Quarterly Report on Inflation

November 2003

Prepared by the Economics Department of the Magyar Nemzeti Bank

Ágnes Csermely, Head of Department

Approved by: István Hamecz, Managing Director

Published by the Magyar Nemzeti Bank

Krisztina Antalffy, Head of Communication Department

1850 Budapest, Szabadság tér 8–9.

www.mnb.hu

ISSN 1419-2926

The new Act on the Magyar Nemzeti Bank, enacted by Parliament and effective as of 13 July 2001, defines the primary objective of the Bank as the achievement and maintenance of price stability. 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, carries out a comprehensive review of the expected development of inflation once 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 viewpoints. Those viewpoints include an assessment of prospective economic developments, the inflation outlook, money and capital market trends and risks to stability.

In order to provide the public with a clear insight into the operation of monetary policy and enhance transparency, the Bank publishes all 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 the anticipated developments in inflation and the macroeconomic events underlying the forecast.

Starting from the November 2003 issue, the Quarterly Report on Inflation focusses more clearly on the MNB staff's expert analysis of expected inflation developments and the related macroeconomic events. The forecasts and distribution of uncertainties surrounding the forecasts reflect the expert opinion of the Economics Department. The forecasts of the Economics Department continue to be based on certain assumptions. Hence, in producing its forecast, the Economics Department assumes an unchanged monetary policy stance. In respect of economic variables exogenous to monetary policy, the forecasting rules used in previous issues of the Report are applied.

CONTENTS

SUMMARY

Changes in the structure of the Report

Starting from this issue, the Quarterly Report on Inflation rests more clearly on the expert analyses and forecast prepared by the Bank. The Statement of the Monetary Council will no longer form an integral part of the Report. The central projections for real economic developments and inflation as well as the uncertainties surrounding the forecast (including the inflation fan chart) reflect the views of the Economics Department. Our forecasts continue to be based on assumptions: we assume an unchanged monetary policy stance (unchanged exchange rate and official interest rates), as in previous Inflation Reports. In respect of economic variables exogenous to monetary policy (the euro/dollar exchange rate, oil prices, certain regulated prices, etc.), the forecasting rules used in previous Reports are applied.

Downward trend of inflation reversed in 2003 H2

The trend of disinflation reversed in the third quarter of 2003. This reversal was reflected in virtually all items of the consumer price index relevant for monetary policy, including tradables, market services, and processed foods. In respect of items exogenous to monetary policy, a number of contradictory trends were seen. While the above-average increase in regulated prices raised the index, the development of prices for motor fuel, market energy and unprocessed foods was a factor reducing the index, although only temporarily. According to the most recent data for October, unprocessed food prices have increased strongly.

This interruption of the disinflation trend can be ascribed to a combination of factors. First, on the cost side growth in unit labour costs did not weaken, but rather increased slightly, as the hitherto fore slow wage adjustment by firms stopped. Second, household consumption expenditure continued to increase, albeit at a slower rate, exerting upward pressure on prices. Third, the substantial depreciation of the forint's nominal exchange rate in the summer may have contributed significantly to higher inflation in tradables prices.

Finally, an increase in inflation expectations may also have been a factor behind the rise in inflation, probably due in part to the nominal exchange rate depreciation in the summer, as noted, and in part to the fiscal measures expected for next year.

Inflation will continue to rise next year

In our current forecast, under the current conditions consumer price inflation rises strongly up to mid-2004, remaining above 6% for the most part of the year. Next year's changes to the taxation system, driven by fiscal policy, are the primary factor behind this development. This is reflected by the fact that, eliminating the direct impact of fiscal policy, net inflation indicators remain practically stable over the entire forecast period.

Although next year's increase in inflation will be dominated mainly by fiscal policy measures, market price inflation is not expected to decline significantly either. The assumption of an exchange rate for the forint which is weaker than in 2002 and the first half of 2003, coupled with the very slow decline in private sector wage inflation, will also impede the resumption of disinflation.

Minimal changes in the inflation forecast compared to the August Report

In the central projection, consumer price inflation stands at 5.1% in December 2003 and 5.9% at end-2004. This is slightly lower and slightly higher than the forecast published in the August *Report* for 2003 and 2004, respectively.

Our current forecast for 2003 year-end inflation would have been considerably lower, due to the low CPI figures for the third quarter and the short-term impact of

the stronger exchange rate assumption. In October, however, there was an surprisingly strong rise in unprocessed food prices, which had been expected but occurred with somewhat of a delay. Hence, on the whole our forecast for December 2003 was reduced only marginally.

The increase in the inflation forecast for 2004 can be ascribed to the fact that the roughly 3% stronger exchange rate (compared to the assumption in the August *Inflation* Report) was insufficient to offset the projected growth in domestic demand (now forecast to be stronger than previously assumed) and the greater-than-expected inflationary impact of political measures related to indirect taxation. The effect of changes in indirect taxes caused an approximately 0.5 percentage point increase in the inflation projection for end-2004.

Disinflation may continue in 2005, if the 2004 tax hikes do not boost inflation expectations

Inflation may quickly drop below 5% in early 2005, as the price index will no longer reflect the one-off price impact of higher VAT. This is based on the assumption that next year's high rate of inflation will not be built into inflation expectations. Thereafter, inflation is expected to slowly decrease in the course of 2005, reaching 4.0% by the end of the year as a result of a combination of various factors.

First, unit labour cost growth in the private sector will slow, while growth in household consumption expenditure will hardly rise at all. As our assumption calls for a constant nominal exchange rate, its impact will be felt indirectly through the labour market (lower wage increases) rather than directly. Other factors exogenous to monetary policy also appear to reinforce a continuation of disinflation: oil price futures are falling, and over the long run accession to the EU may reduce inflation in unprocessed foods.

Upward risks to inflation are significant in 2005

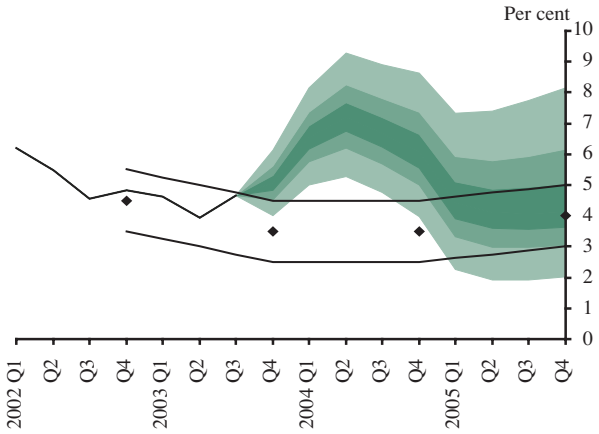
The central projection is surrounded by significant risks. The uncertainties are distributed symmetrically in 2004, while the balance of risks is weighted to the upside in 2005. The risks to the central projection in 2004 results from two main factors. First, the effect of the rise in indirect taxes which is seen to increase inflation expectations and second, the impact of EU accession on food and tradables prices, which is seen as a downside risk.

With regard to 2005, the uncertainty mainly reflects the upside risk associated with inflation expectations. After several decades of high inflation in Hungary there is a significant risk that the assumption underlying the central projection, namely that the additional increase in prices stemming from the rise in indirect tax in 2004 will not have an impact on inflation and wage inflation, will prove incorrect, i.e. that inflation expectations will indeed grow stronger. This would contribute to inflation in 2005, both directly through prices of products, and indirectly through developments in wage growth.

Inflation fan chart

In respect of the probability of meeting the previously announced targets, inflation at end-2004 will almost certainly be above the upper limit of the target band, as even the central projection exceeds it considerably. The probability of inflation rising above the upper limit of the target band at end-2005 is also very significant. However, this is explained by the upside risks, as the central projection for end-2005 coincides with the target.

Fan chart of the inflation projection



Economic activity to pick up gradually

Economic growth is estimated to be 2.9% in 2003. According to our forecast for 2004, growth in domestic demand slows, but overall economic growth picks up to 3.2%, associated with a recovery in external demand. This *Report* presents our first forecast for 2005, in which economic growth is projected at 3.6%, assuming continuation of the fiscal adjustment programme.

Our forecast for growth reflects the combined effect of several factors. The size of Hungary's export markets paints a different picture than in the August *Report*—external demand is lower, due to a revision of earlier data. This revision has had a negative effect on our forecast for both whole-economy exports and manufacturing investment. Nevertheless, the assumptions for external demand and output reflect our view that the global economic cycle may have passed through its trough. The chances for a recovery in external demand in 2003 are now favourable—economic conditions are expected to be stable over the medium term.

By contrast, our forecast calls for domestic demand to grow somewhat more slowly than in previous years, due to the fiscal adjustment and the resulting modest increase in consumption. Each of the factors noted above increases the likelihood of higher net exports relative to this year. Despite the slower increase in exports than observed under the economic conditions in the mid-1990s, Hungary will be able to increase its market share, although the extent of this increase will likely be considerably more modest than in the past.

Fiscal consolidation continues

Our forecast projects the fiscal contraction of demand to continue in 2003–2005, the extent of which will be practically identical to that expected in the August *Report*. However, fiscal contraction of demand in 2004 will occur in a different pattern than previously postulated, which will increase the projected rate of economic growth. This is due to the fact that, based on the draft Budget submitted to Parliament, the fiscal policy stance vis-à-vis the household sector will be more lax compared to earlier information, which will be offset by a stronger increase in indirect taxes.

The contractionary impact of fiscal policy on demand is expected to take a different structure in the individual years. Fiscal policy will likely contract demand in part through higher taxes and in part through lower current expenditures, while government fixed investment is expected to continue. Based on the Government's Preaccession Economic Program (PEP), we assume the restriction to be proportionately distributed between current and capital expenditures in 2005.

Corporate investment picks up, while household and public investment slows

Our forecast for fixed capital formation has only been slightly altered compared to the August *Report*. Over the short term, the forecast for manufacturing investment has been revised down, reflecting greater uncertainty. The forecast for corporate

sector investment, on the other hand, has remained essentially unchanged. Over the medium term, the lower level of external demand and a higher real exchange rate path relative to the August assumption will likely restrain growth in business sector investment. However, the most recent decline in uncertainty surrounding external demand reduces the risks to the projection for fixed investment.

Next year's fiscal adjustment may affect household income and subsidies on housing loans equally; we therefore do not expect dwelling investment to increase further. According to actual data for 2003 H1, government investment was lower than previously forecast, and consequently we have lowered our forecast for the year as a whole. Fiscal adjustment affects fixed investment more strongly in 2004 than assumed in the August *Report*, and therefore the forecast for the coming year has also been reduced, although we still expect positive growth in public investment next year.

Household consumption slows down further

Consumption expenditure growth slows gradually at the forecast horizon. The underlying reason for this is that slow economic growth and the unfavourable development of household expectations are the dominant factors in 2003, while the effect of fiscal adjustment is considerable in 2004. Consumption expenditure may pick up slightly in 2005, due to a rise in private wages and the assumed unchanged direct tax burden.

Conflicting developments in inventories

In the light of actual inventory stock data for Q2, the question remains unanswered as to whether the figures reflect a cyclical upturn or other developments. The picture of business activity painted by output data and forecast would be consistent with an increase in purchased stocks, while the level of finished goods stocks would be declining. By contrast, half of the robust rise in manufacturing inventories was contributed by the increase in finished goods inventories, according to the most recent data.

Prospects for output

Hungary's slightly deteriorating competitiveness, which is due to weaker-than-forecast external demand and the stronger-than-expected real exchange rate, restricts the opportunities for a medium-term expansion of manufacturing output. By contrast, manufacturing output and value added both rise robustly towards the end of the forecast period.

The slowdown in consumption expenditure growth and the lower path of external demand relative to the earlier assumption both are reflected strongly in market services value added. Consequently, the increase in market services value added will likely be more modest than in previous years.

Slow nominal wage adjustment to lower inflation

In 2003 Q3, the labour market continued to show few signs of effective adjustment of private sector wages to disinflation, expected since end-2001. Instead, short-term trends indicate a reversal of the earlier tentative adjustment process—the fall in wage inflation stalled in manufacturing, with the index edging up slowly in market services. The slow rate of nominal wage adjustment can be explained both by robust domestic demand and the higher inflation expectations seen since the middle of the year. However, all this does not mean a complete absence of corporate adjustment in manufacturing: firms continued to adjust by slowing the utilisation of labour, i.e. reducing the number of hours worked and laying off staff.

Uncertainty in labour demand prospects

Although there have been significant negative shocks to economic activity—the external slowdown, increases in the minimum wage and strong real appreciation—the unemployment rate has only increased by a modest 0.5 percentage points over the last two years in Hungary.

Moreover, according to evidence from the latest data the rising trend in unemployment broke off in early 2003, with the rate falling slightly in Q2-Q3. This trend reversal was caused by an increase in employment, which was due to the dynamic rise in the numbers employed in market services and the government sector.

However, for a number of reasons it is difficult to determine whether the expansion of employment is lasting or not, and whether the decline in unemployment will continue in the coming quarters. First, other information available on labour demand (mass redundancies, unfilled positions) provides no clear evidence of a recovery in the stagnant private sector labour market. Second, we assume that the drop in government sector demand for labour, envisaged in next year's Budget, may counter any further increase in employment.

Wage inflation may slow gradually

We assume that this year's slowdown in nominal wage adjustment in the private sector is transient. Wage inflation is expected to moderate from 2004. Assuming that the increases in indirect taxes do not lead to higher inflation expectations, the gradual decline in wage inflation should continue in 2005.

In respect of manufacturing, we expect the earlier process of slow nominal adjustment to continue, despite the pick-up in external economic conditions, making it possible for the sector to improve its profitability, which has suffered since 2000. In respect of market services, we expect the impact of increases in the national minimum wage implemented over the past two years to gradually taper off. Simultaneously, consumption demand (which will be considerably weaker compared to previous years) leads to a slowdown in productivity growth. In our forecast, the combination of these factors will prevent firms from relaxing their wage policies. Consequently, wage inflation in market services is projected to stagnate and decline slowly from 2004.

On the whole, in our central projection private sector wage inflation will be 9.2% in 2003, 8.3% in 2004 and 6.5% in 2005. There is however a significant risk of higher-than-projected wage growth towards the end of the forecast horizon due to the risk of increasing inflation expectations.

Improving productivity boosts corporate competitiveness

Measured on the basis of manufacturing ULC, domestic firms' competitiveness has improved in 2003. However, this has essentially resulted from the nominal depreciation of the exchange rate relative to 2002, while domestic unit wage costs have actually risen faster than in Hungary's competitors. Assuming a constant nominal exchange rate, we expect a slight real depreciation of the exchange rate in 2004, as a result of a slowdown in manufacturing wage inflation and stable growth in productivity. In 2005, the rate of increase in wage costs is forecast to be broadly the same as in Hungary's competitors, and thus the real exchange rate remains stable.

External balance expected to improve with fiscal consolidation

Hungary's external balance deteriorated markedly during 2002–2003, with the current account deficit nearly doubling as a ratio of GDP. The main factor behind this development was fiscal expansion, which directly implied a deterioration of the public sector net borrowing requirement and indirectly contributed to the drop in households' net savings. In 2001–2002, this trend was still offset by the corporate sector lowering its external borrowing due to declining investments.

The slight improvement in the position of general government has lowered the external financing requirement of the national economy in 2003. However, households' net savings continued to fall precipitously on account of the fiscal measures. Simultaneously with this, and in conjunction with the external business cycle, the corporate sector's demand for fixed capital formation has increased. These factors resulted in a deterioration in the external balance in 2003.

Our forecast is for the general government borrowing requirement to fall further in 2004–2005, reflecting our assumption on the fiscal policy stance. However, the financing capacity of the private sector also continues to fall, as a combination of a pick-up in corporate investment and an increase in the net lending of households. This is because, resulting from its structure, the 2004–2005 fiscal contraction of demand contributes to the increase in household sector financing capacity. As the

deterioration in the private sector's position will be smaller than the fiscal contraction of demand in 2004–2005, the external financing requirement will fall slightly overall.

External balance with reinvested earnings included

The current forecast examines for the first time the prospects for the current account balance on the basis of a methodology which includes non-residents' reinvested earnings in Hungary. Although as an effect of this methodology, which will be effective from 2004, the current account deficit will be higher by some 2% of GDP, this will be financed automatically, given that reinvested earnings raise foreign direct investment as well.

