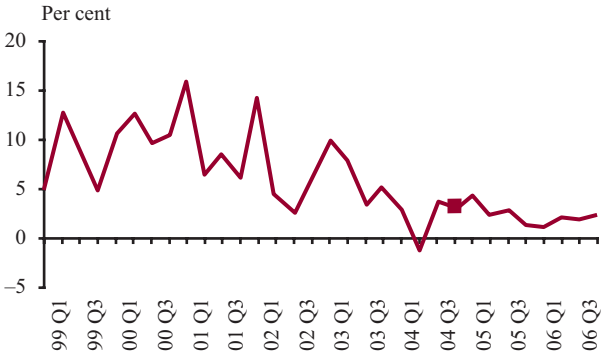
The increase in productivity resulting from the slowdown in the corporate sector's labour demand will have a moderating effect on wages and unit labour costs, which are extremely important in terms of cost-side inflationary tensions. According to our calculations, unit labour costs will grow by approximately 3 per cent and 2 per cent in 2005 and 2006, respectively. Unit labour costs will increase more slowly than inflation, resulting in the restoration of corporate sector profitability. Later, cost inflation pressure will be dampened considerably by the anticipated decline in real unit labour costs. Thus, alongside the main scenario the increase in unit labour costs in general will more and more harmonise with a lower inflationary environment.

Simultaneously with the slowdown in wage inflation, household real disposable income will also grow more slowly than previously. Net real labour income growth is forecast to grow by slightly more than 2 and 3 per cent in 2005 and 2006, respectively.[19] Considering the already announced fiscal measures, real financial transfers – another determining factor of disposable income – will grow by 3–3.5 per cent over our forecast horizon. However, the so-called 'other income items' are surrounded by high uncertainty. Overall, the increase in real disposable income, which was around 4 per cent in 2004, is

[19] Due to changes in taxes, real net earnings are expected to grow approximately 0.8 per cent faster than gross earnings in 2005. This estimation is different from the statistical difference calculated by the CSO as our estimate includes changes in the tax burden deriving from all changes in the personal income tax system (e.g. modification of tax allowances). However, as a result of a decline in employment in 2005, real net income will increase more slowly than average real wages.

Chart 3.5

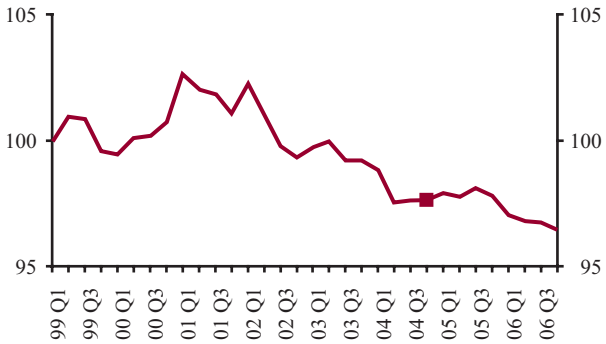
Unit labour costs in private sector*
(Annualised quarter-on-quarter growth rates)



** Based on value-added.*

Chart 3.6

Level of the real unit labour costs in the private sector*
(2000 = 100)



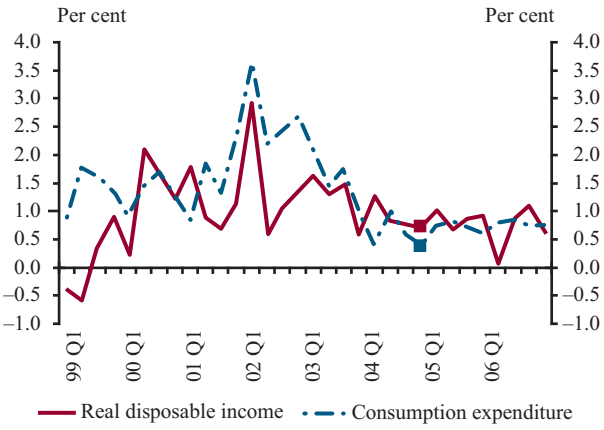
** Based on value-added and the GDP deflator.*

estimated to slow down to approximately 3-3.5 per cent in 2005 and 2006.

Household consumption demand will slow down, declining to a similar extent as income growth. This slowdown may be confirmed by some short-term indicators. Retail sales for January and February slowed, net borrowing by households dropped and car sales fell in the first quarter of this year. Short-term confidence indicators and the increase in unemployment might be conducive to precautionary savings. This view is supported by the fact that households have a

Chart 3.7

Household consumption expenditure and disposable income*
(Quarter-on-quarter growth rates)



** MNB estimate from 2003.*

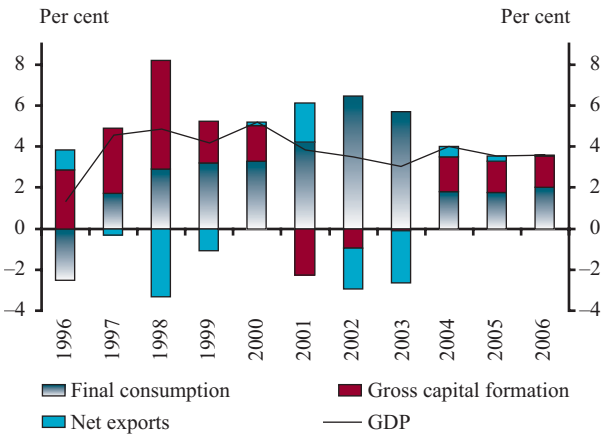
high consumption/income ratio and they may not be able to offset the income effect deriving from the slowdown in real income by further borrowing.[20] All in all, we project around 2.7–3 per cent growth in consumption expenditure on our forecast horizon.

Investments will continue to play a balanced role in the increase in aggregate demand, while the contribution of final consumption will stabilise in a lower level than in previous years. Since within aggregate demand items with lower import-content play a decisive role, and exports – despite the temporary slowdown in external demand – will continue to grow dynamically, imports are expected to grow by 8–9 per cent in 2005 and 2006. All in all, the positive growth contribution of net exports will diminish as domestic absorption gains momentum. In addition to the above, changes in the terms of trade, which will slightly deteriorate, have also been taken into account in our projection. The growth rate of the so-called gross domestic income (GDI), which filters out

[20] The reason for this is that a significant amount of housing loans and consumer credits extended to households in previous years have increased households' instalment-to-income ratio (to around 8 per cent). For more details see Report on Financial Stability, MNB, April 2005.

Chart 3.8

Economic growth and its constituents*



** Contribution of individual factors to GDP growth, percentage points.*

terms-of-trade effects, will be close to that of the GDP.[21]

Business cycle developments will result in stable GDP growth: 3.5 – 3.6 per cent growth is projected for both years. Given our estimate for the underlying (i.e. adjusted for calendar effects) growth rate of 3.8 per cent for 2004, this implies a slight slowdown in the rate of economic growth (note that the headline GDP data may show greater volatility due to the calendar effect: a drop from last year's 4.0 per cent to roughly 3.3 per cent this year). Taking all this information together and based on our 3-4 percent estimation for growth of potential GDP, we expect the

Table 3.3

Projections in the main scenario
(Percentage changes on a year earlier)

	2004	2005	2006
Growth			
Household consumption	2.8	2.1	2.8
Household consumption expenditure	3.5	2.7	3.0
Gross fixed capital formation	8.3	4.5	5.2
Domestic absorption	3.3	3.1	3.4
Exports	15.7	8.5	9.6
Imports	14.0	7.7	9.0
GDP	3.8 (4.0)*	3.5 (3.3) *	3.6
Households			
Real disposable income	4.0 **	3.4	2.7
Labour market (private sector)			
Wages	9.3	7.0	6.6
Employment	-0.3	-0.1	0.8
Unit labour cost	3.1	2.9	1.8

** In 2004 the leap-year effect may have caused an upward distortion amounting to some 0.2 percentage points in GDP, i.e. instead of the 4.0 headline GDP growth, the underlying figure adjusted for calendar effects was probably around 3.8 per cent. In 2005 the distortion is to the negative direction. Our 3.5 per cent growth projection is consistent with the underlying 3.8 per cent growth estimated for 2004. ** MNB estimate.*

[21] Deterioration in the terms of trade may have a negative effect on consumption demand and thus on imports in the longer run. For the details on the macroeconomic effects of oil price increases, see Section 4.8 of the August 2004 Report.

output gap to close. All in all, the role of demand inflation factors will disappear, additional inflationary pressure from the aggregate demand side is not expected.

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

Provided that our assumptions hold true, we project a consumer price index of around 3–3.5 per cent both in December 2005 and 2006. Core inflation, due to its partly temporary decline at the beginning of 2005, will be low in 2005, while in 2006 it will converge to slightly higher than 3 per cent, consistent with the growth in unit labour costs.

Meanwhile, after a certain period of time, external imported inflation factors will contribute to the decline in core inflation only to a lesser extent. Exchange rate-based, direct disinflation factors are gradually losing their importance, and domestic factors (which have a relation to wage costs) start to dominate. Core inflation may be diverted from this by the strength of market competition (companies' price mark-ups) mostly in the beginning of our forecast horizon.

Accelerating core inflation is expected in the shorter run, although it will rather be reflected in the short-base (quarter-on-quarter) indices. Annual indices will still remain at a low level due to the statistical base effect. As mentioned, in 2005 Q1 core inflation was reduced by several factors which are not expected to persist over the longer run. The profile of exchange rate pass-through is the most important factor in the transient acceleration of core inflation. If the current nominal exchange rate remains stable, the price level will gradually approach its new equilibrium value. However, gradual adjustment leads to a lesser and lesser inflation slowdown (rate of price changes). In recent quarters, market services inflation, presumably in accordance with slackening consumption demand, have continuously declined. Taking into account the long-term inflation differential between industrial goods and services, we assume a stagnation in inflation of market services.

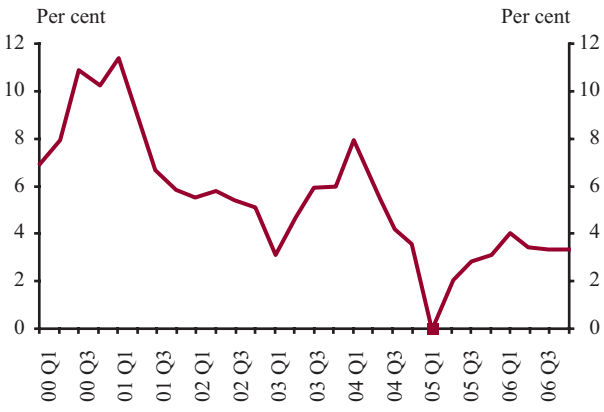
In addition to the above effects, other factors also play a role in the acceleration of core inflation. One of them is the recent decline in tobacco prices, which is attributable to market competition. However, a further fall in tobacco prices is unlikely. Prices in certain product groups (some industrial goods, alcohol, milk and dairy products) are declining, mainly due to EU accession and as a result of a more fierce competition in retail trade. No lasting deflation is expected in case of the price level of these products, because most price-equalisation processes have already taken place.

The previously mentioned factors can also be illustrated in Chart 3.9, where first the quarterly rate of core inflation increases, then gradually becomes stable at the level determined by longer term processes.

Chart 3.9

Trend inflation developments*

(Annualised quarter-on-quarter growth rates, per cent)



** Weighted index created from 4 items (processed food, industrial goods, market services, alcoholic beverages and tobacco products) by the MNB for the purpose of analysis and forecasting. For technical reasons, this indicator may, in the short term, be different from the core inflation index published by the CSO. Over the longer term, however, both follow identical trends.*

Table 3.4

CPI and its major constituents in the main scenario
(Percentage changes on a year earlier)

	2004		2005				2006			
	Actual		Forecast							
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
CPI	7.0	5.9	3.5	3.5	3.1	3.1	3.9	3.4	3.2	3.2
Core inflation (CSO actual)	5.9	5.3	3.2	2.4	2.0	2.0	3.0	3.3	3.4	3.5
Core inflation* (MNB estimate)	6.1	5.5	3.4							
Unprocessed food	11.9	1.4	-2.2	0.4	-2.7	0.2	4.4	3.4	2.0	3.3
Motor fuels and market-priced energy	7.6	10.0	6.4	8.3	7.8	6.6	7.7	2.6	0.5	-0.4
Regulated prices	8.3	7.2	4.8	6.5	6.7	6.8	5.4	3.9	3.5	3.2

** For technical reasons, our projected indicator may, in the short term, be different from the index published by the CSO. Over the longer term, however, both follow identical trends. The cause of this technical discrepancy is that core inflation calculated by the CSO cannot accurately be reproduced from available group CPI data, since the CSO breaks down several groups into core inflation items and sub-items excluded from them (e.g. pharmaceuticals). Therefore, in our projection we adopted an approximation, which, in respect of its trend, will not over the long run result in any departure from the core inflation values published by the CSO.*

Regarding other inflation processes, unprocessed food prices will grow at a moderate pace. An average 0.5 per cent quarterly price increase is expected in this product group. The increasing competition attributable to EU accession as well has lesser importance in case of these products. Agricultural producer prices are expected to be broadly stable or to grow only slightly.

Our central projection is based on futures oil prices, which will result in a gradual decline in motor fuel prices from 2005 H2. However, due to the base effects, lower prices will be reflected in annual indices starting only from 2006 Q2.

Regulated prices are expected to change by 6.8 per cent in the end of 2005. In our projection for end-2006, most regulated prices are assumed to increase by 3.2 per cent, in line with core inflation.

Table 3.5

Highlighted CPI indices in the main scenario
(Percentage changes on a year earlier)

	2004	2005	2006
	Actual	Forecast	
December	5.5	3.3	3.2
Annual average	6.8	3.3	3.4

4 Special topics

4. 1 Background information on the projections[22]

Table 4.1

Changes in the central projections relative to February

(Percentage changes on a year earlier, unless otherwise indicated)

	2004	2005		2006	
	Actual/ Estimate	Projection			
		Febr.	Current	Febr.	Current
Consumer price index (CPI)					
December	5.5	3.6	3.3	3.4	3.2
Annual average	6.8	3.4	3.3	3.8	3.4
Economic growth					
External demand (GDP-based)	1.8	1.9	1.5	2.3	2.2
Household consumption	2.8	2.1	2.1	2.2	2.8
Memo: Household consumption expenditure	3.5	2.7	2.7	2.4	3.0
Fixed capital formation	8.3	4.5	4.5	4.3	5.2
Domestic absorption	3.3	2.2	3.1	3.0	3.4
Exports	15.7	12.1	8.5	10.3	9.6
Imports	14.0	9.7	7.7	9.3	9.0
GDP	3.8 (4.0)*	3.8	3.5 (3.3)*	3.6	3.6
Current account deficit					
As a percentage of GDP	8.9	8.7	8.6	8.0	8.2
EUR billions	7.1	7.7	7.5	7.6	7.6
External financing requirement					
As a percentage of GDP	8.5	8.0	8.0	7.2	7.4
General government					
Cash based (GFS) deficit	6.5	5.5	5.6	4.5	n/a
ESA deficit	5.4-6.0**	5.3	5.0-5.8**	4.7 ***	4.4-5.2***
Deficit according to national definition[1]	4.5-5.1**	4.4	3.9-4.7**	n/a	n/a
Augmented SNA deficit[2]	8.1	8.3	8.5	n/a	n/a
Demand impact[3]	-0.3	0.1	0.1	n/a	n/a
Labour market					
National economy gross earnings[4]	6.1	8.9	8.4	6.5	6.3
National economy employment[5]	-0.5	-0.1	-0.5	0.5	0.5
Private sector gross average earnings	9.3	7.8	7.0	7.1	6.6
Private sector employment[5]	-0.3	0.4	-0.1	0.7	0.8
Private sector unit labour cost	3.1	4.2	2.9	2.6	1.8
Household real income	4.0	3.7	3.4	2.8	2.7

*[1] Correction of ESA deficit with payments to and from private pension funds. [2] Cash based deficit of the general government excluding certain extraordinary revenue and expenditure, and including quasi-fiscal activities recorded outside the general government. [3] Calculated from the so-called augmented (SNA) type indicator; a negative value means a narrowing of aggregate demand. [4] 13th-month salaries carried over from 2004 to January 2005 in the public sector cause a downward bias of the 2004 wage growth indicator and an upward bias of that in 2005. Corrected for this, growth in 2004 and 2005 would be 7.7% and 6.1%, respectively. [5] According to the CSO labour force survey. * In 2004 the leap-year effect may have caused an upward distortion of some 0.2 percentage points in GDP, i.e. instead of the 4.0 headline GDP growth, the underlying figure adjusted for calendar effects was probably around 3.8 per cent. In 2005, the distortion is to the negative direction. Our 3.5 per cent growth projection is consistent with the underlying 3.8 per cent growth estimated for 2004. ** The range indicates the uncertainty in the application of the ESA methodology in Hungary *** Assumption, based on the 0.6 per cent deficit reduction target in the Convergence Programme of the Government, relative to our 2005 projection.*

[22] Unless otherwise indicated, our projection is based on information and data received before 17 May 2005.

Table 4.2

Differences between the current and February 2005 inflation projections*
(Percentage points)

	Weight	Actual	Projection						
		2005 Q1	2005 Q2	2005 Q3	2005 Q4	2006 Q1	2006 Q2	2006 Q3	2006 Q4
Unprocessed food	5.9	1.9	4.0	1.6	–1.1	2.6	1.7	0.4	2.0
Motor fuels and market-priced energy	6.2	–0.3	3.3	4.7	5.2	5.6	2.1	0.7	–0.3
Regulated prices	20.3	–0.1	0.1	0.1	0.2	0.2	0.2	0.1	–0.1
Core inflation**	67.6	–0.2	–0.4	–0.6	–0.9	–1.1	–1.1	–0.8	–0.4
CPI	100.0	0.0	0.2	0.0	–0.4	–0.1	–0.4	–0.4	–0.2

** Negative values indicate if our current projection for the given item is lower than the one of February.*
*** For technical reasons, the core inflation published by the CSO may be different from the similar indicator used by the MNB for analysis and forecasting. In 2005 Q1, the index used by us was 0.2 percentage point higher than the one published by the CSO.*

In February we projected a strongly decreasing inflation path, which has been confirmed by the recently published data and latest information. Accordingly, we have revised our projection only slightly, reducing it by 0.3 percentage point for December 2005 and by 0.2 percentage point for December 2006. This modification is basically the result of our reduced core inflation projection.

Our core inflation projection was reduced because in light of the latest data and information we now consider a larger part of the factors that caused last year's disinflation to be lasting in nature as compared to the time of compiling our February projection. On the supply side, what basically determines the persistence of disinflation is whether the labour market adapts itself to the exchange rate that appreciated during last year and has been stable since then and to the lower inflation environment. According to our analysis carried out on the basis of the latest available data, the growth rate of wages and unit labour cost has continuously been declining in the private sector since the middle of last year, and by end 2005 is projected to decline to a level consistent with price stability. Relative to our February projection, in this *Report* our forecast regarding the increase in wages and unit labour costs of the private sector in 2005 and 2006 has been cut by around 1 percentage point. If companies restrain their wage increases, this may drive the whole economy to a permanently lower nominal path, since their costs will be in conformity with a lower rate of sales price increase.

In addition to the supply side, demand factors also support a core inflation projection moderately lower than the previous one, since, according to our projection, aggregate demand in 2005 will be lower than forecast in February, which is also shown by the reduction in the GDP projection.

Lower household and corporate inflation expectations also support the reduction of our current core inflation projection relative to the February forecast.

In addition to the above described adjustment process there may have been another important factor underlying the actual 2005 Q1 core inflation

data, which was lower relative to our February projection. This factor is the intensifying (import) competition, which is reflected both in the widening range of imported products and in the growing number of economic agents entering the market, which may have been bolstered by EU accession as well.[23] This effect may especially be considerable in the case of processed food and alcoholic beverages, which is confirmed by background conversations with experts from these industries.

Nevertheless, the change in our main scenario relative to February contributed to an increase in our inflation projection. Although industrial goods and food inflation of the euro area was somewhat lower in 2005 Q1 than the multi-year average, the USD oil price trend assumption in the current projection is approximately 20 and 30 per cent higher for 2005 and 2006, respectively, than it was in the February projection, i.e. our assumption regarding future imported inflation justified a higher inflation projection. Moreover, the assumed stronger dollar and weaker forint exchange rate against the euro also contribute to higher inflation.

In addition, we have raised our projection regarding the inflation of unprocessed food, which is basically attributable to the upward modification of our assumption of the producer price of pork.

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

In the following, we briefly present the impact on our projections for inflation and economic growth if the averages of interest rate and exchange rate expectations of market analysts and research institutions participating in the Reuters survey were used in our calculations, instead of the interest rate and exchange rate assumptions deriving from our rules.

We prepared our main scenario under the assumption of a 7.5 per cent short-term interest

Table 4.3

Changes in the major assumptions relative to February*

	2005 February projection		Current projection		Change (percentage)	
	2005	2006	2005	2006	2005	2006
Central bank base rate (per cent)**	9.0	9.0	7.5	7.5	–1.5***	–1.5***
5-year yield (per cent)**	8.5	8.5	7.0	7.0	–1.5***	–1.5***
EUR/HUF exchange rate	246.6	246.6	247.4	248.2	0.3	0.6
EUR/USD exchange rate (US cents)	131.3	131.3	129.9	129.5	–1.1	–1.4
Brent oil price (USD/barrel)	43.7	40.9	52.6	52.6	20.5	28.7
Memo: Brent oil price (HUF/barrel)	*8 198*	*7 676*	*10 028*	*10 087*	*22.3*	*31.4*

** Annual averages. Based on 2005 average exchange rates and futures oil prices. ** End-year figures. *** Difference, percentage points.*

[23] See details in Section 4.7.

Chart 4.1

Central bank base rate path based on the April Reuters survey and the assumption with a constant interest rate

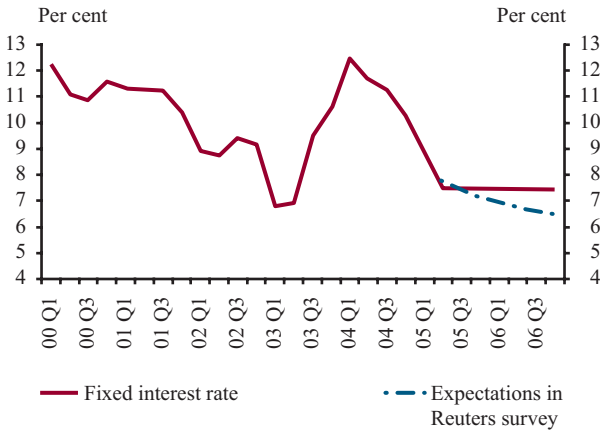
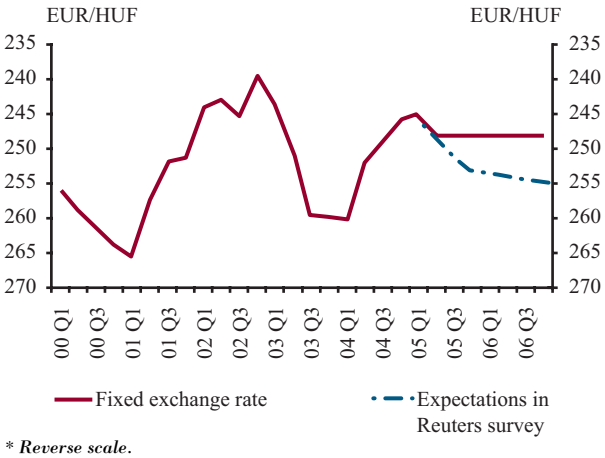


Chart 4.2

Exchange rate based on the April Reuters survey and the assumption of a constant exchange rate*



* ***Reverse scale.***

rate. By contrast, Reuters analysts expect a gradual decline in central bank base rate level and a 6.5 per cent rate at end-2006.

The underlying assumption of our main scenario is that over the entire projection horizon the EUR/HUF exchange rate will remain at the April 2005 average, i.e. 248.2. By contrast, in April, Reuters analysts predict a continuously depreciating HUF/EUR exchange rate, which is to be 254.8 at end-2006, i.e. 2.5 per cent weaker than in April 2005.

If we calculate with the interest rate and exchange rate paths expected by the Reuters analysts, relative to our central projection, it would result in an inflation projection 0.2 and 0.3 percentage point higher at end-2005 and end-2006, respectively. In addition, our projection for economic growth in 2006 would also be higher by approximately 0.1 percentage point. The difference between the central and the above alternative projections is mainly attributable to the difference between the exchange rate assumptions.

4. 1. 2 A comparison of our projections with those of other institutions[24]

A comparison of our current projection with the projections of other bodies (international institutions, market analysts) reveals that while the picture of domestic economic growth painted by us is broadly identical with other analysts' opinion, we are closer to the lower values of market expectations in terms of the inflation outlook.

In terms of equilibrium trends, our projection for the general government deficit is basically identical with that of the market, while our projection for the current account deficit is in the upper range of the band expected by analysts.

Other analysts tend to consider the size of Hungary's export market larger, while their projections for the GDP growth of Hungary's trading partners are broadly identical with our projection.

[24] Please note that the MNB projections cannot fully be compared to other projections. The projections prepared by the MNB are conditional, while other institutions usually make 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 assumptions from other institutions' projections on variables that are exogenous from our perspective.

Table 4.4

MNB's main scenario versus other projections*

	2005	2006
Consumer price index (December on December, per cent)		
MNB	3.3	3.2
Reuters survey (April 2005)[1]	*3.1*–3.7–*4.2*	*3.0*–3.4–*4.0*
Consumer price index (average annual increase, per cent)		
MNB	3.3	3.4
Consensus Economics (March 2005)[1]	*2.8*–3.6–*4.3*	*2.8*–3.6–*4.5*
European Commission (spring 2005)	3.8	3.6
IMF (April 2005)	4.0	3.8
Reuters survey (April 2005)[1]	*3.4*–3.6–*4.0*	*3.1*–3.6–*4.2*
World Bank (May 2005)	4.0	n/a
GDP (annual growth, per cent)		
MNB	3.5 (3.3)**	3.6
Consensus Economics (March 2005)[1]	*3.2*–3.6–*4.0*	*2.4*–3.8–*4.1*
European Commission (spring 2005)	3.9	3.8
IMF (April 2005)	3.7	3.8
Reuters survey (April 2005)[1]	*3.1*–3.6–*4.0*	*3.3*–3.8–*4.4*
World Bank (April 2005)	3.7	n/a
Current account deficit (in EUR billions)		
MNB	7.5	7.6
Consensus Economics (March 2005)[1,2]	*4.0*–6.9–*8.0*	*3.6*–6.8–*8.2*
Reuters survey (April 2005)[1]	*6.7*–7.2 –*8.2*	*6.7*–7.2–*7.8*
Current account deficit (as a percentage of GDP)		
MNB	8.6	8.2
European Commission (spring 2005)	8.7	8.2
IMF (April 2005)	8.6	8.1
World Bank (April 2005)	8.7	n/a
General government deficit (according to ESA-95, as a percentage of GDP)		
MNB	5.0–5.8***	4.4–5.2***
Consensus Economics (March 2005)[1]	*4.2*–5.0–*5.8*	*3.5*–4.6–*6.0*
European Commission (spring 2005)[4]	5.0	5.2
Reuters survey (April 2005)[1]	*4.9* –5.2–*5.5*	*4.3*–4.8–*5.2*
World Bank (April 2005)	5.1	n/a.
Projections on the size of Hungary's export market		
MNB	5.3	5.7
European Commission (spring 2005)[3]	6.2	6.3
IMF (April 2005)[3]	6.4	6.9
Projections on the GDP growth rate of Hungary's trading partners		
MNB	1.5	2.2
European Commission (spring 2005)[3]	1.6	2.1
IMF (April 2005)[3]	1.6	2.2

** MNB projections are so-called 'conditional' projections. Therefore, they cannot always be directly compared to other projections. ** In 2004, the leap-year effect may have caused upward distortion of some 0.2 percentage points in GDP, i.e. instead of the 4.0 headline GDP growth, the underlying figure adjusted for calendar effects was probably around 3.8 per cent. In 2005, the distortion is to the negative direction. Our 3.5 per cent growth projection is consistent with the underlying 3.8 per cent growth estimated for 2004. *** The range indicates the uncertainty in the application of the ESA methodology in Hungary. For 2006, an assumption, based on the 0.6 per cent deficit reduction target in the Convergence Programme of the Government, relative to our 2005 projection.*

[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] Values calculated by the MNB; the projections of the named institutions regarding individual countries are considered with the weights used for calculating the MNB's own external demand indicators. This way, the forecast may differ from the numbers published by the institutions aforesaid. [4] For the sake of comparability the projection of the European Commission was corrected taking into account payments to the private pension fund system.