Rising yields in developed markets

The gradual disappearance of deflation risks and the improving outlook for economic activity dominated international capital market events in 2003 Q3. Yields began to rise on international bond markets as early as the summer. Shares prices in Europe responded particularly optimistically to news suggesting an end to stagnation. Currently, market participants expect the ECB to raise its key policy rate by around one-half per cent in the coming six months.

Global indicators of risk showed investors' increasing willingness to take on risks, and required yields fell globally. By contrast, the fiscal problems facing the accession countries, particularly Poland, the likely postponement of entry into ERM II and EMU as well as the Yukos affair all influenced investor sentiment negatively in Central and Eastern Europe. Hungary's risk perception also suffered, which can be interpreted as a response to signs suggesting the country's increasing external and domestic imbalance.

Uncertainty in the forint market

In the period August–October the forint exchange rate was characterised by much more stability and slow appreciation compared to June–July when it exhibited greater volatility. However, indicating the fragility of the situation, the indicators of market uncertainty began rising again in September, and the gradual appreciation observed from August ended in mid-October. Movements in short-term yields were influenced basically by expectations related to possible interest rate decisions by the MNB, which in turn were affected by the Bank's communications and exchange rate movements. Turbulence in the bond market at end-October led to massive exchange rate depreciation and the rapid build-up of expectations of an official rate increase. The Bank purchased bonds in a quick response to liquidity problems facing the government securities market. Our open market operations, which were different from the general routine proved successful—yields began to fall and later the exchange rate reversed its course. However, an official interest rate increase in the near future is still priced into short-term yields.

Current account deficit financing

The current account deficit continued to rise in the first two months of the third quarter, and the outflow of direct investment capital resumed. Purchases by non-residents of government securities financed the deficit throughout most of the period. The maturity profile of non-residents' government securities holdings shifted towards medium-term maturities (2-4 years), resulting in a decrease in the average. The wave of government securities sales at end-October and early November led to a decline of some HUF 30 billion in non-resident holdings.

Rising bond yields

Long-term government securities yields rose relative to early August; however, this rise was confined strictly to the wave of sales at end-October and early November. The yield curve changed little in the preceding period. The portion of the yield rise, which appears to be lasting, may be traced to the increase in the risk premium required by investors. The larger part of perceived risks may be linked primarily to country and region-specific sources, its horizon extending to 2 to 3 years. Presumably, it is not closely related to expectations of a slight postponement of EMU entry. Inflation and exchange rate expectations did not materially influence yield movements in the period.

Summary table of projections

(Percentage changes on a year earlier unless otherwise indicated)

	2002	2003		2004		2005
	Actual data[1]	Projection				
		Aug.	Current Report*	Aug.	Current Report*	Current Report*
CPI						
December	4.8	5.2	**5.1**	5.8	**5.9**	**4.0**
Annual average	5.3	4.6	**4.6**	6.5	**6.6**	**4.2**
Economic growth						
External demand	–0.6	3.9	2.0 – **2.3** – 2.5	4.6	3.0 – **4.5** – 6.0	4.5 – **5.8** – 7.9
Manufacturing value added	2.8	2.3	0.9 – **1.6** – 2.2	5.3	3.9 – **5.2** – 6.2	4.5 – **6.4** – 8.2
Household consumption[2]	10.5	7.6	7.4 – **7.8** – 8.2	1.0	1.1 – **2.3** – 3.5	1.0 – **2.6** – 4.0
Gross fixed capital formation	7.2	4.3	2.2 – **3.6** – 4.1	4.1	2.3 – **3.9** – 5.4	2.4 – **4.5** – 6.8
Domestic absorption	5.4	5.7	6.0 – **6.6** – 7.2	1.8	1.0 – **2.3** – 4.0	1.5 – **3.0** – 5.0
Exports	3.8	4.0	2.6 – **3.4** – 4.0	7.5	5.9 – **7.5** – 8.8	5.2 – **8.1** – 10.8
Imports	6.1	7.1	7.0 – **8.0** – 9.5	6.0	4.0 – **6.0** – 9.0	4.5 – **7.0** – 10.5
GDP	3.5	3.2	2.7 – **2.9** – 3.0	2.7	2.7 – **3.2** – 3.7	3.0 – **3.6** – 4.2
Current account deficit						
As a percentage of GDP	4.0	5.8	6.1 – **6.4** – 6.7	5.2	5.5 – **6.0** – 6.5	4.6 – **5.3** – 6.0
EUR billions	2.8	4.2	4.5 – **4.7** – 4.9	4.0	4.3 – **4.7** – 5.1	4.0 – **4.5** – 5.0
Current account deficit including reinvested earnings						
As a percentage of GDP	6.1	n.a.	8.0 – **8.6** – 9.2	n.a.	7.2 – **8.1** – 9.0	6.1 – **7.3** – 8.5
Fiscal stance						
Demand impact	4.3	(–0.5)	(–0.1) – **(–0.4)** – (–0.7)	(–1.0)	0.4 – **(–0.8)** – (–1.9)	1.1 – **(–0.8)** – (–1.9)
Labour market (private sector)[3]						
Wage inflation	12.6	9.3	9.0 – **9.2** – 9.7	8.1	7.8 – **8.3** – 10.8	5.5 – **6.5** – 9.0
Employment	(–0.2)	0.0	(–0.3) – **0.0** – (0.2)	0.4	0.3 – **0.7** – 1.3	0.5 – **1.1** – 2.0
ULC-based real exchange rate in manufacturing[4]						
Annual average	9.4	(–0.5)	0.3 – **0.8** – 1.5	(–2.6)	(–1.5) – **(–1.2)** – (–0.2)	(–1.5) – **(–0.8)** – (0.5)
Q4	5.6	(–7.1)	(–3.6) – **(–3.2)** – (–2.7)	0.3	(–1.5) – **(–1.3)** – (0.0)	(–1.0) – **(–0.2)** – (1.0)

** The central projection is marked in bold, surrounded by the lower and upper limits to the projection. There is a 60% probability that the value of the variable falls within the range defined by these limits.*

[1] *GDP annual data published by the CSO on October 21, 2003.*

[2] *Household consumption expenditure*

[3] *Average for manufacturing and services.*

[4] *Positive values denote appreciation.*

The forecast of MNB compared to other institutions

	2003	2004	2005
CPI (December on December, in %)			
MNB[1]	5.1	5.9	4.0
European Commission (October 2003)	4.9	5.1	3.8
Reuters survey (October 2003)	5.1	5.5	3.6
CPI (average annual growth, in %)			
MNB[1]	4.6	6.6	4.2
Consensus Economics (September 2003)[2]	4.7	5.5	n.a.
European Commission (October 2003)	4.6	6.1	4.1
IMF (September 2003)	4.7	5.5	n.a.
Reuters survey (October 2003)	4.6	6.1	4.1
GDP (annual growth, in %)			
MNB[1]	2.9	3.2	3.6
Consensus Economics (September 2003)[2]	3.0	3.5	n.a.
The Economist poll (November 2003)	2.6	2.9	n.a.
European Commission (October 2003)	2.9	3.2	3.4
IMF (September 2003)	3.0	3.5	n.a.
Reuters survey (October 2003)	2.9	3.2	n.a.
Current account deficit (EUR billions)			
MNB[1]	4.7	4.7	4.5
Consensus Economics (September 2003)[2]	4.0	4.0	n.a.
Reuters survey (October 2003)	4.4	4.2	n.a.
Current account deficit (as a percentage of GDP)			
MNB[1]	6.4	6.0	5.3
The Economist poll (November 2003)	6.1	5.3	n.a.
European Commission (April 2003)	6.2	6.1	5.8
IMF (September 2003)	5.7	5.4	n.a.

[1] *MNB forecasts are conditional on certain policy variables (forint exchange rate, interest rate, fiscal policy) and some exogenous variables (US dollar exchange rate, oil prices) and thus cannot be directly compared to other forecasts.*

[2] *Consensus Economics Inc. (London) Based on a survey by "Eastern Europe Consensus Forecasts". The balance of payments forecasts indicated in the survey are given in US dollars, which the MNB translated using the EUR/USD cross exchange rate prevailing in September 2003.*

1 Inflation

1.1 Past developments

1.1.1 Inflation in 2003 Q3

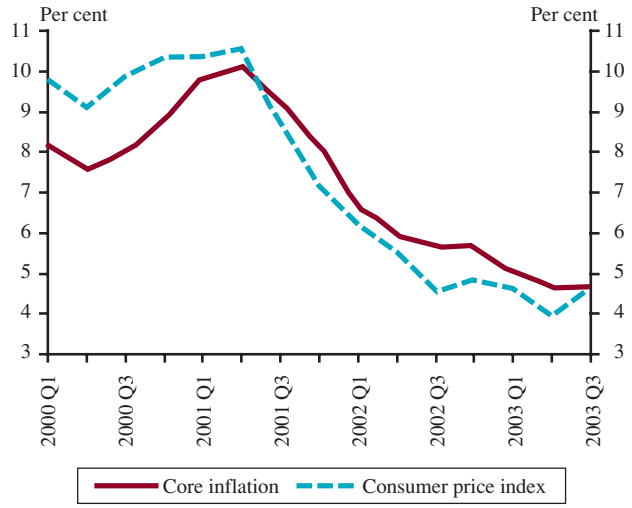
In terms of the consumer price index (CPI), the most significant development of the period under review was an interruption in the declining trend in inflation, which had been uninterrupted since June 2001, when the inflation targeting regime was adopted.[1] The 4.9% rise in CPI recorded in October 2003 represents a return to the high rates characterising the first half of 2002.[2]

Although certain technical factors (i.e. the base effect) contributed to the summer rise in inflation, for the most part the 0.8 percentage point increase in the CPI on the previous quarter was due to underlying economic developments relevant to monetary policy.

Chart 1-1

CPI and core inflation

(Percentage changes on a year earlier)



The quarter-on-quarter core inflation index reflects the acceleration of inflation especially clearly. Both the officially quoted Hungarian Central Statistical Office (CSO) core index and the index excluding tobacco unambiguously indicate a renewed pick-up in price rises, which actually started in the previous quarter. This process is evidently not confined to any specific product range, as it holds true for every endogenous group falling within the scope of monetary policy.

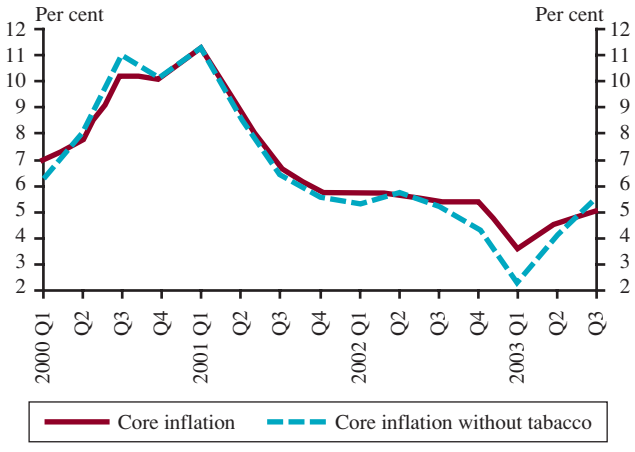
In respect of products excluded from the core inflation indicator, special emphasis should be laid on the technical impact of the effect of the abolition of the television subscription fee no longer being part of the base, noted earlier, as this factor alone increased the price index by 0.2 percentage points in July.

The price index for motor fuels, however, decreased. In the beginning of 2003 Q3 this was due for the most part to last year's high base, as rising oil prices calculated in forint tended to increase petrol prices in that period. During September and October, however, the decline in motor fuel prices could already be measured on a monthly level.

Chart 1-2

Quarterly core inflation

(Annualised and seasonally adjusted quarterly changes)



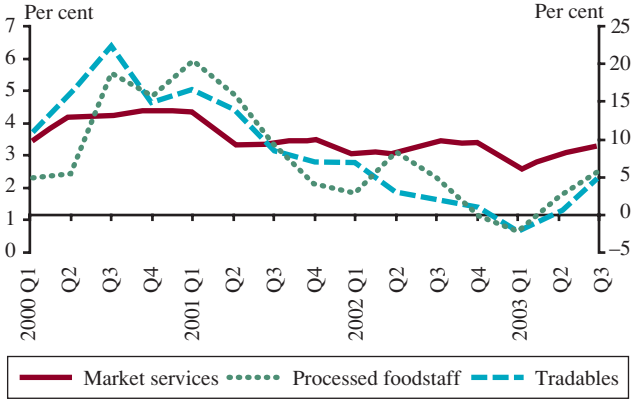
Unprocessed food prices behaved differently in the period up to September as compared to October. In 2003, after the sharp increase in prices early in the

[1] The October 2003 inflation figure was received upon closing this analysis. The new information is reflected in the analysis of facts (Section 1.1) as well as the short-term projection (Section 1.2).
[2] Prior to October 2003, the last time the CPI reached or exceeded 4.9% was in October 2002 (temporarily) and consistently throughout the first half of 2002.

Chart 1-3

Changes in the main constituents of core inflation

(Annualised and seasonally adjusted quarterly changes)



year, average unprocessed food prices essentially declined through until September (disregarding seasonal factors). In October, however, the prices of unprocessed food products suddenly jumped almost 4% in the space of a single month mainly due to vegetable and fruit prices. This phenomenon was observed throughout the region as well.

Turning to regulated prices, special attention should be paid to per-minute telephone rates, more specifically mobile telephone tariffs (included among regulated prices merely for technical reasons), as sharp market competition led to price cuts in September. According to the October statistics, however, this process has come to an end.

1.1.2 PREVIOUS INFLATION PROJECTION VERSUS THE ACTUAL RATE

In the August *Report* we projected a 4.8% rise in the CPI and core inflation of 4.5% for 2003 Q3. Although in terms of actual figures the difference from the projection is insignificant, the two indices changed in opposite directions: while the overall CPI was 0.1 percentage points lower than projected, core inflation was up by the same amount.

The major explanatory variables in the projection changed roughly in keeping with the assumptions of the August *Report*. At the same time, the projection error of core inflation remained within the customary margin of error, and thus has no implications for the current projection. Similarly, the higher-than-forecast CPI for motor fuel is due to the fact that oil prices calculated in forint were higher than assumed on the basis of our technical rules.

Table 1-1

August projection versus actual inflation

	Weight %	Actual Q3 data	August projection	Difference	Impact of the difference on overall CPI
		On a year earlier		Percentage points	
Core inflation	68.1	4.6	4.5	–0.1	–0.1
Unprocessed food	6.3	0.1	3.5	3.4	0.2
Motor fuel and market-priced energy	6.2	2.9	2.2	–0.7	0.0
Regulated prices	19.4	6.9	7.0	0.1	0.0
CPI	100	4.7	4.8	0.1	0.1

Table 1-2

Major assumptions in the August projection versus actual data for 2003 Q3

	August projection	Third-quarter actual data
Wage inflation in the private sector	9.1	9.0*
Unit labour cost (ULC)	4.9	5.2*
Household consumption	6.9	7.4*
EUR/HUF exchange rate	264.0	259.7
EUR/USD exchange rate	113.8	112.5
Brent oil price (USD/barrel)	28.1	28.5
Brent oil price (HUF/barrel)	6,517.0	6,581.4
Imported inflation of tradables**	1.0	0.7

* *Estimate.*

** *Annualised month-on-month growth rate.*

However, the situation is different with regard to the projections for unprocessed food prices. The reason for the figures falling short of the projections is that the summer drought did not immediately drive prices up as was expected by us as well as other market analysts. This shock, however, then appeared in the October price index.

1.2 Inflation projection

In this *Report*, we have raised the projection for end-2004 inflation to 5.9%, up 0.1 percentage points on the August *Report*, while the December 2005 projection is 4.0%. The 2004 projection exceeds the upper limit of the target band, while the 2005 figure remains in the middle. One important underlying factor for the projected disinflation in 2005 is our assumption that the 2004 increase in indirect taxes will not lead to higher inflation expectations and stronger wage inflation.