Source: Consensus Economics Inc. (London) Eastern Europe Consensus Forecasts (March 2005); European Commission Economic Forecasts, spring 2005; IMF World Economic Outlook (April 2005); Reuters survey, April 2005; World Bank EU-8 Quarterly Economic Report (April 2005).

4. 2 Developments in general government deficit indicators

Forecasting fiscal developments is hindered by greater-than-earlier uncertainties. This is attributable to the fact that the application of the ESA deficit category in Hungary has not completely been clarified methodologically, and therefore, due to the methodological uncertainty, the ESA deficit cannot be considered informative.[25] As a consequence of the increasing uncertainty surrounding the predictability of the ESA deficit, our projection for 2005 illustrates our view of the expected fiscal path, by mainly presenting the GFS central projection and the so-called augmented (SNA) deficit. Within this, we consider the developments in the augmented type, SNA deficit category to be a fiscal indicator which reflects changes in fiscal developments over time in a well interpretable manner for monetary policy. The reason is that this indicator includes even those items in government spending that do not belong to the government according to official statistics, but are realised on government initiative or involve long-term commitment by the government to spend.

In our projection for 2005, compared to last year, a decline in the GFS deficit to 5.6 per cent of the GDP, i.e. by 1 per cent, is expected. However, this will mainly be realised by outsourcing government investments' i.e. via an increase in quasi-fiscal expenditure. Therefore, relative to last year, the

Table 4.5

Fiscal indicators according to our baseline scenario
(As a percentage of GDP)

		Actual/Estimate			Projection
	2001	2002	2003	2004	2005
1) GFS deficit	-3.0	-10.1	-5.9	-6.5	-5.6
2) Adjustment of the interest balance according to ESA	-0.4	0.0	0.0	-0.2	-0.3
3) Other corrections on ESA basis	-1.0	+0.9	-1.3	(+1.3)-(+0.7)	(+0.9)-(+0.1)
4) ESA deficit (1+2+3)	-4.4	-9.2	-7.2	(-5.4)-(-6.0)	(-5.0)-(-5.8)
5) Deficit according to national definition*	-3.7	-8.5	-6.2	(-4.5)-(-5.1)	(-3.9)-(-4.7)
6) Quasi-fiscal expenditure and other adjustments	-2.3	+1.3	-2.6	-1.6	-2.9
7) Augmented (SNA) deficit** (1+6)	-5.3	-8.8	-8.5	-8.1	-8.5
8) Augmented (SNA) primary balance	-0.6	-4.9	-4.6	-4.2	-4.4
9) Fiscal demand impact***	+1.8	+4.2	-0.4	-0.3	+0.1

** Modification of the ESA deficit taking account of the revenue and expenditure of private pension funds, based on the statistical corrections in the EDP report sent to Eurostat in March 2005. The extent of the correction is different from the one in the previous Report. ** Cash based deficit of the general government excluding certain extraordinary revenue and expenditure, and including the balance from quasi-fiscal activities recorded outside the general government. *** Calculated from the so-called augmented (SNA) type indicator; negative values denote contraction in aggregate demand.*

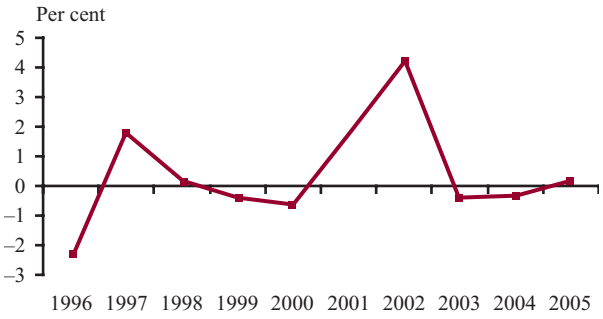
[25] The ESA deficit of individual years changed significantly several times for methodological reasons. This is shown in the changes for the year 2003 ESA deficit. Last year the year 2003 ESA deficit amounted to 5.9 per cent first, then later it was modified to 6.2 per cent. However, in March 2005 Eurostat published a deficit 7.2 per cent of the GDP because of the change in the methodology of VAT recording. The recognition of the losses of MÁV (the state railway company), the recording of the national part of agricultural subsidies according to ESA etc. are still pending matters.

augmented (SNA-type) balance which also includes this expenditure will not improve. On the contrary, as our 8.5 per cent estimation suggests, it will slightly deteriorate this year, and thus our demand effect indicator does not signal contraction for 2005 either.

Our new projection for 2005 relative to the February one has remained broadly unchanged as far as the above indicators are concerned. Meanwhile, in the light of Q1 actual data we perceive increasing risks on the expenditure side of the government budget. The risk of failing to attain the target of ESA deficit reduction in 2006 has also increased, as additional determinants have appeared on the expenditure side since our previous projection.

Chart 4.3.

Fiscal demand impact
(As a percentage of GDP)



Year 2004 deficit

In our February Report, a 5.3 per cent GDP-proportionate ESA deficit was estimated for 2004. When the 2004 ESA deficit was estimated in February, it was unknown whether the CSO would determine 2004 net revenue from VAT according to the ESA methodology applied in previous years, or if there would be a change in methodology. Therefore, the February Report was based on the assumption that one part of the VAT refunds not paid back in 2004 would be recorded in the 2004 ESA deficit and the other part in the 2005 ESA deficit. In February, the CSO made a methodological change in recording the VAT revenues; they switched to complete accrual accounting (based on individual receipts), which resulted in a subsequent adjustment of the 2003 ESA deficit to -7.2 per cent from the -6.2 per cent approved last year. According to accrual VAT accounting the preliminary 2004 ESA deficit changed to 5.4 per cent.

However, this was rather the start than the end of the process of finalising the actual 2004 ESA figures. Eurostat is expected to publish the latest data in September, in possession of the final deficit of the local governments sub-sector and including statistical adjustments consistent with national accounts compiled by the CSO and also the corrections deriving from decisions on the currently pending methodological issues. Based on past experience, an upward revision of the ESA deficit is possible, and this is the reason why a relatively wide, 5.4–6.0 per cent GDP-proportionate range was given for the year 2004 nowcasting.

The preliminary actual figure of the 2004 GFS deficit is 6.5 per cent, which would have been around 7.0 per cent, if VAT refunds had not been delayed by the Tax and Financial Control Administration in 2004 H2. The so-called augmented (SNA) deficit category indicates a nearly 0.5 percentage point decline in the deficit (from -8.5 per cent to -8.1 per cent) relative to 2003, basically as a result of the decline in quasi-fiscal expenditure (which has proven to be temporary in the meantime).

Fiscal balance expected for 2005

According to our central projection the 2005 ESA deficit target of 4.7 per cent is not expected to be achieved, unless further balance-improving measures are taken during the year. Without such measures, the ESA deficit in proportion to the GDP is expected to be in the range of 5.0–5.8 per cent

this year, while the GFS deficit is to be around 5.6 per cent according to our central projection.

While our GFS deficit projection is declining from last year's 6.5 per cent by 1.0 per cent to 5.6 per cent, our so-called augmented SNA deficit estimation shows a slight increase (from 8.1 per cent to 8.5 per cent). These changes in different directions result from the fact that relative to last year government expenditures that were excluded from the GFS and ESA deficit categories have increased considerably.

As usual, our 2005 central projection is based on several important assumptions:

• As for primary expenditure, except for open-ended ones, expenditure appropriations specified by law were assumed to be realised.

• As for the developments in wages and salaries in the public sector, we calculated using the wage growth specified by the Budget Act; in 2005 on general government level it represents an approximately 7–8 per cent gross average wage growth.

• We assumed the definitive freezing of the HUF 100 billion expenditure reserve set aside by the Budget Act and of the additional HUF 60 billion expenditure reserve created by the government in its own competence this spring.[26]

• Our projection for the interest balance is based on the 2 May forward yield curve.

In terms of the magnitude of the deficit, our central projection of the GFS deficit has remained broadly unchanged relative to our February central project-

Table 4.6

Differences between our 2005 projection and the approved budgetary estimates (including additional measures approved later, cash based, as a percentage of GDP)

	Divergence from appropriations specified by law***
I. Revenues	*–0,6*
Of which: direct taxes	–0,3
Of which: indirect taxes	–0,7
Effect of VAT refund from 2004*	–0,6
II. Primary expenditure	*+0,1*
Of which: open-ended expenditure	+0,2
Of which: local governments	+0,3
Of which: blocking of expenditure reserve**	–0,6
III. Primary balance (I-II)	–0,7
1) Interest balance	–0,1
2) Current-price GDP difference	–0,1
Differences total (III+1+2)***	–0,8

** Within our central projection of indirect taxes we calculated with the cash based payment in 2005 of the total amount of VAT refunds carried over from last year. ** In the projection we assumed that the accumulation of expenditure reserves will be 100 per cent effective. Ceteris paribus, this assumption decreases the expenditure side compared to the original budget.*** Due to rounding, items do not always add up correctly.*

[26] In our central projection of the cash based (GFS) deficit, of the central budget appropriations we calculated with the definitive withdrawal of the so-called blocked expenditure reserves specified by the Budget Act and increased by HUF 60 billion by the government later. The method of recognition is identical with the one applied in our February Report except that at that time blocking of the additional expenditure was not on the agenda, so then we could not calculate with that.

ion. The underlying reason is that our central projection of direct and indirect taxes moved towards lower revenues and our projection of open-ended expenditure became higher, while our nominal GDP projection declined relative to February.

As for the tax categories which determine the main budget revenues, in 2005 on cash basis we expect revenue to be lower by nearly 1.0 per cent of GDP compared to the revenue specified in the Budget Act. Our projection of revenues from corporate income tax and simplified entrepreneurial tax has remained broadly unchanged relative to our February projection (we calculate with higher tax revenues from both taxes than the estimate specified by law). However, our central projection of personal income tax and excise duties shifted towards lower revenues relative to February, mainly due to changes in our macroeconomic forecast.

On the expenditure side, with respect to all expenditure items under the control of the Ministry of Finance, as earlier we accepted that these budget appropriations will be achievable (it is also assumed that the Government will be able to carry out the definitive withdrawal of the blocked expenditure appropriations).

We have prepared our own projection of open-ended expenditures; our forecast for pension and pharmaceutical expenditures together includes higher expenditure than the statutory appropriations by 0.15 percentage points of GDP. This difference is mainly attributable to base effects.

Our interest balance projection was prepared using the forward yield curve fixed on 2 May, and it is based on the updated financing plan of the Government Debt Management Agency. According to our calculations, the cash based interest balance of the budget may only slightly exceed the statutory appropriation (by less than 0.1 percentage point of GDP).

On the basis of the GFS deficit central projection, we prepared an estimate for the expected developments in the SNA-type deficit indicator. The so-called augmented (SNA) deficit indicator, which as mentioned above also includes quasi-fiscal expenditure, forecasts an increase in the deficit level in 2005 relative to 2004. This is mainly caused by the acceleration of highway constructions and the upturn in PPP investments.

According to our estimate for the fiscal demand effect, the budget is to have a broading neutral effect on aggregate demand this year. This means that if the extension of the highway network and other quasi-fiscal expenditures are interpreted as government spending, then, according to our estimation, in 2005 there will be no fiscal adjustment in terms of general government in a broader sense.

Uncertainty of the 2005 deficit forecast

All risk factors that may be seen from autonomous economic and fiscal developments are summarised below. There is an asymmetric perception of the spread of risks, towards a 2005 cash based deficit which is higher than the central projection. As it is illustrated by the table below, if conditions turn unfavourable, the cash based deficit may substantially exceed 6.0 per cent of the GDP by the end of the year.

Amongst the risks pointing to a higher deficit level, risks related to the measures taken to reduce budget expenditure may be underlined. Of the annual expenditure estimates of budget chapters, budgetary institutions and so-called 'special appropriations' nearly HUF 140 billion of appropriations was frozen by the government. This measure may result in tensions in this area, because spending is limited not only by the blocking of expenditure, but also by the regula-

Table 4.7

Major factors of uncertainty in the GFS deficit projection for 2005
(As a percentage of GDP)

Central projection of GFS deficit: -5.6 per cent			
Direct and indirect tax revenues will be higher than those assumed in the central projection	+0.4	Tax revenues will fall behind those in the central projection	–0.4
EU subsidies co-financing will be lower than planned	+0.1	Measures taken to reduce spending will only partly be effective	–0.4
Local governments' cash based deficit will be lower	+0.1	Investment spending of local governments will exceed expectations	–0.1
		Higher than expected increase in open-ended expenditure	–0.1
Impact of favourable developments on the balance	*+0.6*	*Impact of unfavourable developments on the balance*	*–1.0*
GFS deficit in the favourable case	–5.0	GFS deficit in the unfavourable case	–6.6

tion regarding this year's carry-over funds. According to this regulation, carry-over funds from last year cannot be at a lower level at end-2005 than at the beginning of the year. This measure applies to the central budget as a whole, and it may generate tensions that the measure cannot likely be realised in the case of some ministries and special appropriations. Therefore, it may happen that certain ministries and budgetary institutions would have to increase their year-end carry-over funds for a full compliance with the relevant legal provision vis-à-vis the whole budget.

Amongst the risks pointing to a lower deficit, in case of the main tax categories a possible higher outcome for the tax revenues indicated in our central projection needs to be underlined. The risk of surplus tax revenues may mainly arise in case of corporate and personal income taxes, especially if last December's increase in corporate tax payments is repeated at the end of this year.

Planned deficit reduction for 2006 and its uncertainty

As there is no approved budget or detailed budget bill for 2006, and the uncertainties surrounding our 2005 ESA deficit projection are also significant, we are not preparing any point estimate for the ESA deficit for 2006.

For 2006 we still assume that as declared by the Government in last December's Convergence Programme, at the ESA deficit level the annual 0.6 percentage point GDP-proportionate decline in deficit will be achieved. However, lowering the deficit level will require the realisation of additional new measures. This is illustrated by the table below, where the effects of the year 2006 determinants are expressed in figures.