We expect inflation to rise sharply until mid-2004, remaining above 6% for most of next year and then declining towards year-end. These assumptions are based on changes governed by fiscal policy. This is supported by the fact that the net inflation indicators excluding the direct effects of fiscal policy remain broadly flat over the entire forecast horizon, if the base effect caused by the low 2003 Q2 price index is disregarded. The direct technical effect of value added tax (VAT) increase will increase inflation by approximately 1.4 percentage points in 2004. Next year, the increase in excise duties will steadily push inflation up, driving the rate up by roughly 0.8 percentage points by year-end. The rises expected in regulated prices on the basis of implemented and announced measures will generate extra inflation primarily in the first half of 2004, but remain roughly equivalent to the rate of inflation nearly in the second six months.

Although next year's rise in inflation is due primarily to fiscal policy measures, inflation cannot be expected to decrease even if market processes alone are consid-

Table 1-3

Central projection for the CPI *(On a year earlier, in per cent)*

	Weighted	Actual data				Projection							
		2003				2004				2005			
		I.	II.	III.	IV.	I.	II.	III.	IV.	I.	II.	III.	IV.
Core inflation	68.1	5.0	4.7	4.7	4.7	6.1	6.7	6.4	6.1	5.0	4.4	4.1	4.1
Unprocessed food products	6.3	–0.8	–2.3	0.1	3.4	5.1	7.6	9.4	5.1	2.8	3.4	5.7	6.3
Motor fuel and market energy	4.7	12.5	3.7	2.9	1.8	–0.3	3.3	–0.1	–0.6	–1.5	–1.2	–0.7	–0.3
Regulated prices	19.4	3.0	3.9	6.9	7.5	10.6	9.9	8.7	8.5	4.9	5.0	4.8	5.0
CPI	**100.0**	**4.6**	**3.9**	**4.7**	**5.0**	**6.5**	**7.2**	**6.7**	**6.1**	**4.4**	**4.1**	**4.1**	**4.1**
Annual average		**4.6**				**6.6**				**4.2**			

	December 2003	December 2004	December 2005
Core inflation	4.7	5.7	4.0
Unprocessed food products	4.2	4.3	5.1
Motor fuel and market energy	2.9	–0.4	0.4
Regulated prices	7.1	8.8	5.0
CPI	**5.1**	**5.9**	**4.0**

Table 1-4

Differences between the current and the August projection

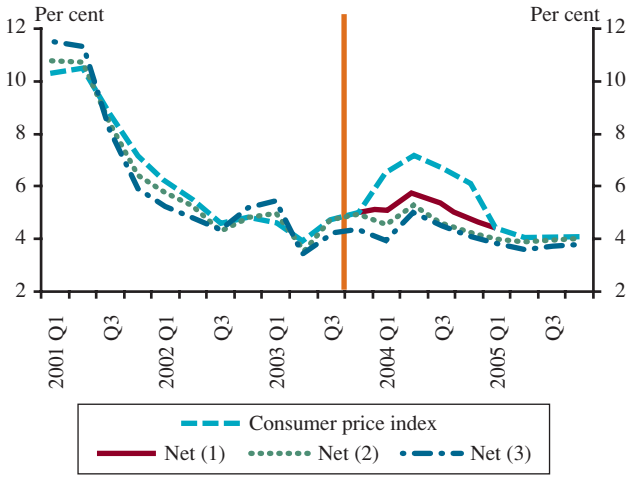
(Projections for December in the respective year)

	August projection		Current projection		Difference (between the current and the August projection)	
	2003	2004	2003	2004	2003	2004
Core inflation	5.0	5.5	4.7	5.7	–0.3	0.2
Unprocessed food products	3.8	6.8	4.2	4.3	0.4	–2.5
Motor fuel and market energy	2.2	–1.2	2.9	–0.4	0.7	0.8
Regulated prices	7.3	8.6	7.1	8.8	–0.2	0.2
CPI	**5.2**	**5.8**	**5.1**	**5.9**	**–0.1**	**0.1**

Chart 1-4

CPI and various net indicators*

(Annual change)



* *Net inflation indicator (1) presents the CPI excluding the direct effects of VAT increase. This is directly comparable to the net inflation specified in the August Report. Net inflation indicator (2) approaches the CPI excluding the direct effects of VAT increase as well as excise duties. In addition to the above two factors, net inflation indicator (3) also excludes regulated prices.*

ered. Disinflation is impeded by the weaker forint exchange rate (compared to last year's assumption) and in the first half of this year, household consumption growth and the exceedingly slow decrease in private sector wage inflation. In addition to this, the moderate price rises recorded in the first half of this year will provide a low base for next year's inflation.

After a very slow decline in the second half of 2004, inflation may suddenly drop below 5% in early 2005, as the one-off price impact of the VAT increase will drop out from the price index. Subsequently, inflation is expected to decline slowly or stagnate in the course of 2005. The reason for this is that in our baseline forecast the assumption is that next year's rapid price rises will not be incorporated into inflation expectations.

Table 1-5

Consumer price index and various net indices for 2004*

	Q4 2004	2004 yearly average
Consumer price index	6.1	6.6
Net (1)	4.7	5.2
Net (2)	4.3	4.7
Net (3)	4.1	4.4

* *Annual change in per cent.*

1.2.1 SHORT-TERM PROJECTION

Inflation is expected to stand at 5.1% at the end of the year, and average 5.0% in 2003 Q4. Both figures are broadly in keeping with our previous projection. In comparison to the low inflation of the immediately preceding period (2003 Q3), the anticipated increase in the CPI is due primarily to a rapid rise in unprocessed food prices and stagnation in core inflation.

In an annual comparison, core inflation is expected to remain essentially the same in 2003 Q4 compared to the preceding two quarters. The reasons for this include two conflicting developments. While inflation is expected to rise for the majority of products relevant to monetary policy, this development may be offset by lower increases in prices of alcoholic beverages and tobacco products.

On the other hand, a stronger rise is anticipated in the prices of products exogenous to monetary policy. Due mainly to the summer drought, unprocessed food product prices may continue to rise during the autumn. Vegetable and fruit prices, in particular, are expected to increase.

There are several factors behind the higher Q4 inflation in regulated prices. The most important of these include rises in rates for electricity, district heating and coach transport.

1.2.2 LONGER-TERM PROJECTION FOR 2004

Inflation is expected to rise to 5.9% by end-2004. This projection is 0.1 percentage points higher than in the August

Table 1-6

Major assumptions in the current and the August Report

	August projection		Current projection			Difference (between the current and the August assumptions)	
	2003	2004	2003	2004	2005	2003	2004
Wage inflation in the private sector*	9.3	8.1	9.2	8.3	6.5	*–0.1*	*0.2*
Unit labour cost*	5.1	3.9	5.2	4.6	3.0	*0.1*	*0.7*
Household consumption expenditure*	7.6	1.0	7.8	2.3	2.6	*0.3*	*1.3*
EUR/HUF exchange rate**	264.0	264.0	255.5	255.5	255.5	*–8.5*	*–8.5*
EUR/USD exchange**	113.8	113.8	116.9	116.9	116.9	*3.1*	*3.1*
Brent oil price (USD/barrel)***	28.1	25.3	28.9	25.5	23.8	*0.8*	*0.2*
memo: Brent oil price (HUF/barrel)	*6517.0*	*5881.0*	*6320.9*	*5572.0*	*5193.4*	*–196.1*	*–309.0*
Imported inflation of tradables prices****	1.0	1.0	1.0	1.0	1.0	*0.0*	*0.0*

* *Yearly average.*
** *Average for October.*
*** *Based on futures prices.*
**** *Annualised month-on-month growth rates.*

forecast. Our projection for 2004 annual average inflation has also been raised by 0.1 percentage points, to 6.6%.

The reasons for the upward revision of the 2004 inflation projection include several factors. The assumption of a stronger forint exchange rate than in August suggests lower inflation, but macroeconomic developments, the implemented and planned fiscal policy measures and the draft acts submitted to Parliament may result in higher aggregate inflation.

Monetary policy (exchange rate) assumption

The forint exchange rate has been stronger in the past two months than assumed in the August *Report*. In line with our forecasting rule, in this projection the average EUR/HUF 255.5 exchange rate in the month immediately preceding the closing date of the *Report*, i.e. in October, is applied for the entire forecast horizon. This exchange rate is roughly 3% stronger than assumed in the previous *Report*.

A stronger forint exchange rate directly affects the prices of tradables, in particular durables and certain food products. In our assumption, the stronger exchange rate drives the overall CPI down by 0.4 percentage points by end-2004 as compared to the August projection.

Macroeconomic developments

Primarily as a result of the planned personal income tax (PIT) cuts, household disposable income may be higher than previously assumed, and this may trigger an acceleration in household consumption. Increased aggregate income may, in turn, be conducive to price rises. Due to the fact that both the real exchange rate and demand would be higher than projected in the August *Report,* over the next twelve months the inflation differential between market services and tradables may increase to exceed the current difference.

In this *Report*, growth in 2004 unit labour cost throughout the private sector is virtually the same as projected in the August *Report,* but with a different internal structure. Although growth in manufacturing ULC may be

Table 1-7

Decomposition of changes in the CPI projection for December 2004 against the August report*

Factor	Impact on the December 2004 inflation assumption (percentage point)
HUF exchange assumption	**–0.40**
Household consumption	0.00–0.10
ULC	0.00–0.10
Inflation expectations	0.00–0.10
Macro-economic processes total	**0.00–0.10**
VAT increase	–0.20
Increase in excise duties	0.50
Increase in the producer price of natural gas	0.10
Other tax measures	0.10
Regulated goods	0.05
Fiscal measures total	**0.55**
Other exogenous processes	**–0.10**
Aggregate inflation impacts	**0.10**

* *Approximate calculations; in terms of year-on-year indices.*
** *Oil price, EUR/USD exchange rate, price development of unprocessed food products, etc.*

lower than previously assumed, in the field of market services it is likely to be higher. As domestic wage costs play a defining role in the inflation of service prices, ULC growth, which is overall in line with our previous forecast, but is in a somewhat different structure may lead to higher inflationary pressures next year.

Ultimately, a rise in inflation expectations may also lead to an increase in inflation. According to Reuters' monthly survey of analysts, end-2004 inflation expectations have increased by roughly 1.5 percentage points since publication of the August *Report*. Obviously, for the most part they reflect the one-off price impact of indirect tax increases, but, to a lesser extent, they may also point to genuine inflation processes. TÁRKI's quarterly survey of corporate managers also indicates an increase in inflation expectations for next year.

In comparison with the August *Report*, not even the combined influences of the changes observed or forecast in household consumption, labour market processes and inflation expectations can counter the effects of the stronger exchange rate.

Processes exogenous to monetary policy

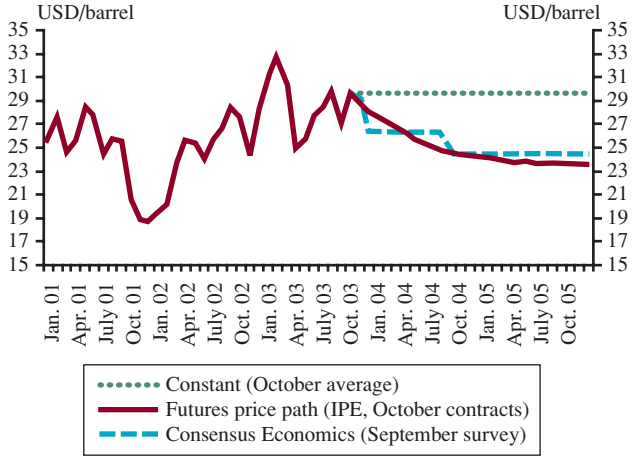
As a result of the combined effects of several factors, we currently project lower annual prices for unprocessed food products in 2004 relative to the August *Report*. Most recent data show that prices in this product group jumped sharply in October, rising by roughly 4%. For the most part this is attributed to the delayed results of the very dry summer. For this reason, we view the recent steep price rises as merely transient in terms of longer-term developments.

Moreover, we believe that accession to the European Union may reduce inflation in unprocessed food prices. Currently, imports of a number of EU products are subject to customs tariffs beyond a certain quantitative limit, but upon accession this obligation will be removed. In addition, Hungary's alignment with the European regulatory environmental and support policies may facilitate convergence of producer prices over the medium term. This is a factor of major importance because some key Hungarian food product prices are higher than average prices prevailing in the European Union.[3]

Despite stronger EUR/HUF and EUR/USD exchange rates, we have raised the projection for inflation in motor fuel and market energy prices due to rising oil futures prices.

Chart 1-5

Alternative oil price assumptions



Fiscal policy

The overall inflationary impact of fiscal policy has increased moderately compared to the August *Report*.[4] Although our projection of the fiscal demand impact remains practically unchanged, its internal structure differs. Thus, household disposable income and consumption demand may be higher than previously assumed. In 2004, fiscal policy will result in inflationary pressure primarily by increasing indirect taxes and the prices of regulated goods in excess of the rate of inflation.

Pursuant to the relevant draft act submitted to Parliament, in 2004 significant changes are expected in value added tax rates as well as the products and services subject to such tax.[5] The lowest VAT tax rate will increase from 0% to 5%, the preferential rate from 12% to 15%, while the standard rate will remain 25%. Based on official information, it was also assumed that the highest VAT rate (25%) would be applied to electricity, but that other types of household energy (gas, district heating, coal, wood, etc.) would continue to be taxed at the preferential rate (15%) from 2004. In certain aspects, the draft act deviates from the fiscal policy plans taken as a basis in the August *Report*.

As detailed in the previous *Report,* the impact of tax changes directly affecting prices can be differentiated from the indirect primary effects. Upon quantification

[3] Decline is expected primarily in milk and dairy product prices. Prices for eggs, potatoes, vegetables, wheat and pork are already approaching the corresponding European prices. Major upward price convergence can be expected only in the case of certain fruits. Barnabás Ferenczi, Zoltán M. Jakab, Nóra Nagy B: 'Do Food Prices in Hungary Conceal Inflationary Tensions? An analysis on the potential effects of EU entry on food prices', MNB Background Studies, 2002/1.

[4] The cut-off date for fiscal policy measures was 5 November 2003.

[5] Draft Act T/5478 on the amendment of acts on taxes, contributions and other budgetary revenues.

of the direct impact, producers and merchants were assumed to completely pass tax increases on to consumers and likewise fully reflect tax cuts in their prices. The August *Report* forecast a 1% price rise as a result of the direct primary impact of the announced VAT changes. However, in contrast to the original fiscal policy plans, the draft does not call for a cut in the standard VAT rate from 25% to 23%. This factor alone raises the direct impact by roughly 0.8 percentage points. In contrast to the original plan, the standard rate has not been applied in respect of neither passenger transport nor district heating, reducing the direct impact by nearly 0.4 percentage points. Thus, the direct primary effects of VAT changes may amount up to 1.4 percentage points on aggregate.

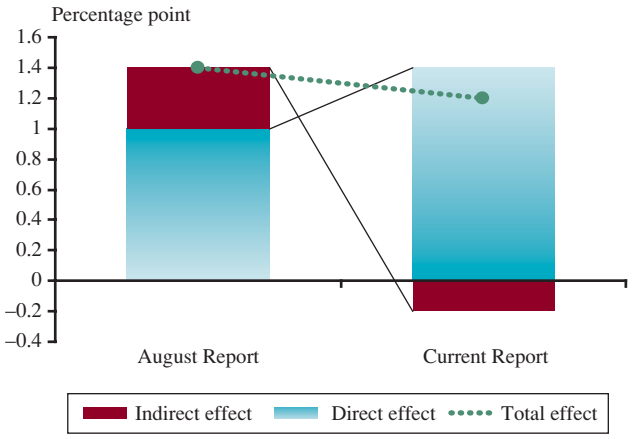
Nevertheless, it could easily occur that economic agents only incorporate part of the additional tax burdens and reductions resulting from taxation changes into their prices.[6] The resulting price changes were referred to as the indirect primary effect of VAT changes. In the August *Report* this effect was anticipated at 0.4%. However, as compared to the fiscal policy plans, according to the draft no reductions in VAT rates are to be made.[7] This means that either there is no indirect impact at all or it will reduce price rises. In our estimation, economic agents may pass on approximately 80% of VAT rises to consumers. Consequently, the indirect primary effect of VAT increase might be around –0.2%.

As a result of the roughly 1.4% direct and –0.2% indirect effect, the aggregate primary impact of VAT changes may amount to 1.2 percentage points. Thus, in addition to their general effects on inflation, the statutory changes affecting VAT may increase the overall price level by this measure. Further eventual pass-through effects of the one-off price increase, in other words, the second-order or overall impacts of VAT changes on the equilibrium are discussed in the section on the uncertainty factors of the central projection.

According to recent information, excise duties are to be increased at a higher rate than expected in the August projection.[8] As rates will increase both per thousand cigarettes and as a percentage of the retail price, average excise duties will rise by over 35%. Consequently, tobacco products may cost over 20% more on average.[9] As the August *Report* relied on the announced fiscal policy plans, it took into account only roughly one-half of this increase. The additional tax increase will boost inflation by roughly 0.3 percentage points as compared to the August forecast.[10]

Chart 1-6

Decomposition of the total impact of the 2004 VAT changes in the August versus in the current *Report*



Previous projections did not expect an increase in the excise duty on alcoholic beverages. Based on the bill submitted, the ensuing price rises have been quantified: at the CPI level they are expected to amount to 0.1–0.2 percentage points.

The August *Report* expected, however, a 2.4 forint reduction in the excise duty on diesel oil. Failure to implement this reduction may increase our earlier projection by nearly 0.1 percentage points.

On the whole, the aggregate excise duty hikes in 2004 may boost the CPI by roughly 0.8 percentage points. This adds 0.5 percentage points to the price increase projection in the August *Report*.

As of 15 October 2003, natural gas prices increased by 16.4% on average for non-residential consumers. Different rates were applied to different consumers: while certain economic agents pay merely 2% more, rates for others were increased by up to 40%. In our view, primarily firms in market services with little or no foreign competition can pass such increased energy costs on to their consumers. The average increase in natural gas prices can be put at 35% in the service sector. In our model calculations it was assumed that, due to the increased energy costs, some of the economic agents affected will raise their consumer prices even before the end of 2003. On aggregate, an increase in the consumer price of natural gas may boost the CPI up by roughly 0.2 percentage points by next autumn, while

[6] For excise duty increases, we assumed a complete pass-through.
[7] With the exception of books, which have been reclassified from the preferential to the lowest tax bracket.
[8] Draft Act T/5478 on the amendment of acts on taxes, contributions and other budgetary revenues.
[9] We assumed a stable producer price level, so that there would be full pass-through of excise duty increase.
[10] Although the tax increase is effective as of January 2004, it will take time to exhaust stocks, and so new prices are expected to appear in shops only in March. Moreover, stocks are expected to completely exhaust within about seven months. Consequently, higher prices can show up completely in price statistics only at the end of autumn, at the earliest.

the December price index may be 0.1 percentage points higher.

In the course of 2004, new types of taxes will be introduced, which will result in higher inflationary pressure, in part indirectly through increases in producer/service provider prices, and in part directly at the consumer level.

The energy tax will drive piped gas and electricity prices up in the non-household sector. In our estimation, piped gas will cost roughly 5% more, while electricity will cost 1.5% more as of 1 January 2004 for the companies affected.

The system of excise duty will also be reshaped. Elimination of the excise duty on coffee as of 1 May 2004 could reduce the CPI by as much as 0.1%. However, we expect merchants and service providers to apply only part of the tax cuts in their prices.

As of 2004, a registration fee for vehicle commissioning will replace the excise duty imposed on the purchase of passenger cars. If the new taxes levied per quantitative unit are compared with earlier excise duties, it can be established that introduction of the new registration tax represents an upward trend in prices. The introduction of registration tax and energy tax may increase prices by roughly 0.1 percentage points on aggregate in 2004.

We continue to apply assumptions based on our standard rule for regulated goods for which we have no official information. This means that wherever no solid information is available on future price changes, the average net inflation rates of the products and market services concerned, i.e. approximately 8.5% in 2004, are identical.

The fees charged for sewage, passenger transport and postal services will, however, increase at a higher rate. In respect of sewage, the introduction of an environment fee will primarily affect service providers, who will, in turn, pass on this extra charge to consumers. We project an increase of roughly 10% in passenger transport prices. In this respect, the assumption of a moderately higher increase than that resulting from the rule-based approach is justified by the fact that, according to the submitted draft, consumer price subsidies will be cut in certain categories in 2004.[11]

Lower-than-average rises are expected in the prices of household piped gas and telephone services. In the case piped gas, no further increases are assumed in the projection in addition to the 5.4% rise in the beginning of 2004, while the sharp competition that has evolved in the mobile telephone services sector supports the assumption of a further drop in prices next year.

1.2.3 LONGER-TERM PROJECTION FOR 2005

Our central projection relies on the assumption that the 2004 changes in the VAT and other indirect taxes will not be reflected in wage and price expectations, as market participants will interpret them as a one-off price rise. If this proves to be the case, inflation is expected to stand at 4.0% at end-2005, with a 4.2% annual average in 2005. This would represent a major decline compared to the projections for 2004.

The fiscal policy measures to be taken in 2004 will have a major base effect. Of the 5.9% inflation expected by the end of 2004, 1.2% will be attributable to the VAT rise, and a further 0.4% to the increase in the excise duty, considered as a one-off rise, in addition to the tax increases required by EU accession. For this reason, a sharp decline is expected in the price index in the beginning of 2005, and the inflation rate may average 4.4 % in 2005 Q1.

In the course of 2005, inflation is expected to fall by a further 0.3% as a result of several factors. While the assumed acceleration of household consumption in 2005 as compared to 2004 suggests higher inflation, exchange rate effects will be more indirect during this period, manifested in lower wage inflation rather than in product market channel, as we assume that the nominal exchange rate remains constant at the October 2003 level. Thus we expect slightly slower growth in labour costs in 2005, provided that next year's increases in indirect taxes do not lead to higher inflation and wage expectations. In addition to labour market factors, the assumed contractionary fiscal policy for 2005—based on the PEP—also facilitates disinflation.

Disinflation is also expected in terms of product groups exogenous to monetary policy. Our projection for inflation in motor fuels and market energy prices has been revised downwards as the futures oil prices applied in the projection fall continuously through 2005. As a result of Hungary's accession to the EU, a moderate increase is anticipated in the prices of unprocessed food products.

Prices of regulated goods are expected to grow more slowly than in previous years. The fundamental reason for this is that, in the case of products for which no official information is available, the same rate of inflation has been assumed for regulated products as for market services, and this is expected to be lower in 2005 than in 2004.

On aggregate, the macroeconomic outlook, the expected fiscal policy stance and the processes exogenous to monetary policy all suggest a decline in inflation in 2005.

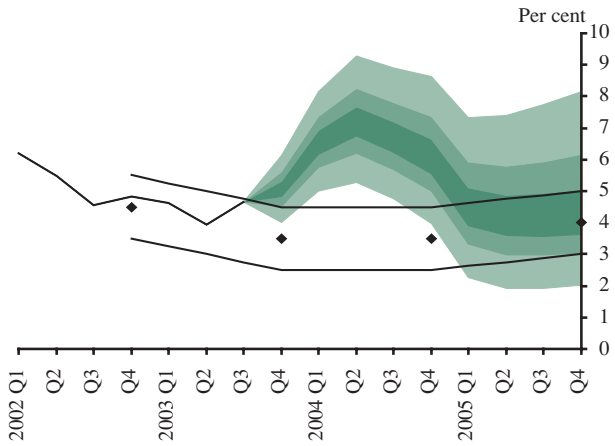
[11] Draft Act T/5479 on consumer price subsidies.

1.3 Uncertainty of the central projection

The central projection contains significant uncertainties. In our expert opinion, next year it is more or less equally probable that the CPI will exceed or remain below the central projection; while it is clearly more likely that inflation will be higher than the central projection in 2005.

Chart 1-7

The fan chart* *(Inflation on a year earlier)*



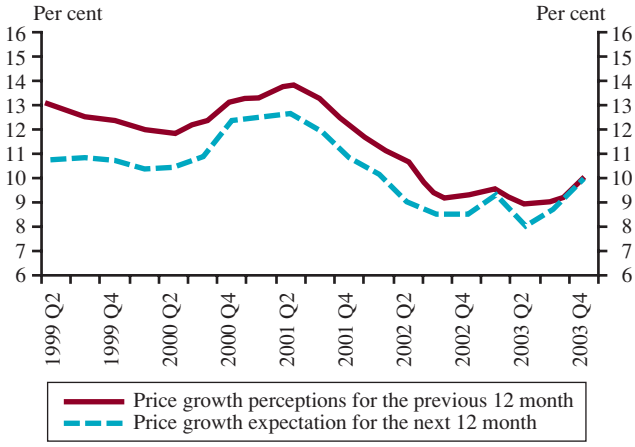
** The fan chart shows the probability distribution of the outcomes around the central projection of CPI. The entire coloured area covers 90% of all probabilities. The central band covers 30% of the distribution, and contains the central projection (as the mode); outer bands cover 15% probability each. The points for end-years and the lines represent the inflation target values and the upper and lower limits of the ±1% tolerance interval.*

With regard to 2004, the most significant risks surrounding the central projection include the eventual effect of indirect tax increases on expectations and the uncertainty involving the disinflationary impact of the abolition of customs duties upon accession to the EU. The former risk points towards higher, while the latter points towards lower inflation. On aggregate, risks are seen as evenly distributed with regard to the 2004 projection. This means that the CPI has roughly the same probability of being higher or lower than the central projection.

However, the situation in 2005 is different. It is considerably more likely that inflation will exceed the central projection. This is due primarily to a possible increase in inflation expectations in the wake of the indirect tax increases in 2004. Such an increase in inflation expectations would push up inflation directly, through price rises, and indirectly, through the rate of wage increases. The significance of the phenomenon is highlighted by TÁRKI's business survey, which shows that inflation expectations already started to increase in mid-2003.

Chart 1-8

Inflation perception and expectations of companies* *(Inflation on a year earlier)*



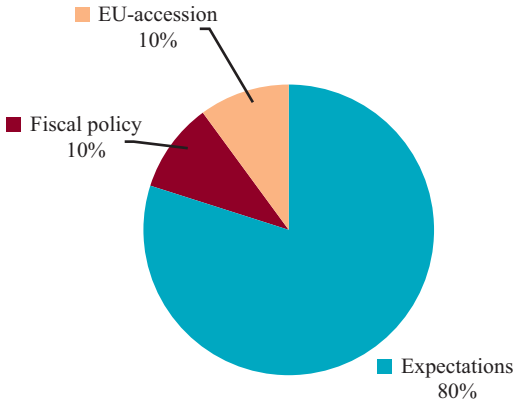
** Based on TÁRKI business survey.*

If the contractionary impact of fiscal policy is lower than assumed in the central projection, this would also entail a further risk of higher inflation. This risk would result from the significant difference between the central projection for fiscal demand (0.8% contraction as a proportion of GDP) and the projection relying on the principle of "unchanged fiscal policy" (1.1% expansion, see Section 2.1.2). This is because from a conceptual point of view, the rule-based latter projection estimates precisely those fiscal policy risks which are currently not covered by particular measures of which we are aware.[12]

[12] On the development of rule-based fiscal projections see Section 5.2 in the 2003 August Report.

Chart 1-9

Factors influencing the direction of uncertainty in 2005



The possible disinflationary impact of EU accession (resulting from the abolition of customs duties and keener competition) may slightly reduce the upside risks for 2005 as explained above.

Analysis of the probabilities of meeting the earlier announced official inflation targets reveals that end-2004 inflation is very likely to exceed the upper limit of the target band, as the central projection is considerably higher. Higher inflation than the upper limit of the target band is also highly probable at end-2005. This is, however, justified by the preponderance of upside risks, as the central projection for that time frame corresponds to the target. The likelihood of inflation remaining below the target is extremely low in 2004 and insignificant in 2005 as well.

Table 1-8

Probabilities of inflation rates outside the target band

	Below the bottom limit of the target band	Above the upper limit of the target band
End-2004	0%	92%
End-2005	13%	47%

2 Economic activity

2.1 DEMAND

We expect economic growth to amount to 2.9% in 2003. In our current projection the rate of growth in domestic demand drops next year, but economic growth picks up pace to 3.2%, bolstered by an upswing in external activity. This issue of the *Inflation Report* contains our first forecast for 2005, which projects economic growth of 3.6% with the assumption that fiscal adjustment continues.

Compared to the August *Report*, the forecasted path of economic growth has changed substantially due to changes in the available data and the 2004 fiscal path, which has now taken on a much more definite shape, as well as changes in other assumptions. One major difference vis-à-vis the August *Report* is the projection of household consumption growth which is now expected to slow considerably less due to alteration of the originally planned changes to the tax system. This is one of the main reasons why the forecast for economic growth has been increased to 3.2% in the current projection.

There have been changes in a number of the factors underlying our forecast since the August *Report*. Of these, the assumptions for the nominal exchange rate path and fiscal policy, and for the PIT and VAT rates in particular, are the factors that have altered the forecast for economic growth the mostly strongly.

In respect of the fiscal path, the August *Report* took as an assumption that the Government's planned measures, decided in July 2003, would be implemented next year. Those measures envisaged a much more severe restriction of households' income position. However, our current forecast reflects next year's Budget submitted to Parliament for approval. According to the draft, the fiscal squeeze on household income will be less intense than previously anticipated, due to the change to the income tax rates. As a result, in our current forecast for next year household consumption growth decelerates, but to a lesser degree than assumed in the August *Report*.

In addition to the developments noted above, changes to the forecast have resulted from a number of other factors as well. Due to a revision of earlier data, the effective external demand indicator, indicating the size of Hungary's export markets, shows a considerably different picture than in the August *Report*, suggesting weaker external demand. This revision has affected our

Table 2-1

Growth in GDP and its components *(Percentage changes on a year earlier)*

	Actual				Forecast		
	2001	2002*	2002**	2003 H1	2003	2004	2005
Household consumption	5.3	8.8	9.4	7.9	7.2	1.7	2.5
Household final cons. expenditure	5.7	10.2	10.5	8.7	7.8	2.3	2.6
Social transfers in kind	*3.8*	*3.0*	*4.9*	*4.4*	*4.0*	*–1.0*	*2.0*
Public consumption	*4.9*	*1.5*	*5.0*	*5.7*	*4.0*	*1.5*	*2.0*
Gross fixed capital formation	3.5	5.8	7.2	0.5	3.6	3.9	4.5
'Final domestic sales'***	4.8	7.3	8.4	6.2	6.0	2.2	2.9
Domestic absorption	1.9	5.1	5.4	6.6	6.6	2.3	3.0
Exports	8.8	3.8	3.8	2.4	3.4	7.5	8.1
Imports	6.1	6.1	6.1	7.5	8.0	6.0	7.0
GDP	**3.8**	**3.3**	**3.5**	**2.5**	**2.9**	**3.2**	**3.6**

** The original GDP data of the CSO for 2002. Our forecast is based on these figures.*
*** Revised data published by the CSO on October 21, 2003.*
**** Final domestic sales = household consumption + public consumption + gross fixed capital formation.*

forecasts for exports and manufacturing investment. The relationship between actual export data available for 2003 and external demand can be better explained using the revised external demand as a gauge. Our assessment of effective external demand also reinforces the view that economic activity has perhaps passed through the cyclical trough.

The rate of economic growth turned out to be lower in 2003 H1 than forecast in the August *Report*. In Q2, growth edged up marginally compared to the previous quarter, and information which has become available for Q3 appears to reinforce our earlier view that exports and industrial output are both rebounding from their cyclical lows.

Our expectation of this year's fiscal restriction has remained unchanged relative to the previous *Report*. But, as a result of the fiscal tightening announced by the Government in the draft budget for 2004, the restriction will likely be slightly more modest, and also different in terms of structure, compared to the August forecast. In 2004, the different pattern of fiscal restriction relative to that forecast earlier will likely add to the expected rate of economic growth.

In respect of the labour market, from the available data we can infer that the decline in wage inflation stalled towards the end of 2002, and that the rate of wage growth has since stabilised at around 8%. The forecast for 2004 private sector nominal wages has changed little relative to the August *Report*, but this is translated into higher net incomes due to the planned changes in personal income taxes.