Determinants known and quantified by us indicate the necessity of an additional fiscal balance improving measure in 2006, amounting to 2.4 per cent of GDP. Our calculation is based on the assumption that in the areas not affected by the determinants the increase in tax revenues and expenditure relative to GDP will remain unchanged next year. As we have no official information on the timing of the final termination of the lump sum health care contribution, in accordance with our projection rules we assumed the termination of this tax category starting from the beginning of the year.

On the one hand, determinants include the phasing out of 2005 extraordinary revenues, and on the

Table 4.8

Effect of quantifiable determinants*
(As a percentage of GDP)

	1	2	1-2
	Effect of determinants	Assumption	Risk not yet covered by measures
Change in ESA balance **	–1.8	+0.6	–2.4

**A positive number denotes an improvement (deficit reduction) in the balance. ** Relative to the balance in 2005.*

other hand, they quantify the lasting effects of the already announced measures to be taken by the Government. Selling the already built highway sections and MOL's extraordinary payment to the gas compensation fund constitute one-off revenues that improve the 2005 deficit level. The cancellation of the lump sum health care contribution (we assumed the termination of this tax from the beginning of the year), payment of the entire 13th-month pension and the indexation of pensions constitute a determinant with lasting effect.In terms of the GFS balance, we expect an additional increase in investment spending by the central budget amounting to approximately 0.5 per cent of GDP, owing to an agreement concluded with the European Union on investment expenditure.[27] According 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, relative to this year, extra investment expenditure amounting to at least around 0.5 per cent of GDP will need to be appropriated on the expenditure side of the 2006 budget.[28]

As meeting NATO obligations has been ineffective in recent years, the meeting of earlier undertaken GDP-proportionate cash based expenditure obligations was not assumed. Nevertheless, we assumed a lump-sum recording of the Gripen fighter plane procurement for 2006, in line with the methodology applied for the balance of payment.[29] From 2006 on there will be a new expenditure appropriation related to the highway construction scheme; this is called 'for availability payment obligation', which is estimated to amount to 0.3 per cent of GDP.

[27] Pursuant to the agreement, in the specified sectors (environmental protection, transportation etc.) Hungary must achieve the minimum level required as expenditures relative to GDP on the average of three years. The purpose of the agreement is to ensure that, rather than relying on EU funds or reducing their expenditure to perform budget adjustment, the new Member States actually use the available extra EU resources as additional sources for programmes.

[28] When our calculation was prepared, it was unknown to what extent the blocking of expenditure reserves may affect investment appropriations. As our central projection of the 2005 cash based deficit assumes the definitive blocking of the expenditure reserve, our estimation for this determinant is to be considered as lower estimate.

[29] Section 4.9 contains more details on this issue.

4. 3 Developments in external balance

The current account deficit was EUR 1.7 billion in 2004 Q4, while the surplus in the capital account balance amounted to EUR 130 million. The assessment of external financial developments is rendered very difficult by the fact that prior to 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 2004 Q1 and then slower than could be expected based on fundamental developments. The seasonally adjusted GDP-proportionate external financing requirement adjusted for the above effect amounted to 7.2 per cent in Q4, which constitutes a considerable, approximately 3 percentage point decline relative to Q3. The significant improvement in the external balance is mainly attributable to the (presumably temporary) contractionary effect of the fiscal policy. On the other hand, the Q4 real economy balance improvement is attributable to the considerably slower increase in the corporate sector's investment demand on the short base, which is most probably also a temporary phenomenon, improving the external balance only in the short run.

The seasonally adjusted accrual based financing requirement of the general government (public sector) declined to 7.2 per cent of GDP in Q4. The spectacular decline in the deficit is mainly a result of temporary deficit reduction measures, such as the postponement to January 2005 of the payment of civil servants' 13th-month salaries. In addition, the government imposed serious restrictions on current expenditure and investment spending of budgetary institutions. The Q1 cash based deficit data available in 2005 suggest that in 2005 Q1 the public sector's seasonally adjusted financing requirement returned to its earlier level.

The increase in households' seasonally adjusted net financial savings slowed continuously during the year. In Q4, simultaneously with the modest decline in asset expansion and borrowing, the seasonally adjusted GDP-proportionate net financing capacity remained at 2 per cent.

Table 4.9

Current account and financing by sectors
(As a percentage of GDP)

	2001	2002	2003	2004	2005	2006
	Estimate				Forecast	
I. General government	–5.2	–8.9	–8.5	–8.4	–8.8	–8.2
II. Private sector (=1+2)	–0.4	2.0	–0.3	–0.1	0.8	0.8
1. Households	5.2	2.6	0.1	1.9	2.7	2.8
2. Corporate sector	–5.6	–0.7	–0.4	–1.9	–1.9	–2.0
External financing capacity (=I+II)	–5.6	–6.9	–8.7	–8.5	–8.0	–7.4
Current account balance	–6.3	–7.2	–8.7	–8.9	–8.6	–8.2
– EUR billions	–3.6	–5.0	–6.4	–7.1	–7.5	–7.6

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 EU accession. The sector's seasonally adjusted GDP-proportionate financing requirement decreased considerably in Q4. The decline in the corporate sector's financing requirement occurred in parallel with the significant slowdown in the increase of investment spending relative to Q3. In addition to other factors, the slower increase in investments may also be related to the lower-than-usual VAT refunds, which are due to the tax audits; companies with liquidity constraints were compelled to postpone their investments.

The 2004 current account deficit grew to EUR 7.12 billion. At the same time, as a result of the surplus on the capital account, the country's GDP-proportionate external financing requirement declined by 0.2 percentage point to 8.5 per cent.[30] The moderation in the external financing requirement was in parallel with the slight decline in the government and private sectors' financing requirement. Although there has been no significant improvement in the external imbalance, the structure of financing has shifted in a favourable direction in terms of risk perception. The ratio of non-debt generating financing increased to 55 per cent from the low of 10 per cent in 2003.

In 2005, the government sector's GDP-proportionate financing requirement may slightly increase. With the slowing expansion of capital expenditure, the GDP-proportionate net financing requirement of the corporate sector is not expected to grow further, while households' net financial savings may slightly increase. The GDP-proportionate external financing requirement is likely to fall by 0.5 percentage point, which means an increase of the current account deficit to EUR 7.5 billion in parallel with a rise in the surplus of the capital account. In 2006, a precondition for the decline in the external financing requirement is a restrictive fiscal policy on the level of the entire general government, while the GDP-proportionate financing capacity of the private sector is expected to remain unchanged.

Table 4.10

Structure of the current account
(As a percentage of GDP)

	2001	2002	2003	2004	2005	2006
	Actual				Projection	
1. External balance of goods and services	–1.5	–2.4	–4.5	–3.0	–3.2	–2.7
2. Income balance	–5.5	–5.6	–5.0	–6.1	–5.8	–5.9
3. Balance of current transfers	0.8	0.8	0.8	0.3	0.4	0.4
I. Current account balance (1+2+3)	*–6.2*	*–7.2*	*–8.7*	*–8.9*	*–8.6*	*–8.2*
II. Capital account balance	*0.6*	*0.3*	*0.0*	*0.4*	*0.6*	*0.8*
External financing capacity (I+II)	–5.6	–6.9	–8.7	–8.5	–8.0	–7.4

[30] At the time of the EU accession the goods of community origin in customs warehouses were recorded as imports. This one-off effect increased the current account deficit and the external financing requirement by 0.5 per cent of GDP in 2004.

The GDP-proportionate current account deficit remained roughly unchanged in 2004, as a joint result of a significant decrease in the deficit of the external balance of goods and services and a more than 1 percentage point deterioration in the income balance. The decrease in the deficit of net exports stemmed from a considerable increase in export growth and a substantial slowdown in the growth rate of domestic use – this decrease was especially large in final consumption of households. The deterioration of the income balance is mainly due to the continuing indebtedness and the increasing interest rates. Because of the lower interest rates and a fiscal deficit financed by more in foreign exchange, the deficit of the income balance in 2005 is expected to remain at the level of the previous year. Therefore, the deficit of the current account may remain at the level seen in the last two years.

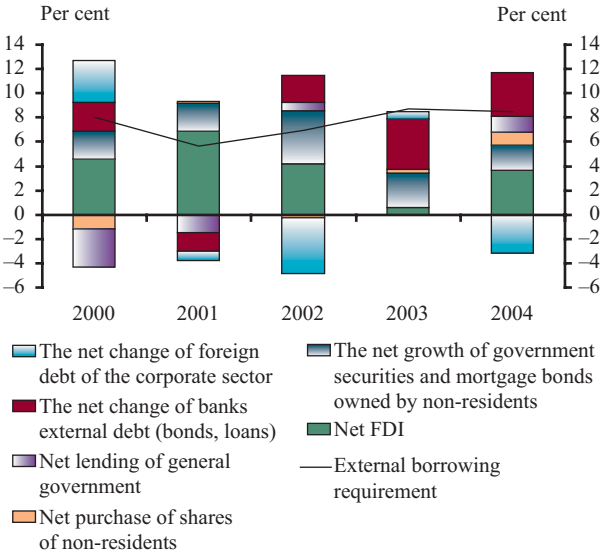
4. 3. 1 Financing the current account deficit

In terms of risk perception, the structure of financing was more favourable in 2004 Q4 than in H1, while the ratio of non-debt generating net financing edged down to 65 per cent following an increase to 84 per cent in Q3. Following the exceptionally high inflow in Q3, the value of foreign direct investment fell significantly in Q4. The main underlying cause of the drop in FDI inflows was that a company's foreign large investors sold their block of shares in a Hungarian company to foreign small investors, which resulted in a rearrangement of FDI and share inflows. Therefore, in Q4 there was a marked increase in non-residents' stock portfolio. Overall, in view of the above influences, the non-debt generating capital inflow remained at the Q3 level. At the same time, the non-debt generating capital outflow increased, resulting in a nearly EUR 400 million decline in net non-debt generating financing.

Chart 4.4

(Composition of financing)

As a percentage of GDP



Within debt financing, following an upswing in Q3, non-residents' demand for government securities was practically zero. The increase in the sector's net forint deposits also fell behind the level registered in Q3. At the same time, along with a moderate increase in spot forint exposure, non-residents reduced their swap holdings against the forint, although it resulted in an increase of only EUR 330 million in their total forint position. In parallel with the considerable FDI inflow, the corporate sector's net external debt continued to decline. Following the fall in Q3, banks' foreign currency borrowing grew to nearly EUR 1 billion, due mainly to foreign currency lending to households.

Table 4.11

External financing requirement

(EUR millions)

	2003				2003	2004				2004
	Q1	Q2	Q3	Q4		Q1	Q2	Q3	Q4	
1. External financing requirement	-1645	-1771	-1317	-1663	-6396	-1371	-2172	-1681	-1582	-6806
1.1 Current account balance	-1554	-1780	-1329	-1701	-6364	-1308	-2253	-1851	-1712	-7123
1.2 Capital account balance	-91	9	12	38	-32	-63	81	170	130	318
2. Financing	4331	160	1515	923	6929	1238	2574	1648	2874	8334
2.1 Direct investments	-209	252	-52	452	443	409	483	1324	724	2940
2.1.1 Direct investments abroad	-485	-162	-62	-756	-1466	-252	-99	44	-117	-424
2.1.2 Direct investments in Hungary	276	413	11	1208	1909	661	582	1280	841	3365
2.2 Borrowing by consolidated general government	1563	-208	1166	-136	2385	905	74	1353	1541	3873
2.2.1 Borrowing from the MNB	-116	-541	-771	-421	-1849	-738	-25	-61	-26	-848
2.2.2 Borrowing by the Government (excluding securities issue)	951	70	1076	415	2512	861	691	450	1579	3581
2.2.3 Purchases of government securities by non-residents	728	264	861	-130	1722	781	-592	964	-12	1141
2.3 Net borrowing by private sector	2932	36	338	578	3884	50	1960	-963	514	1560
2.3.1 Borrowing by credit institutions	2642	-168	390	349	3214	314	1939	106	928	3288
2.3.2 Portfolio investments (shares)	208	39	148	-173	223	326	98	95	314	833
2.3.3 Net borrowing by companies abroad	82	165	-200	402	448	-590	-78	-1164	-729	-2561
2.4 Balance of errors and omissions	45	80	62	29	216	-126	57	-66	95	-40
3. Change in international reserves (1+2)	2686	-1611	198	-740	532	-133	402	-32	1292	1528

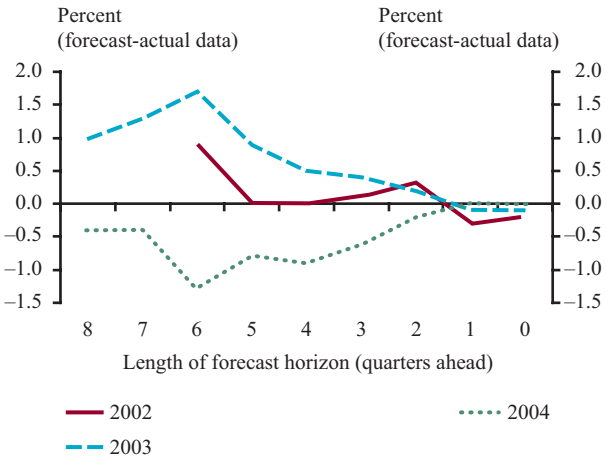
4. 4 Assessment of the performance of the MNB's growth projections

Assessments of the performance of the MNB's inflation projections have been published on several occasions.[31] Starting from this issue, our analysis will also extend to our projections related to growth (i.e. GDP).

In contrast, for instance, with the CPI, the regular revisions pertaining to the provision of statistical data may cause difficulties in our GDP projections, as in this case it is not clear if our projections are to be compared with the data provided for the first time or the revised final data.[32] This analysis relies on the latter solution, even though in some cases subsequent revisions have significantly modified the time series of the period under review. Naturally, in addition to the subsequent calculation of projection errors, in many cases such revisions may even bias the projections (as they overwrite the factual time series that provide the basis of our projections).