The forecast for fixed capital formation has changed little compared to the August *Report*. In the August *Report*, corporate investment was forecast to pick up momentum, underpinned by the recovery of external demand. This expectation has been reinforced by actual data for H1. In our current forecast, household investment rises only modestly this year, after growing strongly in 2002. Next year, the fiscal restriction may affect both household income and subsidies for housing loans, and therefore we do not expect housing investment to increase. Based on the outturns for 2003, the volume of public investment appears to be lower than previously assumed. Accordingly, we have revised down our forecast for the year as a whole. The impact of fiscal restriction on fixed investment is assumed to be stronger in 2004 than outlined in the August *Report*, so the forecast for next year's investment activity has also been scaled back.

We have lowered our forecast for 2003 exports because of new data and weaker growth in Hungary's external markets than previously expected, which also provides explanation for the slow growth in Hungarian exports in H1. Next year and in 2005 the impact of increasingly strong external demand raises the growth rate of exports.

In H1, imports grew faster than previously thought. This may be explained by the upturn in business activity and inventory accumulation. We expect this process to continue in H2 and have therefore raised our forecast for 2003 imports. In 2004, a moderate increase in domestic use reduces the growth rate of imports. Hungarian imports will likely move on a faster growth path in 2005 as a result of a rapid pick-up in corporate investment, but net exports will continue to be a factor contributing to economic growth.

2.1.1 EXTERNAL DEMAND

The likelihood of a recovery in external demand in 2003 H2 is now greater than assumed at the time of the August *Report*. Over the medium term, economic activity is expected to be stable, with smaller and broadly symmetrical risks. Effective external demand, i.e. the size of Hungary's export markets, however, has been lower due to the revision of past data, and market expansion in 2003 has been more modest than anticipated by the Bank's staff in August.

Table 2-2

Fixed investment by sector* *(Annual percentage changes)*

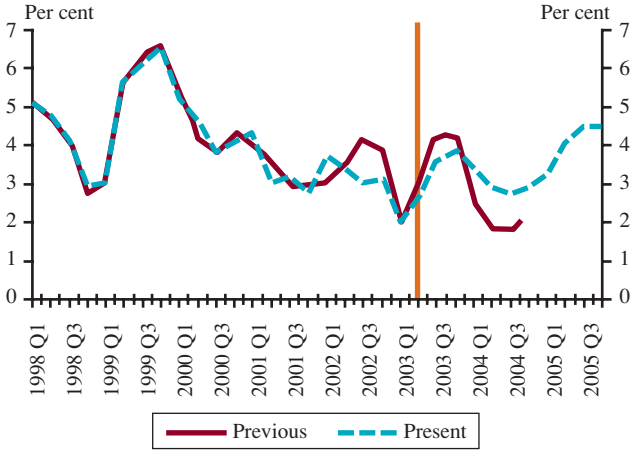
	Weights %	2001	2002**	2002***	2003	2004	2005
		Estimates			Forecast		
Corporate sector	57	1.0	(–4.6)	(–2.1)	2 – 6	3 – 7	4 – 8
General government****	19	(–6.9)	27.5	29.5	2 – 5	0 – 8	0 – 6
Households	24	21.4	20.0	18	0 – 5	(–5) – 2	(–5) – 0
Whole-economy fixed investment	**100**	**3.2**	**5.8**	**7.2**	**2.0 – 4.0**	**2.0 – 6.0**	**2.5 – 6.5**

* *On methodology, see Manual on Hungarian Economic Statistics.*
** *Original GDP data of the CSO for 2002, our forecast is based on these figures.*
*** *Revised GDP data published by CSO on October 21, 2003.*
**** *Government spending on motorway construction is included in general government data.*

Chart 2-1

Projected GDP growth

(Annualised quarter-on-quarter growth rates)



While the global economic recession probably ended in early 2002, up to now there have been few signs of a clear-cut recovery. Modest growth appeared to begin in 2002 H1, but the impact on the price of oil of the Iraq conflict, which escalated in the second half of last year, and the difficulties facing numerous large corporations with high leverage ratio put a brake on these favourable developments. Concurrently, business sentiment in many economies also fell to its lowest level in recent years.

In the second half of 2003, the global economy may move away from the near-stagnant conditions which have since prevailed. The political tensions with a major impact on crude oil prices have now abated, and large corporations have slashed their debt ratios, paving the way for a revival of economic activity. The U.S. economy has been growing vigorously since 2003 Q2, as evidenced by a number of economic indicators. The consequences of this development have now been reflected in the European business cycle, which is more relevant for the Hungarian economic outlook.[13]

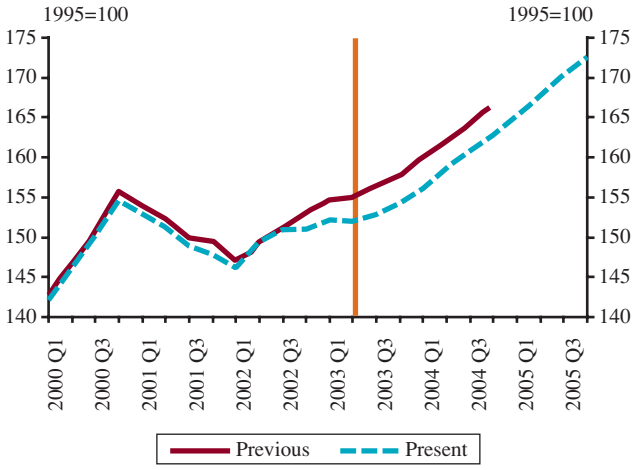
As was also discussed in the previous *Report*, Hungary's external environment has exhibited a disturbing duality recently. Whereas economic growth in most of Hungary's major trading partners reflected nearly stagnant economic activity, the size of Hungary's export markets – an indicator better describing movements in external demand according to our analyses – suggested a pronounced improvement from 2002 Q2. This was driven by the robust growth of imports by Germany accounting for a large share within the indicator. The gap between the size of Hungary's export markets and other indicators describing the external business cycle (GDP growth, industrial output, etc.) had become unusually wide by 2003 Q1, adding a great deal of uncertainty to our short-term forecasts.

As a result of the latest data currently available for 2003 Q2, which show a slight drop in imports by Hungary's trading partners, and a substantial negative revision of data for earlier periods affecting mainly 2002 Q4, the gap has recently narrowed somewhat. This means that the size of Hungary's export markets was much lower than previously indicated. Thus, the major driving force behind the weaker-than-expected growth of Hungarian exports in late 2002 and early 2003 was the lower weaker external demand than previously thought.

Ultimately, this downward revision of the path of external demand implies a longer period of recovery.[14] However, no new material information is available which would affect our earlier forecast over the medium term, and so quarterly growth rates beyond 2003 will likely be similar to those provided in the August *Report*. Accordingly, annual growth in Hungary's export markets this year is expected to be significantly lower, only 2.3%, due to the data revision noted above. A decline of similar measure can be derived from changes in the forecasts of international economic research institutes.

Chart 2-2

Size of Hungary's export markets*



** Weighted volume of imports of Hungary's major trading partners.*

As was pointed out earlier, we expect quarterly growth rates to be broadly unchanged with regard to 2004.

[13] The major European indicators of business sentiment (the EABCI for the euro area and IFO business climate index for the German economy) have shown a clear improvement in the past several months.

[14] The period of recovery, calculated from the start of recession, is the period required for Hungary's export markets to recover to the level observed in the last quarter preceding the start of recession (2000 Q4). It appeared at the time of the Augusts Report that this recovery could be completed by 2003 Q2. However, based on the current correction in levels, the Bank only expects the recovery to finish by 2003 Q4. Consequently, the period of recovery may be longer by six months.

Thus, we expect the size of Hungary's export markets to grow by 4.5% for the year as a whole, almost the same as in the forecast in the August *Report*. Due to the data revisions and the actual data for 2003 Q2, noted above, external demand will likely be lower in level throughout 2004 relative to the previous forecast.

Other economic forecasters have also lowered their assumptions for growth in 2004—their revisions are typically larger than our. This is a phenomenon that has been seen in the past as well (see Section 5 in the May 2003 *Report*).

Our forecast for 2005 is for external demand to grow evenly, although at a somewhat slower rate than in 2004. That still means that the size of Hungary's export markets will increase at a strong rate of 5.8% for the year as a whole.

Accordingly, the central path is built on a scenario in which external demand expands at an increasing pace from 2003 H2. There are, however, uncertainties, as reflected in rather different assessments of the developments in Germany. Germany is of crucial importance for the size of Hungary's export markets by virtue of the massive share for which it accounts. In our forecast, Germany's imports grow significantly more modestly compared to the forecasts of international institutions. Our recent observations suggest that the widely anticipated rebound in German GDP will presumably be driven by a strengthening of the components of domestic demand linked to consumption, rather than by an upturn in investment. Although German new orders for manufacturers' output rose in the previous quarter, they were strongly volatile prior to this. This is also clearly the case in respect of a number of other business indicators forecasting industrial output. Consequently, we expect German import growth to be only 3–4% in 2004 (in their latest projections, international forecasters anticipate import growth of 5–6%). In our view, German imports may rise by as much as 5–6% only in 2005 (most international forecasters expect growth in German imports of around 7% in 2005). Our (implicit) forecast for German GDP growth differs less from those of international economic forecasters—the German economy is forecast in this *Report* to grow slightly below the rate anticipated by external forecasters in 2004, and slightly above it in 2005.

As regards Hungary's total export market, the balance of risks is weighted to the downside at the beginning of the forecast period, as growth may turn out to be lower in the second half (for example, German industrial output fell considerably in August). Over the medium term, and particularly towards the end of the forecast period, we anticipate an upside risk to the central projection. This is consistent with our forecast lagging behind those of other economic forecasters.

Table 2-3

Various forecasts for external demand*

(Average annual percentage growth)

	2003		2004		2005
	Current	Previous	Current	Previous	Current
Forecasts for the growth of Hungary's export market size					
MNB	2.3	3.9	4.5	4.6	5.8
EU Commission**	2.5	3.9	5.6	6.4	6.9
IMF***	3.0	4.4	6.2	6.3	n.a.
Forecasts for the growth in GDP of Hungary's trading partners					
MNB	0.5	0.9	1.6	2.0	2.4
EU Commission**	0.5	1.0	1.8	2.2	2.2
IMF***	0.5	1.0	1.8	2.2	n.a.

* *Weighted annual average of import growth of Hungary's 12 main trading partners in per cent (constant prices).*

** *Sources: European Commission: Economic Forecasts October 2003/April 2003.*

*** *IMF World Economic Outlook September 2003/April 2003.*

2.1.2 FISCAL STANCE

We expect to see a continued fiscal contraction of demand in 2003–2005. This will amount to 0.8% of GDP for each of the next two years as a proportion of GDP, following this year's contractionary effect of 0.4%.

The composition of fiscal contraction is likely to be different in the individual years. After the reduction in investment in 2003, government investment is expected to pick up, and demand will be restricted by increases in taxes and curtailment of current expenditure. We assume the fiscal contraction of demand in 2005 to be proportionately shared by reductions in current and capital expenditures.

Our forecast for the fiscal contractionary impact on demand in 2003–2004 has barely changed relative to the August *Report*. In August, Bank staff prepared their forecast on the basis of the proposed budgetary measures announced in July which envisaged improvement of the balance in 2003 mainly through the postponement of certain expenditures and improvement in the balance in 2004 by raising direct and indirect taxes. The draft Budget for 2004 and other draft acts on taxes as well as the likely amendments thereof are significantly different from the proposed measures announced in July.[15] The latest proposals do not include postponement of some expenditures scheduled for 2003 (e.g.

[15] We have prepared an estimate of the likely modifications; however, we have decided to restrict the range of those modifications to information which has become available up to 5 November.

payment of one extra week of pension benefits, the so-called '53rd week'), and still include the increases in taxes on households in 2004 (increases in the social security contribution and indirect taxes); however, the impact of these measures is mitigated to a degree by the changes to the personal income tax system. Consequently, the increase in revenue will be lower, but the larger reduction in expenditures (corporate transfers, wages, quasi-fiscal expenditures) may offset this. The expert projection for 2004 is surrounded by great uncertainty—the effect of risk factors may reach 1.1%–1.2% of GDP in either direction.

We have also prepared a forecast for the fiscal impact on demand for 2005. The underlying assumption is that the fiscal contraction of demand proceeds in parallel with the deficit reduction envisaged in the PEP. According to the path laid out in the PEP, the deficit as a proportion of GDP falls by 1% in 2005, and this is equivalent to a 0.8% contraction of demand on the basis of the change in the primary balance. This is assumed to be implemented through further cuts in government expenditure.

We have updated our estimate for **2003**, reflecting new information on the expected developments in revenue and expenditure over the course of the year, an update of our macroeconomic projection and the Governments decisions, which have become available.

There are two major changes in our current forecast relative to the August *Report*. The result of the modification of proposed measures announced in July is that the 53rd week pension payments and the 13th month salaries will be paid out in 2003, which has added 0.2% of GDP to the deficit. The upward revision of the forecast for tax revenue reduces the deficit by 0.1% of GDP.

The year-end, however, continues to carry risks, as the major part of revenue and expenditure is concentrated in the final months, in accordance with the seasonal pattern of fiscal developments. Similarly to last year, the Government may raise additional revenue via income taxes this year which may not be explained on the basis of macroeconomic developments. However, the central projection does not take account of this, given the extraordinary nature of such additional revenue. It cannot be ruled out, however, that the implementation of certain investment projects will continue to lag behind schedule, as seen in the first half of the year. Expenditures of the local government and the budgetary units, notably investment spending, are expected to pick up, reflecting the year-end patterns, and so expenditures similar to last year's, or even higher, cannot be ruled out. The overall impact of these uncertainties may divert the actual outturns by ±0.3% of GDP from the central projection.

Table 2-4

Current estimate for the 2003 fiscal demand impact relative to the August Report
(As a per cent of GDP)

Previous central projection –0.5			
53rd week pension and 13th month wage are not postponed	+0.2	Higher than previously expected tax revenue	–0.1
Current central projection –0.4			

Preparing our own forecast on the basis of official information remains the underlying principle of the forecast for **2004**. The August *Report* relied on the Government's plans announced on 16 July. In contrast with this, the starting point for the current forecast is the draft Budget submitted to Parliament and the likely amendments. In the new forecast, next year's demand impact differs only slightly from the 1% contractionary impact expected in August, although its composition is significantly different.

As in the August *Report*, we have prepared our current forecast using two different approaches. The rule-based forecast, prepared as a benchmark, has been altered considerably (for the details of the principles of the rule-base approach, see Section 5.2 of the August *Report*). The forecast only took account of other determinations which added to the deficit in August, i.e. prior to sub-

Table 2-5

Risks in the central projection for the 2003 demand impact *(As a per cent of GDP)*

Central projection: –0.4% demand impact			
Higher contraction of demand		**Lower contraction of demand**	
Higher tax revenue at the end of the year	–0.2	Additional expenditure by local and budgetary units	+0.3
Slowdown in broadly defined government fixed investment	–0.1		
Total difference under extreme scenario	–0.3	Total difference under extreme scenario	+0.3
Demand impact under extreme scenario	**–0.7**	**Demand impact under extreme scenario**	**–0.1**

mitting the bill to Parliament. If the draft Budget approved by the Government and submitted to Parliament for voting is considered as a legal determination, then, in the rule-based approach, this version would more or less ensure a contraction of demand equal to 1% of GDP, as anticipated in August.

We have built our expert projection, considered as the central projection, on official information which has become available. Our previous expert estimate was based on the partial information announced by the Government in July and on the major changes released on the Ministry's website. The Budget bill submitted to Parliament has now made available information on the estimates in full detail, which also reflect the changes to the draft implemented in July–September. The Government made substantial changes to the announced measures in that period. The effect of the changes to these plans aimed at reducing the revenue estimates amounts to approximately 1% of GDP, due chiefly to the lowering of the income tax rates, the corporate income tax and the VAT on district heating. Meanwhile, revenue estimates have been raised by 0.5% GDP, mainly on account of the withdrawn reduction of the highest VAT rate. The measures reducing total expenditure have mainly affected Government spending on wages and corporate transfers.

In addition to these factors, our expert estimate also takes account of the modifications currently underway, and likely to be incorporated in the final Budget,[16] as they may bring structural shifts to such an extent that their impact on inflation is not neutral. Due to our forecasting principles, they increase the deficit, if the offsetting measures are not detailed. The details of the savings in the payment of the 13th month salaries and the increase in the maximum social security contribution rate are already available. However, the remaining part reduces the extent of contraction by 0.2% of GDP relative to the rule-based version; in other words, our expert forecast relies on not yet finalised but likely measures (not yet enacted, not detailed, etc.), with a mild expansionary impact on demand.

Our central projection differs from the draft submitted to Parliament on account of a number of factors:

- The figures for the base year, where they have an effect for 2004, are based on our own projections.

- In line with our own macroeconomic projection, next year's growth in tax revenue is expected to be lower and pension payments higher based on the indexation method.

- In line with our forecasting rules, we have ignored such extra revenue items of the bill that were linked to planned improvements in the efficiency of control and tax collection, and enhanced tax compliance.

- The unspecified measures offsetting the likely modifications currently underway have been ignored. In the case of some measures of the draft Budget, where information is available, for example, in respect of PIT, we have prepared our own projection.

- Based on the trends of autonomous fiscal developments, we expect spending overruns in certain open-ended expenditures and at the local authorities.

Due to the fluctuation of government fixed investment and changes to the taxation system which effects are difficult to estimate, the fiscal impact on demand can only be forecast with higher-than-usual uncertainty.

On balance, uncertainties in macroeconomic developments result in risks of a stronger contraction of demand. The nominal growth in the most important tax bases, for example, those of earnings and purchased consumption, may turn out to be higher than our forecast, which in turn may result in higher revenues and slightly more spending on pensions. If the growth in the tax bases correspond with the rates in our forecast, but inflation turns out to be higher, then pension payments would be higher due to the indexation method.

Table 2-6

Results of the central projection for the 2004 demand impact *(As a per cent of GDP)*

	2004 demand impact		
	Rule-based forecast	Expert central projection	Difference in percentage points (=expected measures based on proposals)
Previous projection	+0.8	–1.0	–1.8
Current projection	–1.0	–0.8	+0.2

** Negative values indicate contractionary measures and positive values indicate expansionary measures.*

[16] We have taken account of information which became available up to 5 November. Reductions in excise duties and VAT (wine, fossil fuels, cinema pictures), the partial withdrawal of the reduction of the consumers' price subsidy, the reduction in PIT (tax exemption, increase in tax credit, partial withdrawal of the reduction in subsidies on house loans, taxes on additional incomes will not be raised), the reduction in the corporate tax base and the increase in subsidies to local authorities have been taken into account as likely modifications. However, we have not taken account of the effect of the compensation for the increase in the price of electricity, which may amount to 0.2% of GDP.

Table 2-7

Risks in the central projection for the 2004 demand impact *(As a per cent of GDP)*

Central projection: –0.8% demand impact			
Higher contraction of demand		**Lower contraction of demand**	
Tax shortfall in H1 2003 has a temporary nature	–0.2	Tax shortfall in H1 2003 has a permanent nature	+0.2
Effect of macroeconomic developments (tax revenue, pension indexation)	–0.4	Effect of macroeconomic developments (tax revenue, pension indexation)	+0.1
Measures currently not specified	–0.4	Lower reduction in quasi-fiscal items	+0.4
Smaller offsetting effect of fiscal developments (local government)	–0.1	Higher offsetting effect of fiscal developments (local government, budgetary units	+0.5
Total difference under extreme scenario	–1.1	Total difference under extreme scenario	+1.2
Demand impact under extreme scenario	**–1.9**	**Demand impact under extreme scenario**	**+0.4**

Other measures, the details of which are currently not specified, may also improve the overall balance and contract demand further. In addition, information may become available which would increase quasi-fiscal items as well.

The envisaged substantial rearrangement of expenditures and restriction may carry the risk that it is not implemented in full due to autonomous fiscal developments. Explanation for this is that the local authorities and the budgetary units may undertake additional expenditures by stepped-up borrowing or using carry-forwards.

In **2005,** based on the principle of 'no fiscal policy change', the expansionary impact on demand, i.e. the deterioration in the primary balance, would amount to 1.1%. In contrast to this forecast established on a risk and rules basis, our expert forecast which uses the PEP as a starting point calls for a 0.8% contractionary impact on demand.

Our expert forecast is based on the assumption that the planned deficit reduction of 1% of GDP in 2005 in the PEP would take place, implying some 0.8% of GDP improvement in the primary balance.

This will require measures to be taken by the Government amounting to 1.9% of GDP in 2005 (as shown by the difference between the 'no policy change' scenario and the PEP-based baseline). That, however, is not excessive, as it stands close to our forecast for 2004 in August and which will be implemented in broad terms according to information currently available.

In 2005, similar to 2004, EU accession will represent the most fundamental change, this will have also a full year effect for the year as a whole. The reduction in the health contribution rate as planned and the investment cycle of local government authorities,

Table 2-8

Results of the central projection for the 2005 demand impact *(As a per cent of GDP)*

2005 demand impact		
Rule-based forecast	Expert central projection	Difference in percentage points (=expected measures)
+1.1	–0.8	–1.9

which result in increasing expenditures in the years prior to the elections, are likely to be of smaller importance.

Overall, we assume the contractionary impact on demand amounting to 0.8% of GDP to be composed of a 0.2% reduction in investment spending and a 0.6% reduction in current expenses, the smaller part of which being accounted for by a cut in wages and the larger part by other spending. We do not anticipate an increase in revenue; moreover, total revenue may, on balance, even fall based on the measures announced so far and the concepts outlined in the PEP. (The planned measures include a further reduction in health contributions and an increase in excise duties due to tax harmonisation.)

In terms of the composition of the effect on demand, the direct impact on household disposable income, indirect changes to taxes influencing prices and prospects for broadly defined public investment deserve special mention.

We have increased our forecast for government sector wages and employment relative to the August *Report*. That revision reflects the release of the CSO's data for August which has become available and the 2004 Budget bill. We have increased our forecast for the

annual increase in employed persons in 2003 by 0.9 percentage points to 1.9%, and have raised our forecast for the average wage increase from 17.7% to 18.3%.

In addition to the full-year effect of the increase in public servants' wages in the previous year, this year's wage growth dynamics have also been shaped by the increase in civil servants' wages and by the increase in the wages of court judges and prosecutors to be implemented in two stages.

The downward trend in numbers employed in general government reversed at end-2002. The increase was perceptible in the period from last September, and the number of employees had risen by 4.4% by last December relative to a year earlier, rising by 1.5% on a yearly average. During 2003, the number of employees has been volatile. It was 1,000 higher than the nearly 821,000 in December 2002, resulting in a yearly average increase of 2.5%. The Government has announced staff reductions in the central government sector, which may be implemented by the end of the 2003.[17]

The forecast for 2003 was based on the assumption that total staff would be around 800,000 at year-end in the government sector. This implies that total staff would be 2.5% less than in December 2002 (due to the layoffs are scheduled towards the end of this year, staff level would still be 1.9% higher on a yearly average than the average of 2002).

Our forecast for wages in 2004 reflects the 5% increase in public servants and other government employees' wages in the Budget bill and the full-year effect of the increases in judges' and public prosecutors' wages in 2003. Consequently, overall, average government sector wages increase by 5.7% in 2003. The forecast also contains a 2.5% reduction in the numbers employed in the sector, as the bill does not ensure the total cover required to fund wage increases at the majority of the budgetary units. The Government's measures only affect the local authorities indirectly, which carries a risk to the forecast. The actual staff reduction may turn out to be less, if local authorities ensure the cover required for higher employment by way of using own revenues, cutting investment spending or increasing indebtedness.

Transfers to households in cash will likely increase by 10.3% in nominal terms in 2003, some 0.8 percentage points higher than the forecast in the previous *Report*. In August, we used the assumption that 53rd week pensions at the end of the year would only be paid out next year. Since then this measure has been withdrawn by the Government. Adding to transfers, the additional increase in pensions in November turned out to be moderately higher than our forecast. However, the current forecast has been reduced by actual intra-year data which have meanwhile been released. Pensions are expected to rise by 8.3% in nominal terms in 2004. This forecast contains, based on our own macroeconomic projections, a higher increase in pensions, additional one-week pensions and family allowances aimed at preserving their real value.

Direct taxes and contributions affecting household income would be increased by less, as the impact of the 1 percentage point increase in employee social security contributions outweigh the effect of the planned reduction in PIT. The reduction in PIT was implemented through a change to the tax schedule (rates and brackets); however, the widening of the tax base, the reduction in tax credits and preferences as well as the increase in taxes on other incomes largely offsets this effect. In our current forecast, fiscal tightening through this channel is lower by 0.8% of GDP relative to the August *Report*.

All these translate into net wages growing some 0.5 percentage points lower than gross wage next year (after this year's 2 percentage point gap in the other direction). This –0.5 percentage point negative gap for next year, however, implies a more relaxed fiscal stance towards households compared to the August *Report* which predicted a –3.3 percentage point gap for 2004 based on the July announcement of fiscal plans.

Changes to indirect taxes, also taking account of their curtailing effect on consumption, are expected to result in additional revenue equal to 0.8% of GDP. The August *Report* contained a forecast for an additional 0.4% in revenue. However, the Government has since decided that the highest VAT rate will not be reduced to 23%. The decision to impose a 15% VAT on district heating instead of imposing the highest rate reduces revenue, and a couple of modifications currently underway, but its impact only amounts to 0.1% of GDP.

The volume of broadly defined government fixed investment is expected to increase by up to 5% in 2003 on the basis of the CSO's national account statistics. By contrast, in a broad definition investment spending by general government falls, which means that the tendency whereby the growth of spending is different from the CSO's statistical records continues. The two types of accounting are different due to the differences between the time of recording and definitions; however, there was no substantial gap between the two growth rates up to 2002 H1. The two types of accounting are assumed to resume converging from 2004. The CSO's investment index may be between 5%–10% in 2004, and it is expected to rise more modestly in 2005.

[17] The exact details of this, such as its actual impact and the size of one-off costs, etc. were unknown to us at the time of preparing this *Report*.

2.1.3 HOUSEHOLD CONSUMPTION, SAVINGS AND FIXED INVESTMENT

Household consumption growth is expected to slow down from the exceptional rates seen last year. Over the short term, the expected slowdown is due to the slow pace of economic growth, increasing uncertainty as shown by some surveys, while in 2004 it is fiscal tightening that will play a role. Later, in 2005 we expect household consumption expenditures to pick up again borne by stronger real wage growth and the assumed unchanged direct tax burden.

Our forecast for household consumption expenditure in 2003 has remained broadly unchanged relative to the August *Report*. However, the forecast for 2004 has been revised up. One reason for this increase is that the forecasts in the August *Report* were based on the fiscal adjustment programme announced by the Government in July, while the current forecast contains a more lax fiscal policy stance towards households.

Table 2-9

Household consumption, savings and fixed investment *(Annualised growth rates, per cent)*

		Household real net income	Real consumption expenditure		Real value of fixed capital formation
2002	Actual/ Estimate	12.3	10.2*	10.5**	20 – 30
2003	Forecast	7.9	7.8		0 – 10
2004		0.8	2.3		(–10) – 0
2005		3.1	2.6		(–5) – 5

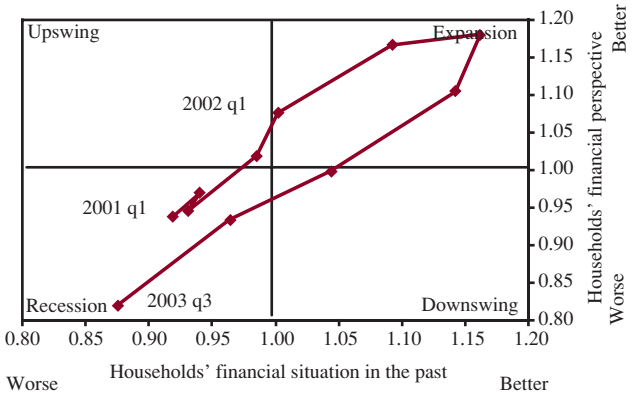
** Original GDP data released by CSO which is the basis of our forecast.*
*** Revised CSO data released on 21st October 2003, see Section 5.1.*

The increase in household consumption expenditure in 2003 H1 continued to be higher than at any time between 1991–2000. Its quarterly growth rate, however, has already been slowing gradually. A number of factors may play a role in the decline in the growth rate. First, the pace of growth in household net income has slackened. Second, the expectations of households have been deteriorating continuously, which may lower consumption expenditure, due to indicating rising uncertainties. This phenomenon can be seen in deterioration of two components of the GKI consumer survey.

In forecasting 2003 consumption expenditure, Bank staff have faced the same difficulty as discussed in the

Chart 2-3

Households' assessment of their own business position as shown by the GKI confidence index



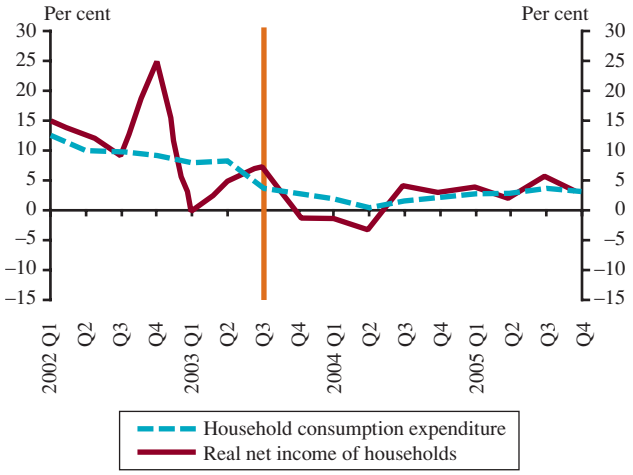
Source: GKI business survey. The values are the deviations from the long-term trend.

August *Report*, namely, that a loose fiscal policy changes to a restrictive fiscal policy stance resulting in a higher uncertainty in terms of the future developments in household income. Further deterioration in households' perception of their future position is consistent

Chart 2-4

Household income and consumption expenditure

(Annualised growth rates, per cent)



with our earlier assumption and we have thus broadly maintained our forecast for 2003.

As a result of income and consumption growing nearly identically, the gross saving rate is likely to remain basically unchanged relative to 2002.[18] We expect the dynamic growth in housing loans experienced in 2003 H1 to remain uninterrupted. Consequently, the net lending of households will fall significantly in 2003.[19] Robust

[18] Gross (or: total) savings rate equals the proportion of disposable income not spent on current consumption.
[19] Net lending (or: net financial saving) equals gross savings net of investment spending.

borrowing for home-building will likely give a boost to households' housing investment relative to 2002, with a resulting increase in the accumulation rate.[20]

The expected changes in the fiscal policy stance is the most important factor for developments in consumption expenditure in 2004 relative to the August *Report*. The forecast in the August *Report* was predicated on the basis of the fiscal plans announced in July, which included a restrictive policy stance towards households. The current forecast, in contrast, takes into account the Budget Act proposal submitted to Parliament, which contains a more lax fiscal stance towards households relative to the assumption in the August *Report*. According to the PIT Act passed in 2002, tax rates will be lowered next year, in combination with a revaluation of the income brackets; however, taking into account other burdens on incomes, the burden on household income will change little relative to 2003. As a result, household net real income may increase slightly, in contrast with the decline projected in August *Report*.

It can be assumed that households seek to smooth their flow of spending in the face of income fluctuations, therefore, the volume of consumption expenditure changes less than real income. For example, the volume of household consumption expenditure fell less than income in 1995–1996. Smoothing was even more spectacular in 2000, when a temporarily more modest income growth was not followed by a comparable decrease in consumption. In contrast to 2000, the "other" side of the coin was seen in the period between 2002 and early 2003 when consumption grew less than income.