Chart 4.5

Errors in GDP growth rate projections by the MNB*
(Deviation=projection–actual)



** Positive values indicate that projections were higher, while negative values denote that they were lower than facts.*

The Magyar Nemzeti Bank has been publishing projections since August 2001. A statistical analysis of GDP projections and the facts leads to the conclusion that the differences between our projections on GDP growth rates and the relevant facts statistically do not differ from zero, thus no significant under- or overestimations can be seen on any time horizon in the past three years. Simultaneously, it is noticeable that over short time horizons positive and negative errors almost completely neutralise one another, whereas over the longer term the projections exceeding subsequent facts are in a slight majority.

If our projections for the individual years are evaluated separately, our projections for 2002 roughly correspond to the facts, while growth is overestimated in the 2003 and underestimated in the 2004 projections, primarily over the longer terms. The essential difference between the two years lies in the reason for the major part of deviations: while for 2003, they result from our projections regarding external economic developments, which subsequently proved to be over-optimistic, with regard to 2004, they can be explained by an unforeseen negative supply shock (the indirect tax hike in early 2004).

It is worth comparing the performance of our GDP projections with that of other analysts. As shown for consumer inflation projections, professional analysts' GDP projections may provide a natural basis of comparison.[33]

Before detailing the results, it is worth recalling the factors that may set limits to comparison. The most important one is the fact that the projections pre-

[31] See Section 5.1 in the February 2004 and Section 4.4 in the February 2005 issues of the *Report on Inflation*.
[32] Revisions of the domestic GDP data are described in Section 5.2 in the November 2002 issue of the *Report on Inflation*.
[33] See section 4.4. in the 2004 February Report.

Table 4.12

Statistical indicators characterising deviations of GDP projections from the actual data*
(Percentage points; deviation = projection – actual)

	Mean error (ME)	Mean absolute error (MAE)	Root mean square error (RMSE)
For 1-4 quarters ahead	0,04	0.34	0.43
For 5-8 quarters ahead	0.29	0.87	0.99

** The mean error (ME) represents the arithmetic average of differences between our projections and the facts. As all values included in the indicator have equal weight, a positive indicator denotes the preponderance of characteristically higher, and a negative one of characteristically lower projections. The mean absolute error (MAE) is calculated similarly to the mean error, but in this case every difference is interpreted as an absolute value. The root mean square error is an average of the squares of differences from the facts, from which the root square of the entire indicator is calculated. For this reason, irrespective of its sign, this indicator 'punishes' bigger differences from facts to a greater extent than previous indicators.*

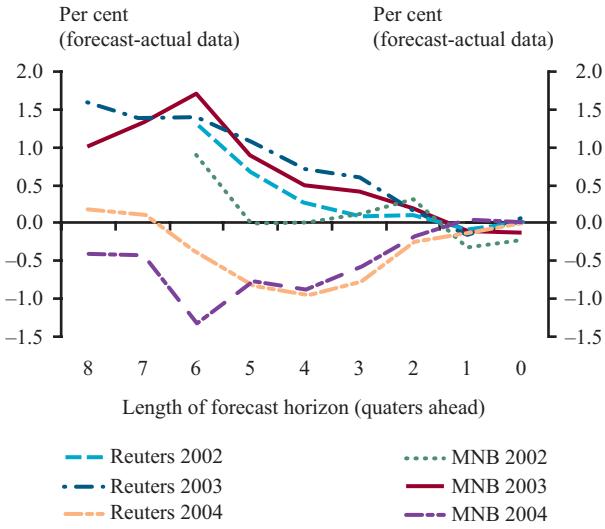
pared by market analysts and researchers are characteristically unconditional, meaning that they are made on the basis of the widest available set of information. By contrast, central bank projections are conditional, i.e. the central bank applies technical assumptions for certain macroeconomic variables (e.g. exchange rates, interest rates, certain fiscal variables, etc.), and thus such projections are valid only in excess of a limited set of information.

The evaluation of these analyses is even more difficult because instead of checking our results against individual analysts' projections separately, they are compared to the consensus (average or median) of projections by other analysts. The bigger the sample used for comparison, the more this fact may reduce the error of consensus projection (as positive and negative errors are more likely to offset one another).

On the basis of these considerations, our projection performance may be deemed as more accurate for 2002 and 2003 GDP: our projections deviate less than the average of projections by professional analysts. With regard to the 2004 growth rate, our projection may be given two different evaluations: errors in our projections made for longer periods (6-8 quarters) exceed the analysts' consensus, whereas over shorter horizons the two are of equal orders of magnitude.

Chart 4.6

Errors in GDP growth rate projections
(Deviation=projection–actual)



Performance of our projections for 2004 growth and inflation – a simultaneous analysis

The official announcement of indirect tax hikes markedly divided our 2004 projections into two distinct parts. Prior to the announcement, our view of the growth prospects basically corresponded to the subsequently realised GDP growth, however, consumer inflation in the same period was significantly underestimated because indirect tax hikes had not been taken into consideration. Following announcement of the tax hikes, the expected inflationary effects were

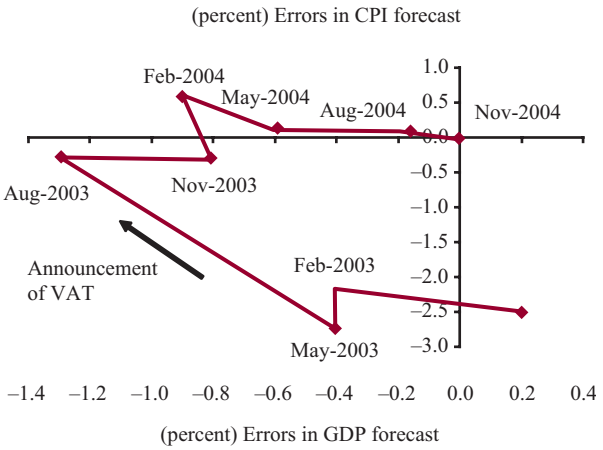
immediately incorporated into our projection. Primary effects were included in an extent actually corresponding to the facts. Consequently, errors in our released CPI projections decreased considerably.[34]

Simultaneously, the errors in our GDP projections suddenly rose and only gradually returned to their normal course. The increase in the projection error in the August 2003 Report was clearly due to the modification of our projection on household consumption. A major revision of our projection was required by a massive slowdown in household real income caused by the secondary effects of the announced indirect tax hikes on labour markets and the expected fiscal tightening. In our subsequent projections, we gradually modified our view of household behaviour towards a more precise assumption, however, our GDP projection remained underestimated. The reason why we projected slightly slower growth than actually achieved in this period was our overestimation of the influence of the decelerating international business cycle on Hungarian economic growth through net exports.

Chart 4.7

Errors in our projections for 2004 GDP growth and average consumer inflation

(Deviation=projection–actual)



Thus, taking everything into consideration, it may be established that compared to the consensus of professional analysts, our GDP projections for 2002 and 2003 perform satisfactorily, whereas the errors of our longer-term projections for 2004 growth exceed the errors in the analysts' consensus taken for reference. The reason for a larger projection error over this time horizon lies for the most part in our assessment of the uncertainty over the secondary effects of the indirect tax hikes.

[34] Section 4.4 in the February 2004 issue of the *Report on Inflation* gives a more detailed evaluation.

4. 5 Factors that may explain the recent rise in unemployment

According to the latest Labour Force Survey conducted by the CSO, in 2005 Q1 the rate of unemployment rose to 7.1 per cent from 6.1 per cent on a year earlier. Nevertheless, the Hungarian unemployment rate remained below the EU average (8.9 per cent). As such a fast rise in the rate of unemployment has been unprecedented since the early 1990s, we feel that special attention must be paid to this particular stage of labour market developments.

Based on the Labour Force Survey[35], the following brief analysis examines the composition of the 2004 increase in unemployment by sex, age, education, sector and region. To sum up our conclusions, it can be established that the 2004 rise in unemployment cannot be considered as an age-specific phenomenon. The rate of unemployment increased in nearly every age group. Higher unemployment hit people with secondary and tertiary education harder than others. A considerable part of the unemployed were already active in the labour market (i.e. were laid off), but the number of new entrants (school leavers) also rose quickly. In terms of sectors, market services and manufacturing laid off staff in the largest numbers, while the public sector and agriculture contributed to unemployment only to a moderate extent.

In our assumption, the primary reason for this rapid rise in the rate of unemployment lies in falling labour demand, although labour supply factors (the influx of graduates into the labour market, the dissolution of regular military troops, raising the pensionable age and the appearance of foreign employment service agencies) have also contributed. In many respects, the 2004 rise in unemployment is similar to that which occurred in 2002, although the idiosyncratic effects (e.g. staff cuts in the public sector and decline in the consumption boom) may trigger a larger and more persistent increase than earlier.

4. 5. 1 Composition of unemployment growth

According to the data published in the Labour Force Survey, the number of unemployed increased by nearly 30,000 in the course of 2004.[36] First, let us examine the additional numbers of unemployed in a breakdown by age, qualifications and sectors.

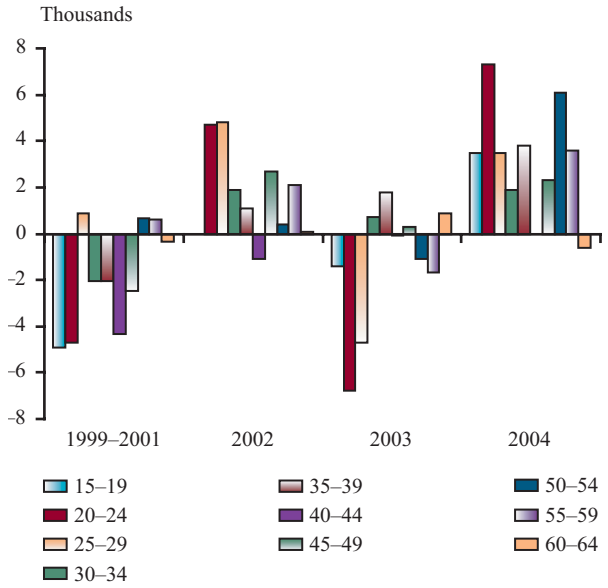
Age: The increase in unemployment in 2004 resulted primarily from rises in two age groups: those between 20-24 and 50-54. With the exception of people between 40-44 and 60-64, however, unemployment grew in every age group. Although due to their relatively small significance in the unemployed group, the age group of the youngest employees between 15-19 contributed to the increase in an average extent, with the rate of unemployment rising by nearly 30 per cent in this age group.

[35] The Labour Force Survey includes data provided by households by filling out questionnaires. The Labour Force Survey uses the categories set up by the ILO. Thus, a person is considered unemployed if he or she (1) does not have a paid job in the week reviewed; (2) has been looking for a job in the immediately preceding four weeks; and (3) would be ready to start a job within the immediately following two weeks.

[36] In the course of the analysis, the 2004 changes in the rate of unemployment are interpreted as changes that took place between December 2003 and December 2004. A detailed analysis is performed on the basis of absolute shifts (measure in thousand persons). The reason for this is that this way the individual groups' contribution to the aggregated growth is directly quantifiable. Absolute numbers are, however, biased by demographic effects, which may be handled by an analysis of the unemployment rates within the group. As the results of the analysis of the unemployment rate do not significantly differ from the picture suggested by absolute values, only the latter are examined in this study.

Chart 4.8

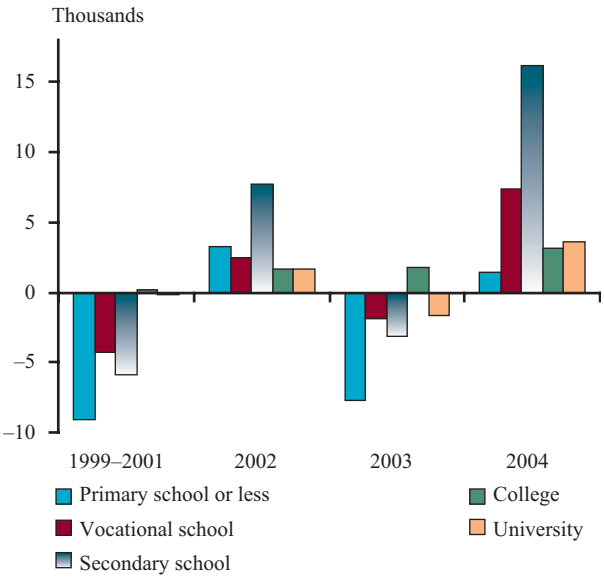
The number of unemployed by age-groups 1999-2004
(Annual change in thousands)*



** Change December on December; 1999-2001 data are period averages.*

Chart 4.9

The number of unemployed by highest education 1999-2004
(Annual change in thousands)*



** Change December on December; 1999-2001 data are period averages.*

Qualifications: The most significant contribution to unemployment growth came from workers with secondary education. Unemployment rose similarly in groups with vocational and grammar school qualification. However, the most rapid increase was seen among people with tertiary education: in this group, the number of unemployed with university diplomas doubled in the course of 2004.

Reasons for becoming unemployed: In an analysis of the increase in unemployment according to the reason for becoming unemployed, nearly 20,000 people were found to have lost their jobs, while fresh graduates added 'only' 10,000 to the number of unemployed. In other words, among the newly unemployed there were twice as many previously employed people as new labour market entrants fresh out of school. It is worth mentioning, however, that the number of people who became unemployed on account of graduation rose by a significant 50 per cent over the course of 2004.

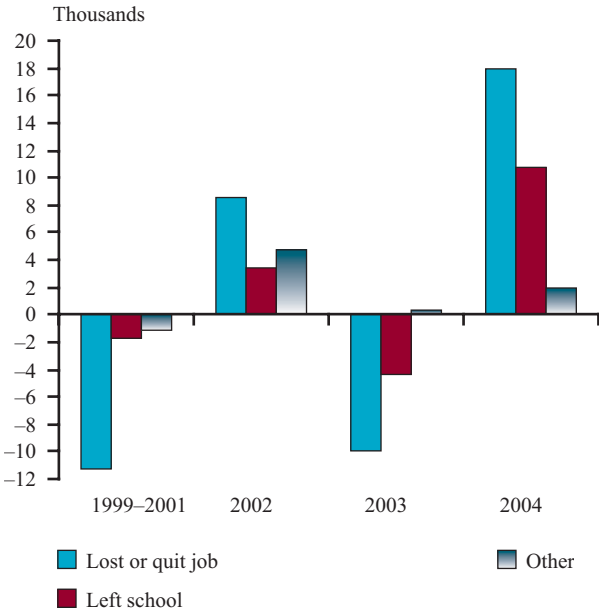
Sector-classification of last job: In an analysis of former employees according to the sector classification of their last jobs, the largest increase is seen in the field of market services. In the second place, people dismissed from manufacturing had a major contribution to rise in unemployment, while the public sector and agriculture reduced staffs only moderately.

An analysis of employment developments may add interesting information to the sector analysis. In market services unemployment rose simultaneously with an increase in employment. We assume that the underlying reasons for these developments are to be found in a reallocation of jobs within retail, real property business and business services. In manufacturing, the number of unemployed rose while the rate of employment declined. A more meticulous sector analysis, however, clouds the picture. A very small number of people were put on the redundancy list in the largest staff cutting sectors, the textile and food industry. This may have two reasons: dismissed employees have either become inactive or have found employment in other sectors. Within manu-

Chart 4.10

The number of unemployed by the main reason for job serach 1999-2004

(Annual change in thousands)*



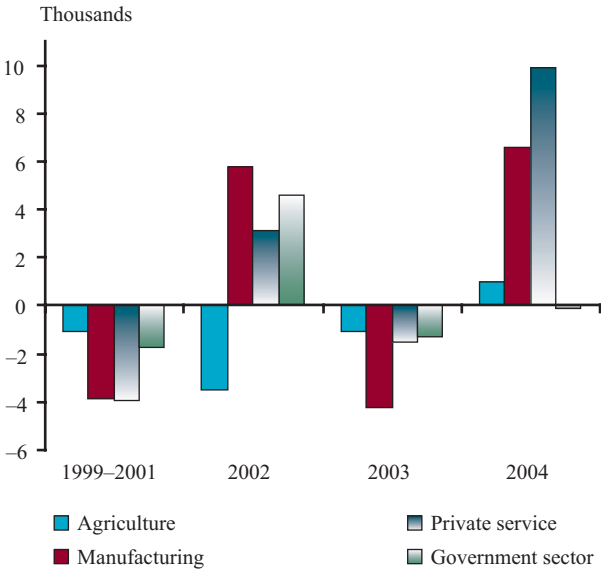
Other: own business terminated or suspended, seasonal job finished, left military service, child-care leave finished, family or financial status changes, other.

**Change December on December; 1999-2001 data are period averages.*

Chart 4.11

The number of unemployed by sector of their previous workplace 1999-2004

(Annual change in thousands)*



**Change December on December; 1999-2001 data are period averages.*

facturing, people were laid off in the largest numbers from the wood processing industry, machinery and equipment manufacturing. However, machinery and equipment manufacturing is neither unequivocally staff increasing nor staff reducing.[37] Along with the textile industry, the public sector also added little to the rise in unemployment, despite the fact that 2004 saw significant workforce reductions in the sector. This phenomenon required further study.

4. 5. 2 Increasing labour supply versus declining labour demand

In our assumption, the 2004 rise in unemployment was primarily due to a gradual decline in labour demand. The signs of decreasing labour demand are analysed in detail in Section 2.2 of this *Report*. The rise in labour demand came to a halt in the private sector, while the total hours worked and the numbers employed remained unchanged, and the number of vacancies fell in the past six months. In the wake of staff reductions in the public sector, employment further declined at the aggregate level of the economy. The fact that job loss prevails as a reason for unemployment also suggests a decline in labour demand.

However, it is also possible that rising unemployment is due to idiosyncratic factors in labour supply (such as the influx of school leavers into the labour market, the dissolution of regular military troops, raising the pensionable age and the appearance of foreign employment service agencies). These factors can be outlined as follows.

New labour market entrants: As discussed above, although unemployment rose quickly in the 15-24 age group and among graduates, other age groups

[37] According to the data revealed in the Labour Force Survey, headcount in machinery and equipment manufacturing dropped by 9,000 in the course of 2004, while the institutional labour statistics indicates increase by 6,000 people.

added roughly equal numbers to unemployment, and job loss was the most significant reason of all for the massive rise in unemployment. Moreover, the available data are insufficient to clarify if the reason for the rise in unemployment amongst fresh entrants lies in a stronger outflow from schools (increasing labour supply) or a decline in employment (decreasing labour demand).[38]

Rise in the pensionable age: Theoretically, the government decree raising the pensionable age limits the number of people leaving the labour market in even years, which may have increased labour supply and consequently pushed up unemployment in 2004. However, as discussed in the February 2005 issue of the *Report,* no such change can be shown in the number of applicants for old-age pension. This means that rise in the pensionable age probably affected unemployment in a similar way as in previous years.

Dissolution of regular troops: this affected approximately 3,000 people in 2004, and thus its impact was insignificant.

Foreign employment service agencies[39]: A sudden increase in unemployment in border counties provides indirect evidence of the impact of employment service agencies, and the facts actually substantiate this. However, the largest increase in unemployment was not recorded in the counties where this service is typically provided.

All things considered, we believe that although the aforementioned labour supply developments have also contributed to the 2004 rise in unemployment, none of them can be designated as the main reason for unemployment. In our opinion, the primary reason for a rise in unemployment was decrease in labour demand.

4. 5. 3 Is the recent rise in unemployment a novel situation? A comparison with developments in 2002.

In terms of future wage inflation pressure, one important aspect is whether over the long term unemployment will remain high relative to its earlier level (see Section 3). The available information provides insufficient points of reference to decide definitively if the rapid rise in unemployment is a transient or permanent phenomenon, as in the recent past, the rate of unemployment rose only once, namely in 2002.

The 2002 rise in unemployment was due to external cyclical reasons (as 2002 was marked most strongly by the global recession). As soon as recovery started, unemployment dropped nearly to its earlier measured low rates. This means that the increase in unemployment was temporary. With a view to this fact, it is worth comparing the current rise in unemployment with the developments seen in 2002.

In our opinion, the current rise in unemployment was triggered by a decline in labour demand, which can be ascribed to cyclical reasons.[40] According to the evidence provided in the above charts, the composition of the increase is also similar to 2002. In both cases, young age groups and people with secondary education significantly contributed to rise in unemployment, with unemployment also increasing rapidly among university graduates. In both cases, most of the unemployed had lost their jobs, significant numbers of them in manufacturing. In 2002, unemployment rose simultaneously with a rise in employment in the fields of retail, real property business, business

[38] International experience indicates that fresh entrants' employment is extremely sensitive to the cyclical fluctuations in labour demand.

[39] Foreign employment service agencies may contribute to the rise in unemployment in two ways. Directly, if the foreign labour they employ crowd out domestic employees from the labour market. Indirectly, if domestic labour is employed through agencies, and statistics are unable to capture this movement. As the Labour Force Statistics takes the latter effect into consideration, rises in unemployment may be related to employment service agencies only in the former way.

[40] Chart 2.21 in the main text reveals that unemployment increased in manufacturing in a manner similar to that seen 2002.

services and machinery and equipment manufacturing. This suggests that in the past, job reallocation, which in international experience entails permanent unemployment, had a transient effect. Overall, the current rise in unemployment may be traced back to similar reasons and is composed of similar constituents as two years earlier, and thus it might be considered as transient.

However, in our opinion, there are several factors impeding a rapid decrease in unemployment. Other economic sectors are currently less capable of absorbing released labour than they were in 2002. In market services in 2004 the number of unemployed rose nearly three times as fast as in 2002, which may be related to a decline in domestic demand for such services. In addition, the public sector absorbed 40,000 people in 2002, and released 20,000 in 2004.[41] We project that in the next few years the public sector will further reduce its staff, and thus contribute to the rise in unemployment over the longer term.

According to the theory of unemployment persistence, the longer a person remains without a job the lower the chance of finding a job is, primarily as the knowledge and experience gained in previous jobs becomes obsolete. As the current increase in unemployment exceeds the 2002 rise both in terms of in time and extent, this impact suggests the evolution of a far more persistent unemployment.

[41] The Labour Force Survey is in a slight conflict with our assumption of government behaviour, as it indicates 4,000 people released from the public sector 2002 and no contribution by the sector to the rise in unemployment. In our opinion, the public sector's overall impact on employment might have been positive in 2002 and negative in 2004.

4. 6 Stylised facts in consumer price statistics: durable goods

Within the framework of this series, price developments are scrutinised in individual groups of products or services. The February 2005 Report gave details of telephony, while this issue focuses on durable goods. First, the peculiar features of durable goods are described and the problems the statistical office faces during the measurement of changes in the relevant durable prices are outlined. Following this, developments in the prices of durable goods and the complete consumer basket are compared. As a first step in the international comparison, the weight of this product category is assessed in new versus old EU Member States, and finally, the correlation between the level of economic development and the relative price level of durable goods is examined.

4. 6. 1 Peculiar features of durable goods

In the MNB's system used for the purposes of analysis, tradables are products that are imported or compete with imported goods.[42] In the MNB's classification, tradables are divided into durables and non-durables. There is no clear dividing line in every case, for instance, in the Eurostat's classification a third group called semi-durables is also distinguished. In our opinion, a product can be considered as a durable good if it has the following features:

- It is consumed slowly;
- It represents high value, and some durables can even be considered as an investment;
- It has a secondary market; and
- It has an extremely small part not involved in international competition.

The MNB classifies the following sub-groups of the CSO among durables:

- Durable household goods: furniture (0.7 per cent) and heating and cooking equipment (0.7 per cent) representing the most significant share.
- Motor vehicles: new passenger cars (3.2 per cent).
- Durable entertainment facilities: television sets (0.5 per cent).

Currently, altogether durable goods account for 8.4 per cent of the entire consumer basket.

In some cases, the classification of a product on the basis of the above considerations is controversial. For instance, the item identified as 'holiday abroad' is classified among tradable goods in the MNB's system, because exchange rates and import prices play an important role in the development of their prices. Furthermore, with a view to the high value of the product, it could also be classified among durable goods, however, it is included among non-durables because it is consumed quickly.

Based on durability and secondary market, certain higher-value clothing items could also be classified among durables, however, textile and leather products may have a relatively significant component that does not face competition from imported products.

As a point of interest, let us mention the fact that in practice both the CSO and the Eurostat include used cars in the consumer basket. This is in conflict with the principle laid down in the national accounts statistics stipulating that every product can be recorded only once. Used cars comprise an exception primarily on account of their consid-

[42] *Manual to Hungarian Economic Statistics,* MNB 2002, p. 13.

erable market share. In the system used by the MNB, this item is classified among durable goods.

4. 6. 2 Issues related to measurement: changes in quality and the management of new goods

If the CPI were an actual indicator of the cost of living, it would measure changes in the expenditure required to reach a specific level of usefulness, which is not necessarily identical with a particular consumer basket. By contrast, the baskets used in both Hungarian and European practice are weighted with the base period, and thus the substitution effect does not hold. For this reason, consumer price indices theoretically overestimate changes in the costs of living.[43]

The so-called Boskin report[44] revealed further sources of bias in the calculation of the US CPI, and tackled, among others, the inadequate handling of quality changes and new goods in price statistics. In the case of durables, the above problems are of special significance, as they rapidly change and have short life-cycles. This is because statistical price changes may imply quality changes, and disregard for this fact biases estimates on the cost of living. Changes in the prices of newly introduced products are also difficult to detect, as they have no 'past' to form a basis of comparison.

The Central Statistical Office adjusts each single durable good for quality. However, 'in the event of change in the price of a product or service, it is difficult to define the extent of the actual price change as against the change justified by the modified product quality'.[45] For example, if both the price and the performance of a car change, the role of quality change in the price change can only be estimated. In the recent years the seasonal adjustment techniques of the Central Statistical Office have significantly improved.

A further source of bias is implied in the fact that in compliance with the Eurostat requirements, the CSO applies the weights measured in household statistics two years before the specific year reviewed in the relevant statistics. This is especially problematic in the case of durable goods, as their importance within consumption is constant increasing, which is, however, reflected in the consumer price statistics with a two-year delay. Another problem involved in this issue is the separation of the prices of certain durable goods from their related services. Currently, mobile telephones are not included in the Hungarian CPI, as they are presumably purchased together with subscription or pre-paid cards.

4. 6. 3 Changes in durable prices in the past decade and the major factors affecting prices

International competition characteristically limits rise in the prices of tradables. With a view to the fact that the ratio of durables which is not in competition with imported goods is quite small, this impact is especially strong. In the wake of rapid technological development, increased productivity has further limited price rises in this product category. While average inflation grew by 210 per cent between December 1994 and February 2005, tradable prices rose by 122 per cent, and durable prices by a mere 69 per cent during the same period.

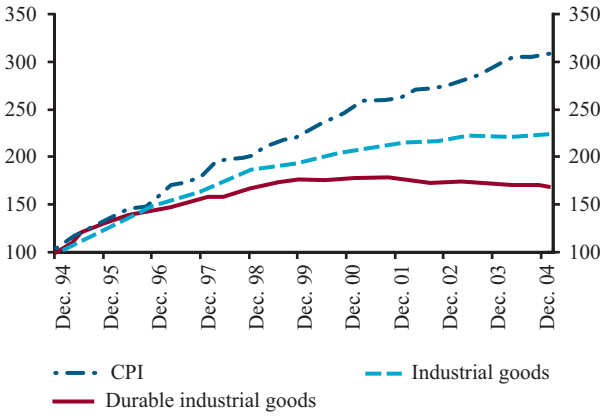
[43] A detailed discussion of this issue is given in: Ferenczi, Barnabás –Valkovszky, Sándor – Vincze, János : *What are Consumer Price Statistics Good for?* MNB Working Papers, 2000/5

[44] Gordon, Robert – James, National: The Boskin Commission Report and its aftermath, NBER Working Paper Series (No. 7759)

[45] Central Statistical Office: *The Statistical Method of CPI calculation,* Budapest, 2000, p.26.