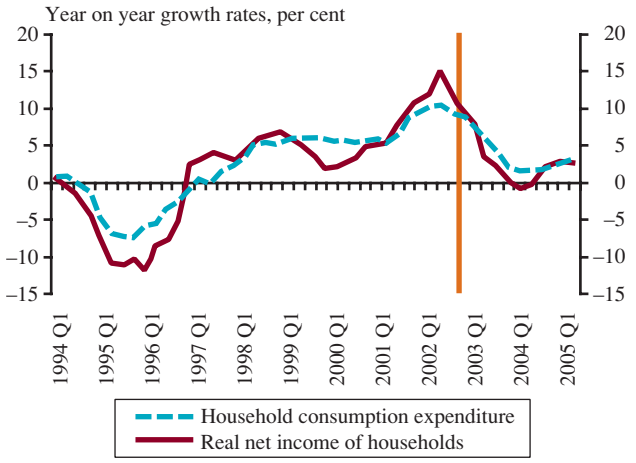
It is worthwhile to note, however, that consumption smoothing expected in 2004 would not necessarily lead to an increase in the financial saving rate, as financial savings are only one of the components of the gross saving rate (derived as the difference between income and consumption). Households finance their capital expenditure from gross savings, the overwhelming part of which is accounted for by amounts spent on dwelling investment. In the period 2002–2003, dwelling investment and hence also the rate of accumulation increased, thus 'crowding out' financial savings.

Based on the aforementioned, in determining the scale of smoothing we have taken account of the fact that households' financial savings have fallen significantly in recent years, and so households will likely spend less on consumption to the detriment of their wealth than they did earlier. Accordingly, we assume that households will adjust more rapidly to fluctuations in their incomes. Even so, consumption growth is expected to be higher than real income growth in 2004. That is, the gross saving rate will fall slightly relative to 2003. However, this fall will reflect a decline in the rate of accumulation rather than the further drop in financial savings, which may be a source of consumption smoothing.

Chart 2-5

Household real disposable income and consumption expenditure 1994–2005

(On a year earlier, per cent)



Gross real income and the fiscal policy stance will be relevant factors for forecasting household behaviour in 2005. Corporate sector wages and social transfers in cash both are expected grow more rapidly than in 2004, and consequently gross real income will also likely increase at a faster pace. Our assumption for the fiscal policy stance is drawn from the deficit reduction plan outlined in the PEP, assuming as well that taxes are not increased and the fiscal policy stance towards households is maintained. As an effect of these factors, net real income and the volume of consumption expenditure rise. In contrast to 2004, consumption smoothing is expected to reverse pattern in 2005, that is, income growth will likely be somewhat stronger than the increase in consumption, with a resulting slight increase in the saving rate.

According to the principle followed in forecasting the fiscal policy stance, we assume no further changes to the housing subsidy scheme in 2005. In addition, no pressure is expected from the income side toward higher dwelling investment. Consequently, in our projection the level of dwelling expenditures remains unchanged in 2005. As a result of unchanged capital expenditure, the accumulation rate is expected to fall further and households' net lending to increase.

2.1.4 CORPORATE INVESTMENT

Manufacturing investment was level in Q2, after seeing a strong rise in the first quarter. Whereas the actual data for Q1 was higher than could have been inferred from

[20] Accumulation rate equals the proportion of disposable income spent on accumulation of real assets (usually residential property investment).

other indicators of economic activity, the exact opposite was true in respect of the actual data for Q2. This reversal was not characteristic of the entire corporate sector—growth in the second quarter was largely in line with the forecast in the August *Report*. Over the short term, therefore, we have lowered our forecast for manufacturing investment and expect greater uncertainty. However, the forecast for the entire corporate sector has been broadly maintained.

Over the medium term, weaker external demand and a stronger real exchange rate relative to the August assumption are expected to hamper growth in business sector investment. Nevertheless, the clearer outlook for external demand which has emerged recently reduces the medium-term risks to the forecast for fixed investment activity.

Table 2-10

Annual average growth of business fixed investment, per cent

	Actual		Forecast		
	2002*	2002**	2003	2004	2005
Manufacturing investment	-10.4	-9.0	2.0	5.3	5.6
Corporate investment	-4.6	-2.1	3.4	5.2	6.2

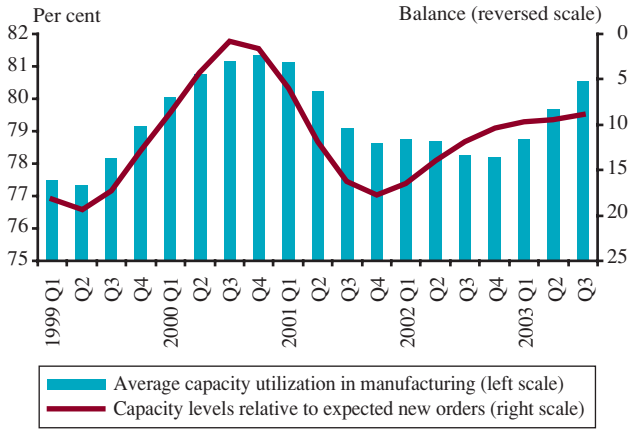
* *The original data of the CSO for 2002 GDP data. Our forecast is based on these figures.*
** *The revised 2002 GDP data published by the CSO on 21st October 2003. See Section 5.1.*

In the August *Report*, economic conditions were assessed against the background of a strong increase in manufacturing investment in Q1, noting that its scale may have been excessive and might be corrected later. Based on data for Q2, this predicted correction took place. Nonetheless, this does not mean that economic prospects have worsened. On the contrary, according to the Kopint-Datorg corporate survey conducted in Q3, capacity utilisation grew in the period, with an increase in the proportion of firms that judged their capacities to be low in relation to their expected orders as well. Although the low outturn for the second quarter has reduced the 2003 estimate of 3.4% in the August *Report* to 2.0%, we continue to expect investment activity to gain upward momentum. The risks too are now somewhat lower than earlier. This view is also supported by the improvement in expectations attached to domestic economic activity relative to the previous quarter.

However, the short-term outlook for the corporate sector has barely changed: second-quarter actual data conformed with our forecast. Hence, growth in corporate sector investment in 2003 has remained broadly unchanged at 3.4%.

Chart 2-6

Current and expected capacity utilisation in manufacturing *(Based on the Kopint-Datorg survey)*



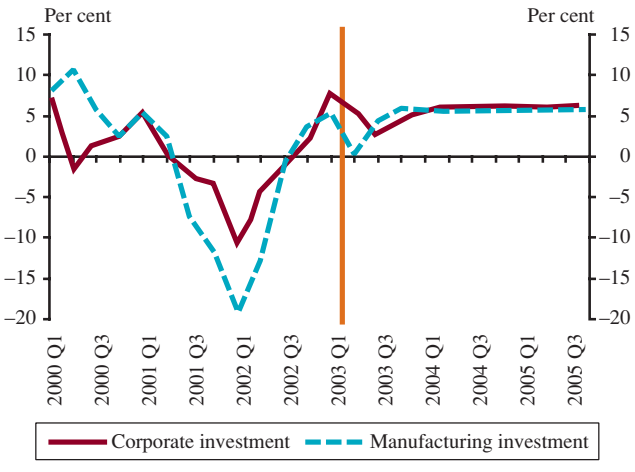
Fixed investment is expected to grow more modestly in 2004 than forecast in the August *Report*, as a result of the lower level of external demand and a stronger exchange rate, affecting primarily manufacturing. The higher exchange rate of the forint vis-à-vis the euro, along with basically static unit labour costs, means that we have not incorporated in the current forecast the projection for a more modest improvement in competitiveness which was postulated in the August *Report*. Based on these assumptions, our forecast calls for manufacturing investment to grow by 5.3% in 2004.

We expect corporate sector fixed investment in 2004 to slow by slightly less, as the rate of growth of investment in market services is unlikely to change much relative to the previous data. Moreover, the forecast for consumption demand has been revised upward, although its impact on investment by market service

Chart 2-7

Fixed investment volume in manufacturing and the corporate sector

(Annualised quarter-on-quarter growth rates)



providers is only indirect and is difficult to capture. Overall, we expect corporate sector investment to expand by 5.2%, just marginally less than the forecast 5.3% growth provided in August.

Investment in manufacturing and the entire corporate sector in 2005 is expected to grow at a similar rate as 2004. This reflects the assumption that a more modest slowdown in output of market services will be accompanied by an improvement in quarterly growth rates (see Section 2.2), so the sector's investment activity will remain higher than in manufacturing. Fixed investment in the corporate sector and in manufacturing is forecast to grow by 6.2% and 5.6% respectively in 2005.

2.1.5 INVENTORY INVESTMENT

Whether it is the cyclical upturn or other processes that are reflected in the figures remains an issue even after the release of actual inventory data for Q2. The picture of economic activity painted by output data and projections (see Section 2.2) would be consistent with the increase in purchased inventories, while the level of finished stocks would rather be declining.

Manufacturing inventories have been increasing relatively strongly for nearly a year now. At least half of this, however, has been accounted for by a build-up in finished goods inventories. While the rise in the stocks of purchased inventories may point to more favourable expectations attached to the business cycle, it is possible that this relates mainly to activities in the external markets, which may also be inferred from the relatively robust pick-up in manufacturing exports. Consequently, inventory changes have not yet provided solid evidence in respect of the domestic business cycle.

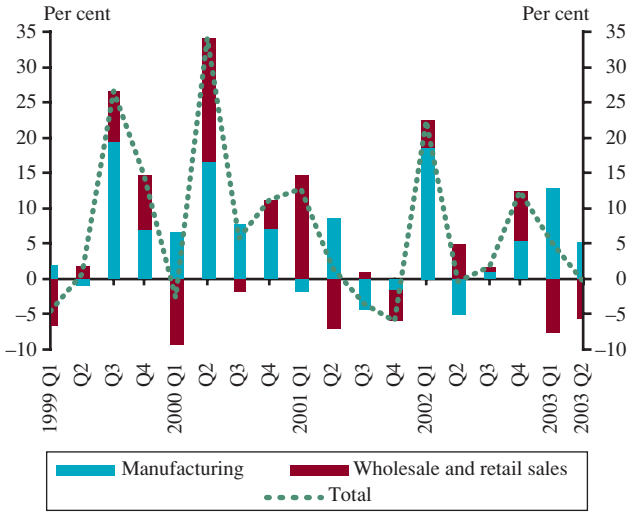
However, retail sector inventory stocks (nearly all of which are composed of purchased stocks) fell drastically in 2003 H1. That may be attributable to our increasingly strong view outlined in Section 2.1.5 of the August *Report* that this may be linked to reduction of inventories by the firms involved, in anticipation of a slowdown in consumption in 2004.

As a result of the different developments in the two types of inventories, whole-economy inventories stagnated in 2003 Q2, after rising in previous quarters. This stands in contrast to the massive rise in stocks in the GDP statistics released for Q2; but it should be noted that discrepancies between the two types of whole-economy inventory data[21] have occurred in the past. This in turn appears to reinforce the view that developments in inventories continue to be too uncertain for conclusions to be drawn in respect of the domestic business cycle.

Chart 2-8

Whole-economy inventories

(Annualised quarter-on-quarter growth)



2.1.6 EXTERNAL TRADE

This year can characterised by sluggish exports and buoyant import growth, with net exports restraining the rate of economic growth. This situation can be explained by weak external demand and strong domestic demand. In 2004 and 2005 we expect the picture to change due to the pick up in external demand already visible this year and the slowdown in domestic demand, and thus net exports will again contribute to GDP growth.

In our August forecast we expected that external trade would hamper economic growth in 2003. In 2003 H1, developments in external trade proved to be even more negative than anticipated. Explanation for this was the decline in external demand and the increasing appetite of robust domestic demand for imports. The rate of export growth was weaker than forecast, whereas imports grew more rapidly than thought. The size of Hungary's export markets expanded only marginally in H1, due to the revision of data for the country's trading partners, which was also consistent with the slow increase in Hungarian exports.[22]

We anticipate stronger growth in exports in H2, as is underlined by recent trade data. Import growth continues to be robust, but the slowdown in domestic demand has reduced import demand.

[21] It should be noted, that the so called statistical discrepancy is also accounted for in the change-in-inventories item.

[22] In analysing this year's export data, the 'X-box' effect significantly increasing foreign trade turnover in 2002 H1 should not be neglected, which added some 2 percentage points to the annual rate of trade flows last year. The appearance of the X-box in foreign trade is the result of a one-off relocation decision, and is not informative in respect of long-term developments. Based on data calculated after eliminating this effect, the quarter-on-quarter indices signal a pick-up in exports from 2003 Q2.

Growth in whole-economy exports will be slower than growth in goods exports in 2003, due in part to the decline in travel revenue. Travel revenue has continued to fall this year, similar to 2002. The slowdown in global economic activity has been the principal cause of this weak performance of travel, although the effect of the earlier real appreciation of the forint exchange rate also played a role.

We expect exports to grow slightly more strongly than Hungary's external markets in 2004 relative to 2003. This trend is forecast to continue in 2005. However, the delayed effect of the real appreciation of the exchange rate in the previous two years will likely undermine export growth in 2004. A stronger real exchange rate than assumed in the previous *Report* represents a downside risk to next year's export growth, but we assume this effect to be offset by the greater-than-previously expected responsiveness of Hungarian exports to developments in external business conditions. Exports are expected to increase more rapidly than imports in 2004; and the need for imports borne by domestic demand declines considerably. In our forecast, whole-economy exports and imports rise by 7.5% and 6.0%, respectively, in 2004.

In 2005, exports are expected to continue growing and imports to pick up slightly as an effect of a tentative upturn in domestic demand. In the current forecast, whole-economy exports rise by 8.1% and imports by 7.0%.

Chart 2-9

Export and import developments*

(One year earlier, per cent)

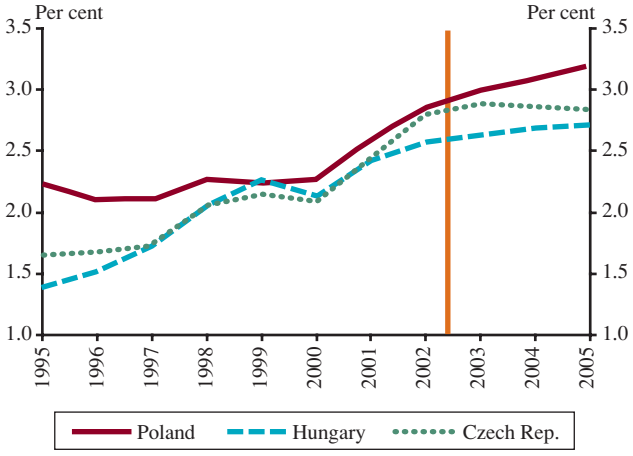
** Volume of goods and services trade.*

One way of measuring international competitiveness is to examine market shares.[23] For the acceding countries, comparing their shares of the EU's import market is a natural choice. As discussed in our earlier analyses, the three largest acceding countries (the Czech Republic, Poland and Hungary) all increased their share of EU imports up to 2002. This process even gained pace, after stalling in 2000.

Using the forecasts for the three countries under examination and for the growth of EU imports, we have estimated the developments in the three countries' market shares for the period up to 2005. According to the results, only Poland is likely to continue increasing its market share dynamically. Despite its relatively weak export performance in 2003 H1, Hungary will likely be able to add to its market share, although the extent of this gain will be much more modest than in earlier years. Surprisingly, the Czech Republic may even lose some of its market share from 2004, based on the current projections.

Chart 2-10

Market share developments*



** Source: Eurostat. For definition of market shares, see footnote no. 23.*

2.1.7 EXTERNAL BALANCE

For the first time, our forecast contains an analysis of Hungary's current account according using a methodology which includes non-residents' reinvested earnings in Hungary as well. The reason for the shift to this approach is that the MNB will begin releasing data on non-residents' reinvested earnings in its official balance of payments releases starting from 2004.

The financial accounts data published by the MNB make it possible to analyse Hungary's external equilibrium position in accordance with standard international methodology from 1998. Data for earlier years have been produced using estimates. The MNB will publish the official data series on 31 March 2004, going back to 1995.[24]

It should be noted that recording reinvested earnings does not entail an extra financing requirement, as non-

[23] Market share is defined as the share of exports from a given country within all extra-EU imports of EU countries; based on data at current prices by the Eurostat.

[24] The data shown in this section are based on expert estimates for the period pre-1998. See Section 5.2 for more details.

residents' reinvested earnings are recorded as direct foreign investment with an offsetting amount in the financial account. However, taking account of reinvested earnings allows to make comparisons with international balance of payments data, and the adjusted balance of payments tend to behave differently along the economic cycle. Dependence on foreign owners has become more emphatic as a result of direct investment, as their decisions to reinvest their profits do have a considerable influence on external balance.