Chart 4.12

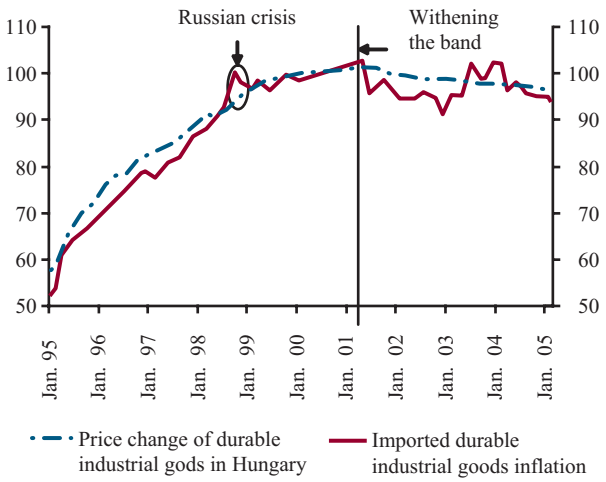
Comparison of the Hungarian CPI with the prices of tradables and durables
(December 1994 = 100)



Due to sharp international competition, it is reasonable to assume that, in forint terms, changes in the prices applied by Hungary's most important foreign trade partners provide a fair approximation to changes in durable prices. This indicator is called imported inflation.[46] Under a crawling peg regime, the imported and actual rates of inflation are expected to move more in alignment because the exchange rate path is predictable. In this study, price changes in the euro area, Hungary's most important partner, are considered as a basis for comparison. As over the entire period reviewed, durable price movements did not exceed 2 per cent, imported inflation resulted for the most part from exchange rate fluctuations. This assumption is substantiated in our chart. It is clear that in highly volatile periods, for instance during the Russian crisis, prices adjusted to exchange rate changes with some delay and presumably in a smoothed manner, and following the 2001 widening of the intervention band, co-movement between the two time series loosened.

Chart 4.13

Average of the 2000 price indices for durables and imported durables
(Average of 2000=100)



4. 6. 4 International comparison

Weights

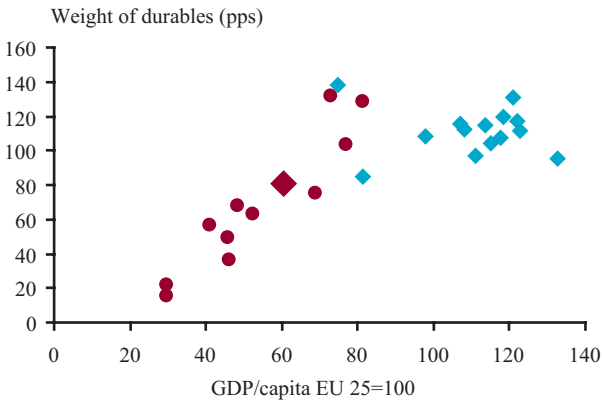
It is highly probable that a country's level of development determines the significance of durable goods within the consumer basket. In relatively less developed countries a larger proportion of the income is spent on 'subsistence goods', primarily food. Several durable goods, including the most significant one, i.e. cars, are purchased only if higher income is realised. Although durables are frequently purchased from loans, a precondition for borrowing is high income. The development of financial intermediation also affects the volume of durables purchased with loans. Based on the classification applied by Eurostat (coicop), for instance, in 2005 cars weigh[47] 3.1 per cent in Hungary, and 4.9 per cent in the EU-15 on average. Durable weights plotted against per capita GDP reveals that this correlation can be shown only up to a specific level of development. In the case of old EU Member States, indicated by blue points, per capita GDP no longer affects the weight of durables.

[46] Imported inflation is calculated by multiplying of the price index for durable goods with the EUR/HUF exchange rate change.
[47] This slightly differs from the weights used in the Hungarian price statistics.

Chart 4.14

Per capita GDP and the weight of durables in the consumer basket

(New Member States and Accession Countries are marked in red, the red diamond stands for Hungary. 2003 data.)



Price developments

In the New Cronos database of Eurostat, the data relevant to all EU countries are available only from 2001. Over a period of this length, no region-specific data can be obtained, and thus no more than the most essential data are disclosed.

Taking December 2000 as a basis, durable prices fell to the greatest extent in 5 new Member States. The largest price reduction was seen in Cyprus. In the EU-25, prices declined by 1.6 per cent on average. Within the Central European region, prices fell by 12.1 per cent in the Czech Republic, 3.7 per cent in Hungary and 1.2 per cent in Poland, while the largest price hike of the EU-25 was also registered in the region, namely in Slovenia. Opposite price movements are registered in the two accession countries. Prices fell more than average in this group of information processors[48], which is of minor account but still important on the basis of its role in the economy.

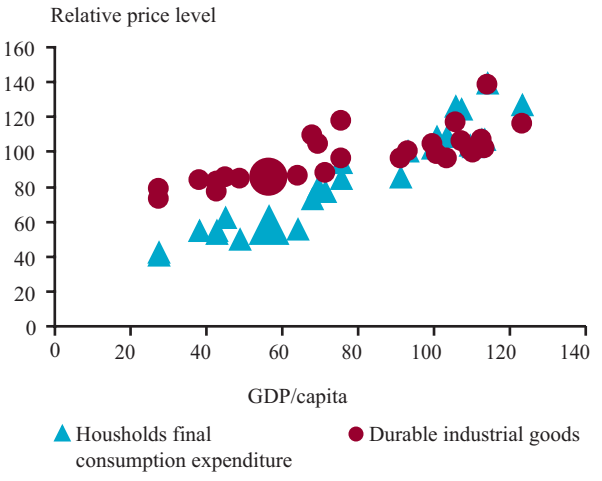
Relative price level

This analysis relies on the comparative price levels published by Eurostat. Expressed in the common currency, statistics indicate the average prices of the individual product and service categories in the individual member states.[49]

If the final consumption expenditure of households is considered as a consumer basket, a close connection can be shown between the countries' relative development and relative price levels. There are also other factors to significantly affect durable price levels. In our opinion, the most important ones are market size and the intensity of competition. With the exception of Italy, the relative price levels of the largest old economies of the EU remain below the average of the European Union. The relative development measured on the basis of per capita GDP is shown, as an explanatory variable, on axis x of the cloud depicted in our chart while the relative price levels of the complete consumer basket and of tradable goods are plotted on axis y as dependent variables. The rela-

Chart 4.15

Correlation between per capita GDP and relative price levels in 2003



[48] Full English name: Audio-visual, photographic and information processing equipment.
[49] In the ESA95 classification: average of the EU25=100.

tionship between development and the relative price level is obviously weaker in the case of durable goods.

This analysis shed light upon the fact that as durables are the goods most exposed to international competition, exchange rates are the primary factor to affect developments in their prices. Due primarily to lower incomes, in less developed EU Member States durables are insignificant in the consumer basket. In addition to the level of development, factors such as market size and the intensity of competition also have a considerable impact.

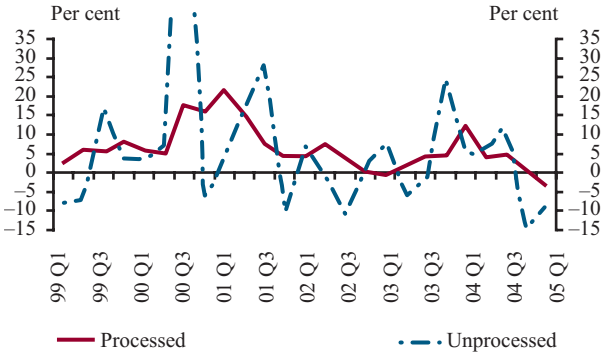
4. 7 Short-term effects of accession to the EU – food products

From 2004 H2 major disinflation has been seen in consumer prices. Disinflation is clearly reflected in nearly every constituent of the CPI, and more specifically, the most recent data reveal decline in the prices of tradables, food products and alcoholic beverages. While earlier deflation was characteristically recorded only in the prices of unprocessed food products, which are highly volatile, from early 2005 it is also seen in the case of processed food products, amounting to 12 per cent of the consumer basket.

Chart 4.16

Consumer prices of processed and unprocessed food products

(Seasonally adjusted annualised quarterly changes)



Disinflation in food prices may have resulted from the combined effects of several factors. One of the possible reasons may be a strengthening in the EUR/HUF exchange rate in early 2004. A stronger exchange rate directly triggers disinflation, as on relative terms imports of agricultural and processed food products become cheaper. In 2004, agricultural output, which was exceptionally good in the region, and the historically low growth rate of domestic household consumption gave further impetus to disinflation, as their coincidence may have resulted in oversupply in the market of food products.

In addition to the above reasons, further explanations may include accession to the European Union and the impacts of accession to the single market on domestic prices. The reason for this is that cross-border trade in other products had practically been liberalised by the time of accession, whereas in trade relationships with both the EU-15 and the ten accession countries the import of agricultural and certain food products was still limited by customs tariffs and quotas and their export was subsidised. When import restrictions were lifted, the Hungarian market was opened to cheaper foreign products and the range of domestic products could be widened. Directly (through lower import prices) or indirectly (through intensifying competition), these factors also prompted disinflation.[50]

The possible disinflationary/deflationary impacts of EU accession are substantiated in a Background Study prepared by the MNB on the expected effects of EU accession on food prices.[51] Based on a comparative analysis of the agricultural and food prices in the EU-15 and Hungary, the study points out that certain domestic agricultural producer prices actually closely approached or even exceeded the European Union's average producer prices in 1999-2000, and concludes that no sudden and significant rise is to be expected in consumer food prices following accession.

The above-specified likely impact of EU accession can be detected in foreign trade developments. At

[50] Theoretically, competition may also have been augmented by factors independent of accession to the EU, e.g. the appearance of certain new retail companies in the domestic market.

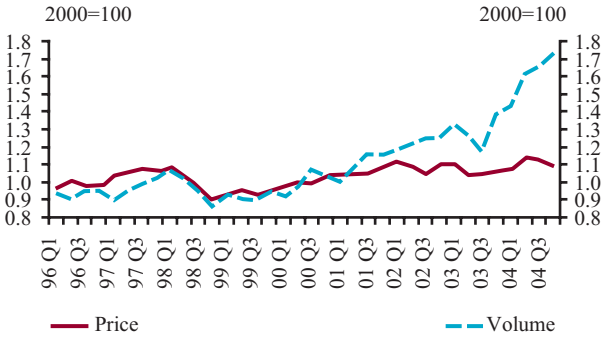
[51] See Ferenczi – Jakab – Nagy: Is there an inflation tension in Hungarian food prices? In: The expected effects of Hungary's accession to the EU. MNB Background studies. (available only in Hungarian language)

around the date of accession and subsequently, the volume of imported food, beverages and tobacco increased at an accelerating pace. In 2004 H2, import volumes were up more than 30 per cent on a year earlier.[52] Simultaneously, import prices fell (in forint as well as in euro terms), although only slightly. The observed developments are in line with the hypothesis that following accession to the EU, large volumes of relatively cheap goods flowed into Hungary.

Chart 4.17

Volumes and prices of imported food, beverages and tobacco

(Seasonally adjusted; average of 2000=1; EUR-based price index)

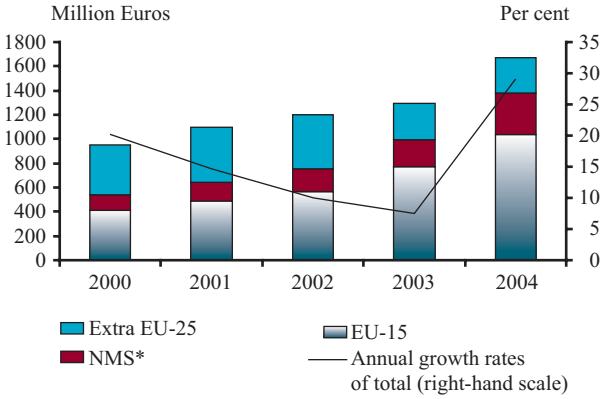


Accession to the single European market and the adoption of the European tariff system required the rearrangement of the national structure of trade in food. Foreign trade integration strengthened within the European Union, and this diverted trade relations from countries outside the European Union. Interestingly, rearrangement in food, beverages and tobacco imports started as early as 2003, and gained further impetus after EU accession. However, based on data available at current prices, this rearrangement is less obvious in the national structure of food, beverages and tobacco exports, and is of the opposite direction in the trade of all goods. The latter phenomenon is in keeping with the facts that the import of non-food products from the EU-25 had not been restricted prior to EU accession, and similarly to the international developments, in recent years the expansion of imports from the Far East prevailed in the national structure of total imports.

Chart 4.18

Import turnover in food, beverages and tobacco in a breakdown of country groups

(At current prices; EUR millions)



** NMS: New Member States.*

Most groups of food products clearly reveal accelerating (sometimes even conspicuous) increases in imports from the EU-25. In most food products with large trade turnover, the 2004 growth in imports significantly exceeded the average of import growths in the previous four years (2000-2003). Simultaneously, the relatively high level of Hungarian production costs and prices in comparison to other participants in the European market may be reflected in the fact that the country's net export position vis-à-vis the EU-25 deteriorated in nearly every group of food products. In addition to a regional intensification of trade in food, expansion in the export of food, beverages and tobacco from Hungary characteristically fell short of imports of such.

In terms of the effects on consumer prices, the pic-

[52] Although immediately before the EU accession, imports suddenly increased fast while customs tariffs and quotas were still applied, this may well have been part of the importers' market acquisition strategy.

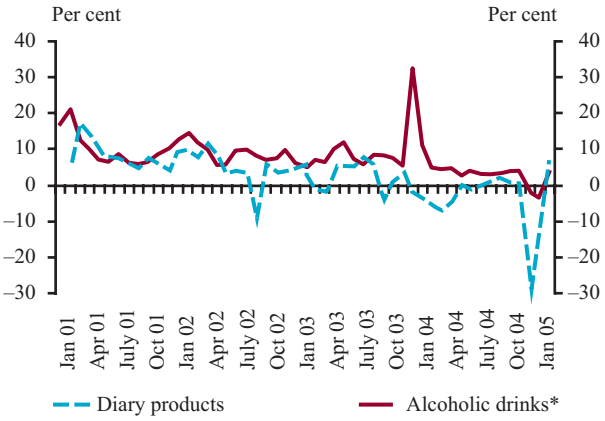
ture is far more complex, as not every product that underwent major import growth resulted in significant disinflation in the corresponding consumer price statistics. Thus, for instance, while the import of livestock from the EU-25 grew nearly six fold on a year earlier, on the basis of market information, it can be considered as a replacement for declining domestic production and did not cause change in either raw or processed meat prices. Similarly, increase in the import of goods may be linked with the shut-down of a domestic tobacco manufacturer.

Major changes in consumer prices – most probably due to the underlying impacts of cheap import goods that pin down prices – are seen in two product categories of consumer price statistics. These include milk and dairy products and alcoholic beverages. In both cases the rate of price hikes slowed down in comparison to the previous years, and in early 2005 it turned into deflation.[53]

Chart 4.19

Consumer prices of milk, dairy products and alcoholic beverages

(Annualised monthly growth rate of trend)



**The outstanding January 2004 growth rate resulted from a rise in excise duty.*

Table 4.13

Trade in certain food products with the EU-25*

(At current prices; EUR millions)

With the EU-25	Weight within the group "Food, beverages and tobacco" (based on 2004 turnover, percentage)	Growth rate of imports (percentage)		Net export position (EUR millions)	
		Average of 2000-2003	2004	Average of 2000-2003	2004
Livestock	4.8	16.2	492.0	60.0	9.6
Meat and meat products	7.8	53.0	98.5	408.9	346.8
Dairy products and eggs	5.4	25.6	24.9	-16.8	-48.6
Cereals and grain products	10.3	23.6	49.8	124.5	118.8
Vegetables and fruit	17.4	39.9	-1.5	226.5	214.8
Sugar. sugar products and honey	3.4	18.5	32.6	22.2	49.2
Coffee. tea. cocoa and spices	11.5	19.1	36.7	-26.7	-74.4
Beverages	7.1	29.9	68.7	33.0	-42.0
Tobacco and tobacco products	3.3	17.4	110.9	-6.5	-31.0

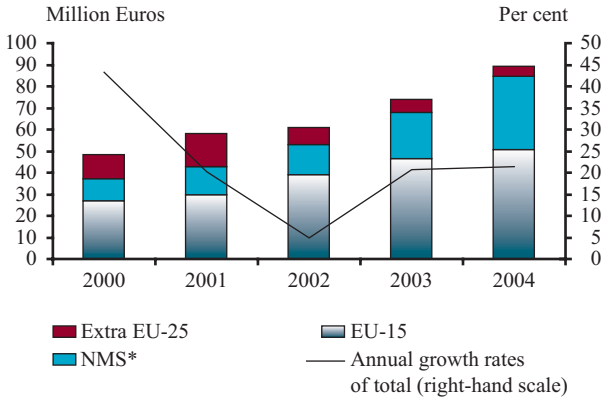
** The above major product categories give over 70 per cent of the total amount of products falling under 'food, beverages and tobacco'.*

[53] In the case of milk and dairy products, prices dropped at the beginning of 2004. This can be explained by the fact that in this product category imports from the EU15 had gathered speed already prior to the EU accession, from late 2003.

Chart 4.20

Import turnover in dairy products and egg, in a breakdown of country groups

(At current prices; EUR millions)

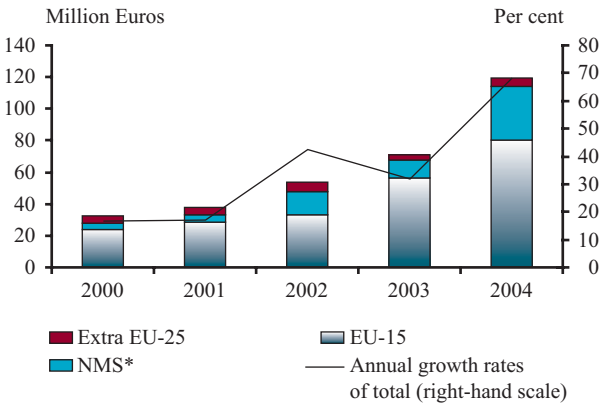


**NMS: New Member States.*

Chart 4.21

Import turnover of beverages, in a breakdown of country groups

(At current prices; EUR millions)



**NMS: New Member States.*

(Since May 2004, the seasonally adjusted consumer prices of milk and dairy products, which amount to 3.2 per cent of the consumer basket, have dropped by 2-3 per cent. Ferenczi et al. (2001) have already called the attention to the fact that domestic producer prices barely fall short of the average producer prices of the three largest European milk producing countries (Germany, France and the Netherlands). Prior to accession, in some new Member States prices were probably significantly lower than in Hungary.[54] Thus it was to be expected that through the appearance of lower foreign prices, the enlargement of the European Union would have a disinflationary impact in Hungary. Accordingly, 2003-2004 saw the value of imported dairy products increase by over 20 per cent once again. And the EU-15 and the New Member States increased their share to gain predominance in the national structure.

Within the category of alcoholic beverages, amounting to 6.4 per cent of the consumer basket, the price of beer fell in the largest measure, however, deflation could also be seen in other alcoholic product prices. This phenomenon is also explained by the cheap goods imported from the EU-15 and the New Member States. Based on anecdotal information, however, EU accession is not the only underlying factor to explain all these, other factors have also contributed to the appearance of cheap goods. Thus, for instance, the import of large volumes of canned beer from Germany may be explained by the fact that modifications in the German market regulation (the introduction of product fees) prompted participants to direct their sales towards other markets.

The above-described phenomena observed in the prices of and trade in agricultural and food products typically follow from trade integration. The effects that unfolded in 2004, including the strengthening of trade relations and price levelling within the European Union, as well as the diversion of trade from non-EU countries, are considered to

[54] This is supported by the fact that subsequently to the EU accession, in Poland dairy prices rose extremely fast, output and production capacities expanded, while the value of exports increased by nearly 85 per cent on a year earlier. Source: 'Poland: Dairy and Products', Global Agriculture Information Network (GAIN) Report, November 2004 (http://www.fas.usda.gov/gainfiles/200410/146117610.pdf). Similarly, in the Czech Republic and Slovakia, producer milk and butter prices, respectively, rose at a rate above average, which resulted from the increased export possibilities. Source: CNB Report on Inflation, January 2005, and 'First Experiences of the Slovak Agriculture Following EU Accession', report by the state secretary of the Slovakian Ministry of Agriculture, 28 January 2005.

be short-term outcomes of integration.[55] With regard to domestic consumer prices, levelling involves a single change in prices, affecting the rate of inflation merely as a transient effect, and remains within the confines of price levelling. However, price levelling is unlikely to have finished, thus the above-specified disinflationary/deflating impacts will be felt throughout the year of 2005.

[55] Regarding the effects of European trade integration, see e.g. Andre Sapir (1992), Regional Integration in Europe, *The Economic Journal,* Vol. 102, No. 415.

4. 8 Economic fluctuations in Central and Eastern Europe

In the post-socialist countries of Central and Eastern Europe, the mere existence of business cycles was a novelty for most citizens, observers and policymakers. Although spontaneous economic fluctuations intermingle with the recession resulting from economic transition and the subsequent recovery, it has become clear that despite robust improvement in profitability, growth remains uneven in these economies.

In a study recently published by the MNB[56], we endeavour to describe these fluctuations from the volatility, persistence and co-movements of various macroeconomic indicators.

The chart plots fluctuations in the Hungarian economy. Despite the short sample period, it is clear that growth in GDP and, even more, industrial output were far from being even. Examples include the 1995 overheating, the prolonged effects of the subsequent adjustment, the upturn that started in around 1998 (interrupted by the Russian crisis), and finally slowdown around 2001. However, the chart cannot display the manner in which total output and the diverse other indicators move together in the course of the individual fluctuations.

Overall, it may be said that in the countries of the CEE region economic fluctuations exceed those measured in developed economies, and in size they are similar to those observed in emerging markets. This especially holds to private consumption: citizens in transition countries spend much when they have high incomes and considerably cut their expenditures when their income is low. Co-movements between variables, however, show a high degree of similarity. An important exception is government consumption, which is characteristically pro-cyclical, in contrast with developed countries. This may suggest that the governments of the region make only restricted use of fiscal policies in smoothing economic fluctuations.

Fluctuation size – an international comparison

The following table shows volatility and auto-correlation in the cyclical component of output.[57] It is clear that fluctuations are larger in transition economies than in developed ones, however, persistence (auto-correlation) in fluctuations is very similar. Characteristically, the first two auto-correlations are significantly positive, while the third one is marginally significant.

However, it is important to see that the volatility indicators of developed countries differ considerably in the earlier and later periods of the sample. In the 1990s, economic activity was far more balanced than earlier. For this reason, the indicators of transition economies should rather be compared with the early period.

Cyclical features in Central and Eastern European Countries, CEECs

Our major findings are the following:

- Consumption is highly volatile;
- Government expenditures are pro-cyclical;
- Investment is extremely volatile;
- Net exports are counter-cyclical;
- Imports are far more pro-cyclical than exports;

[56] Péter Benczúr - Attila Rátfai: *Economic Fluctuations in Central and Eastern Europe - The Facts,* MNB Working Papers 2005/2.

[57] A cyclical component is the deviation of the individual variables (in this case real GDP and industrial output) from the trend. Trend can be interpreted in several ways. The results included in this study result from the Hodrick-Prescott filter.

• Exports are most pro-cyclical and persistent in open economies;
• Labour market variables are highly volatile;
• Employment follows output with delay, and is frequently pro-cyclical;
• Real wages are for the most part pro-cyclical;
• Productivity is typically pro-cyclical and coincidental;
• Private sector credit is pro-cyclical and characteristically delayed;
• Consumer prices are counter-cyclical and characteristically delayed;
• The cyclical nature of inflation is not beyond doubt, its volatility relative to output is low;
• Net capital flows characteristically lead the cycle, are pro-cyclical and have low persistence;
• Nominal interest rates are characteristically smooth and persistent;
• Nominal exchange rates are more persistent than real exchange rates.

Our analysis reveals that the features of fluctuation are similar in Croatia, the new EU Member States and developed countries. The largest differences are disclosed in the case of Bulgaria, Romania and Russia, especially in terms of the labour market, price and exchange rate variables. With regard to the other countries, the indicators of cyclicality give a highly homogeneous picture in many cases.

Chart 4.22

Cyclical components of Hungarian GDP and industrial output

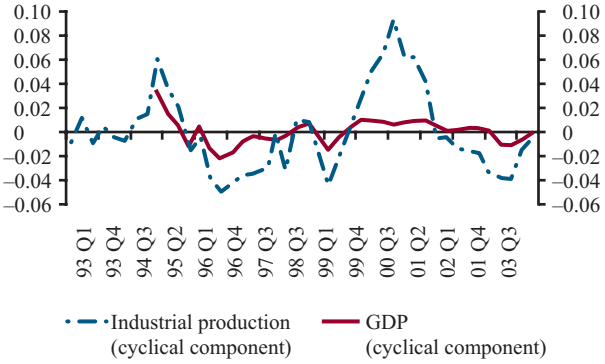


Table 4.14

Fluctuations in an international comparison

GDP (real)						
Group	Period	Volatility	Autocorrelation			
			1.	2.	3.	4.
Developing	1978-1995	3.10	--	--	--	--
	1993-2002	2.89	0.74	0.48	0.18	-0.11
CEECs	1993-2002	2.29	0.63	0.42	0.23	0.1
New member states	1993-2002	1.77	0.57	0.39	0.21	0.08
Hungary	1993-2002	1.06	0.67	0.32	0.03	0.13
G7	1960-1989	1.50	0.74	0.52	0.30	0.11
	1993-2002	0.82	0.75	0.54	0.27	-0.02
EU	1960-1989	2.12	0.52	0.31	0.18	0.06
	1993-2002	1.06	0.68	0.48	0.25	0.02
Industrial output (real)						
Group	Period	Volatility	Autocorrelation			
			1.	2.	3.	4.
Developing	1978-1995	4.15	0.55	0.34	0.13	-0.08
	1993-2002	3.91	0.59	0.36	0.13	-0.12
CEEC	1993-2002	4.18	0.67	0.41	0.20	-0.06
New member states	1993-2002	3.44	0.65	0.39	0.14	-0.13
Hungary	1993-2002	3.93	0.87	0.68	0.41	0.13
G7	1960-1989	3.39	--	--	--	--
	1993-2002	1.94	0.79	0.50	0.18	-0.15
EU	1960-1989	3.07	--	--	--	--
	1993-2002	2.34	0.63	0.36	0.12	-0.18

4. 9 Effects of the Gripen Agreement on 2006–2007 macroeconomic data

In 2004, Hungary concluded (and then amended) an agreement with Sweden for the ten-year lease and purchase of 14 fighter aircraft. Pursuant to this agreement, the Hungarian state will obtain ownership of the fighters in 2016, following an uninterrupted payment of HUF 15 billion per year as a rental. Despite this fact, the fighters will arrive in Hungary during 2006 and 2007.

As the GDP statistics, the balance of trade on the current account and the ESA deficit of general government use an accrual-based methodology, they will settle accounts with the total expenditure related to the aircraft upon their physical delivery. Consequently, while in the cash-based (GFS) fiscal statistics additional expenditures will be recorded in even distribution between 2002 and 2016, the total amount of expenditure will appear all at once in the 2006-2007 deficit of the external equilibrium and the ESA-based deficit of the budget. Thus, irrespective of the fundamental developments, in this period the indicators of macroeconomic stability will be unfavourably biased.

A similar accounting methodology was followed in 1993, when in the framework of the financial settlement of earlier Russian debts to Hungary, the Russian party paid part of them by the supply of 28 MIG-29 service aircraft. This supply worth USD 800 million raised the value of 1993 imports, government consumption and the current account deficit on a one-off basis.

The fighters expected to arrive in Hungary in 2006 represent HUF 90 billion, in other words, as a result of the one-off effect of the delivery of these fighters, the ESA-based government deficit, used as an indicator in the convergence programme, will increase by 0.4 per cent of GDP.

Imports and government consumption measured in GDP will also increase in a similar extent, which, assuming an unchanged GDP growth rate, will raise domestic consumption and result in higher deficit in the net GDP-based exports.

In the current account the customs-based trade in goods will increase by approximately EUR 360 million, i.e. the current account deficit and the external borrowing will be 0.4 per cent of GDP higher than the 'value following from fundamental developments'. In 2007, delivery will represent approximately HUF 110 billion, thus the one-off deficit increasing effect may be 0.45 per cent of GDP.

As, irrespective of fundamental developments, the above calculations suggest a one-off deficit rise in the equilibrium indicators projected in this Report, they are disregarded in the projections. However, in contrast with the cash-based GFS-deficit, where this expenditure is recorded in line with rental payment in an even distribution for 14 years continuously, in the SNA-based borrowing requirement of the government sector, this expenditure will be recorded for 2006-2007.

Boxes and Special topics in the Report 1998–2005

Appendix

Appendix

May 2005*

* *Recurring analyses are not listed here.*

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