The balance of payments, calculated according to this method (to be applied from 2004), shows a 2–2.5 percentage point higher deficit as a proportion of GDP. This new external equilibrium indicator paints a considerably different picture for earlier years as well.[25] Taking account of reinvested earnings, the 1995 adjustment is seen in a different light. The influence of the adjustment on external balance was significant, though smaller and shorter than one was led to believe based on earlier data. The results of our examination have shown that developments in corporate investment has the strongest impact on the external balance, in addition to the changes in the position of general government.

In 2001–2002, the large-scale deterioration in the position of general government was not accompanied by a considerable shift in the external balance because firms reduced their investment activities significantly.

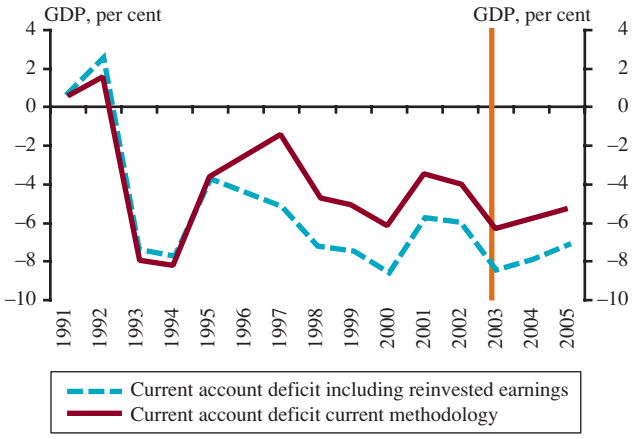
In 2003, the position of general government has improved slightly, but partly as a result of fiscal policy there has been a large fall in household sector net savings. The corporate sector financing requirement has increased in line with the development of the external economic cycle, and thus it has been the change in the private sector's position that has caused the deterioration in external balance.

We expect the general government borrowing requirement to decline in 2004–2005. The private sector's financing capacity will likely be lower as corporate investment picks up. However, its extent will be smaller than the contractionary impact of general government on demand. Consequently, the external financing requirement will fall slightly.

Developments in reinvested earnings raise the issue of how investors' willingness to reinvest earnings evolved in the period and what assumptions can be employed in respect of the future. The ratio of non-residents' reinvested earnings to their total income has been stable in Hungary in recent years, fluctuating at around 50%. With the decline in corporate investment, willingness to reinvest earnings fell in both 2001 and 2002. According to our forecast, reinvested earnings as a proportion of non-residents' total earnings rises in Hungary from 2003, in tandem with the upturn in the corporate investment cycle.

Chart 2-11

Current account deficit according to the current and new methodology in effect from 2004*



** Pre-1998 data are estimates. Data for 1998–2002 is from the financial accounts published by the MNB. See Section 5.2 for more details.*

Chart 2-12

Reinvestment ratio*

** The ratio of non-residents' reinvested earnings in Hungary to their total income earned in Hungary.*

Compared to the projections in the August *Report*, based on the methodology currently in effect, the current account deficit is expected to be 6.4% of GDP in 2003, higher than projected earlier, as a result of the increase in the general government borrowing requirement. We fore-

[25] Our analysis of the external equilibrium indicator which includes reinvested earnings was published in the June 2003 Report on Financial Stability. (http://english.mnb.hu/dokumentumok/stabil_0306_en.pdf). For a detailed analysis, see Zsuzsa Fekete and Gábor Vadas: A new approach to external equilibrium, MNB Background Studies (currently in publication).

Table 2-11

Current account deficit and financing capacity of sectors according to the current and new methodology in effect from 2004 *(As a per cent of GDP)*

	2001	2002	2003	2004	2005
	Estimate		Forecast		
I. General government*	(–5.0)	(–9.3)	(–8.2)	(–7.4)	(–6.4)
II. Private sector (1+2)	2.2	5.6	1.9	2.0	1.9
1. Households	5.1	2.6	0.2	0.4	0.6
2. Corporate sector**	(–2.9)	3.0	1.7	1.6	1.3
*Financing requirement (I.+II.)****	*(–2.8)*	*(–3.7)*	*(–6.4)*	*(–5.3)*	*(–4.5)*
Current account balance	**(–3.4)**	**(–4.0)**	**(–6.4)**	**(–6.0)**	**(–5.3)**
–in EUR billions	(–2.0)	(–2.8)	(–4.7)	(–4.7)	(–4.5)
Reinvested earnings	(–2.3)	(–2.0)	(–2.2)	(–2.1)	(–2.0)
Corporate sector including reinvested earnings	(–5.2)	0.9	(–0.5)	(–0.6)	(–0.7)
Financing capacity including reinvested earnings****	(–5.1)	(–5.8)	(–8.5)	(–7.5)	(–6.5)
Current account balance including reinvested earnings	**(–5.8)**	**(–6.1)**	**(–8.6)**	**(–8.1)**	**(–7.3)**
–in EUR billions	(–3.3)	(–4.2)	(–6.3)	(–6.4)	(–6.2)

* *Specially constructed cash flow indicator to analyse net saving positions. It includes not only the general government's balance, but also the financing requirement of some publicly owned corporations.*

** *Financial and non-financial corporations combined. Government spending on motorway construction is included in general government sector data.*

*** *The external financing requirement includes the current and capital account balances.*

**** *Reinvested earnings have been derived from the MNB's financial accounts data. See Section 5.2.*

cast the external financing requirement to fall by about 1% as a proportion of GDP in 2004. However, due to the methodology of recording EU-related transfers, the current account deficit is expected to be 6.0% of GDP, nearly the same as this year. The current account deficit is expected to fall modestly in 2005, to 5.3% of GDP, as an effect of the fiscal adjustment programme.

The increase in the external financing requirement in 2003 is expected to be stronger than assumed in the August *Report* due to the higher general government borrowing requirement. At the same time, the private sector's financing capacity will likely fall, in line with our previous forecast. This is due to the fact that, based on data currently available, outstanding housing loans will rise robustly, accompanied by a high level of household consumption. Household consumption and demand for housing loans are not expected to increase further in Q4, so the sector's net saving position will remain positive, though much lower than in 2002. Corporate sector financing capacity will also fall this year, as firms' capital expenditure has resumed rising after declining in 2002.

In our forecast for 2004, the external financing requirement is lower as a proportion of GDP. The general government borrowing requirement also falls as a result of the fiscal contraction of demand, though it remains at a very high level. Household disposable income rises at a much slower pace than in 2003, so households' net savings are forecast to increase slightly. Corporate sector investment grows in line with development of the external business cycle.

If the deficit reduction plan set forth in the PEP is implemented, the fiscal contraction of demand will continue in 2005 and, as a result, the external financing requirement will fall moderately. In our forecast, household net savings continue to be stable rather than to rise. Firms' capital expenditure grow only slightly, with a resulting increase in their financing requirement.

The effect of EU accession is assumed to be neutral for the external financing requirement. According to our calculations, the effects of EU transfers, the different recording of customs duties and contributions by Hungary will be offsetting overall. In our assumption, EU-related settlements will add some 0.4% of GDP to the current account deficit, as Hungary's contributions will be recorded as transfers among current items, while a part of transfers from the EU will be recorded in the capital account.

2.2 Output

External demand turned out to be lower than previously thought, and the real exchange rate stronger. Consequently, a moderate deterioration in competitiveness has narrowed the room for domestic output to grow. Nevertheless, by 2005, manufacturing output and value added should both rise at a robust pace.

Over the medium term, market services value added reflects the slowdown in consumption expenditure and a lower external demand path relative to the previous assumption. As a result, market services value added is expected to grow below its rate seen in previous years. Growth in construction is also anticipated to continue slowing, although some recovery may start in 2005.

Table 2-12

Output

(Average annual growth rates, per cent)

	Actual		Forecast		
	2002**	2002***	2003	2004	2005
Gross output of manufacturing	3.9	3.9	3.4	6.0	7.9
Value added in manufacturing*	0.8	2.8	1.6	5.2	6.4
Value added in market services	4.1	5.1	3.9	3.5	3.0
Value added in construction	10.0	16.7	5.7	3.8	4.5

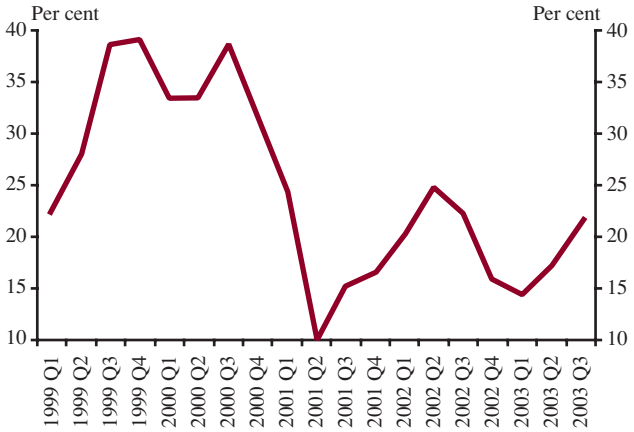
* *Adjusted series.*
** *The original data of the CSO for 2002 GDP data. Our forecast is based on these figures.*
*** *The revised 2002 GDP data published by the CSO on October, 21. See Section 5.1.*

As mentioned in the August *Report*, domestic manufacturing began to pick up from early 2002. In the given phase of the business cycle, this could only be explained by the simultaneous robust expansion of German imports. This explanation was underscored by the fact that whereas sales in domestic manufacturing were flat, exports were clearly experiencing a dynamic upturn. Hungarian subsidiaries of large German firms which exported primarily investment goods must have played a dominant role in this process. This early recovery was accompanied by value added growing with a significant lag behind gross output. This difference has been reduced in the revised GDP data published by the CSO (see Section 5.1).

Growth in domestic manufacturing output stalled in 2003 Q1, possibly in relation to the particularly strong increase in uncertainties surrounding the prospects for external demand. However, expectations regarding external economic conditions saw significant improvement from the second quarter, giving new impetus to gross manufacturing output, albeit the increase in value added continued to be weak in the second quarter. Based on data for Q3, domestic business sentiment seems to have recovered. Consequently, we expect manufacturing output growth to gather momentum in the second half. All this may allow gross manufacturing output to grow by 3.4% and value added by 1.6%.

Chart 2-13

Domestic business confidence index from KOPINT survey *(Data weighted by the MNB*)*



* *An increase in the index indicates improving business confidence.*

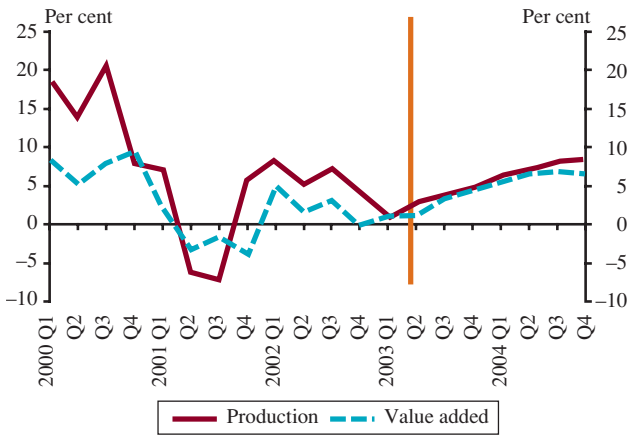
Two factors limiting the extent of growth over the medium term are that the level of external demand has been lower and the unit labour cost-based real exchange rate has been stronger than we expected. Consequently, although manufacturing output will likely grow evenly in 2004, its rate will be lower than forecast in the August *Report*. On a yearly average, gross output may rise by 6.0% and value added by 5.2% relative to 2003.

In 2005, annual growth rates will likely reflect the vigorous development of external demand, and hence manufacturing is expected to grow relatively strongly, equivalent to a 6% expansion of the size of Hungary's export market—gross output and value added may grow by 7.9% and 6.4%, respectively. There remain substantial upside risks to this growth path, as export sales may potentially be considerably higher relative to the central projection.

Chart 2-14

Manufacturing output and value added*

(Annualised quarter-on-quarter growth rates)



* *After correcting actual data for 2002 Q3–Q4.*

Growth in market services has been declining recently. Transport services, linked more to the evolution of external economic activity, and financial services have been the major causes of this development. In 2002 and the first half of 2003, the strong increase in household consumption kept the growth rate of value added in commercial services at high levels, which had a counter effect. However, in 2004 the growth of household consumption is expected to slow considerably, in addition to an increase in taxes affecting consumption. Accordingly, the rate of growth is likely to moderate further in market services, despite the rebound in external demand. We expect growth to be 3.9% in 2003 and 3.5% in 2004. Value added in market services will likely continue to grow along this lower quarterly growth path in 2005. We do not expect growth to decelerate further; indeed, growth will likely pick up towards year-end as an effect of the recovery of external demand. However, all this implies some 3% growth for the year as a whole, lagging behind the outturns for earlier years.

The performance of construction was weak in 2003 Q1 (probably the result of the unusually bitter winter), followed by a correction in Q2 towards the path forecast in the August *Report*. Nevertheless, the data which have become available (most notably the stock of construction firms' existing orders and the size of new orders) suggest a further slump in growth. The fall in the stock of existing orders for construction firms' output mainly affected the category 'other structures'. In addition, building construction is expected to grow at a slower pace. The sector's value added is thus expected to be only 3.8% in 2004, after rising by 5.7% in 2003. We expect output of 'other structures' (which include the most important central government orders as well) to increase mildly in 2005. Consequently, the sector's total output may reach 4.5%.

3 Labour market and competitiveness

In the preceding quarter there were further signs of slower corporate nominal wage adjustment to disinflation: wage inflation has stopped declining in manufacturing and has edged up slightly in market services. In our assessment deceleration in wage adjustment is transient in both manufacturing and market services. Wage inflation is expected to fall in both sectors from 2004, although for different reasons and to varying degrees.

Similarly to the previous *Report,* in formulating the wage projection, we attached great importance to both short and long-term inflation expectations. Accordingly, our key assumption is that companies come to realise that the increase in consumer prices generated by indirect taxes will not produce extra sales revenues in 2004. As companies do not interpret rising prices as a general inflation shock, they are unlikely to adopt a softer wage policy. It is also assumed that corporate bargaining power is strong in wage negotiations, so companies will be able to defy all potential, higher inflation-induced demands for higher wages. Should the above assumptions fail to materialise, inflationary pressure in the private sector may well be higher than previously projected.

Relative to our last forecast, cost-push inflation (quantified on the basis of ULC) is unlikely to increase substantially in the private sector in both 2003 and 2004. A stronger exchange rate is expected to trigger more forceful adjustment in manufacturing. As a result, nominal wage inflation will decrease more considerably, whereas productivity will grow more dynamically there than in market services. Consequently, unit labour costs are expected to remain broadly the same in manufacturing in both 2004 and 2005, and increase by 7.5% and 5.5%, respectively, in market services.

Table 3-1

Summary table of labour market indicators

(Percentage changes on a year earlier)

	MNB estimate*	Projection				
		August *Report*		Current *Report*		
	2002	2003	2004	2003	2004	2005
Manufacturing						
Employment	(–1.9)	(–1.9)	(–0.1)	(–2.0)	(–1.0)	0.4
Wage inflation*	11.6	8.2	7.3	8.0	7.0	5.9
Productivity**	2.7	4.3	5.4	3.8	6.1	5.7
ULC****	7.2	2.9	1.7	3.1	0.3	0.1
Market services						
Employment	1.5	1.8	0.9	2.0	2.3	1.6
Wage inflation*	13.5	10.3	8.8	10.2	9.4	7.1
Productivity**	2.6	2.1	2.6	1.9	1.0	1.4
ULC****	9.1	7.3	5.8	7.4	7.5	5.5
Private sector**						
Employment	(–0.2)	0.0	0.4	0.0	0.7	1.1
Wage inflation*	12.6	9.3	8.1	9.2	8.3	6.5
Productivity**	2.8	3.2	3.8	2.9	3.4	3.3
ULC****	8.0	5.1	3.9	5.2	4.1	3.0

* *MNB estimates based on data reported by the Central Statistical Office (see Manual to Hungarian economic statistics).*

** *Average of manufacturing and market services.*

*** *Productivity: volume of value added per employee. The recent revision of 2002 manufacturing value added data is not considered.*

**** *ULC denotes nominal increases in labour costs per unit of value added. The recent revision of 2002 manufacturing value added data is not considered.*

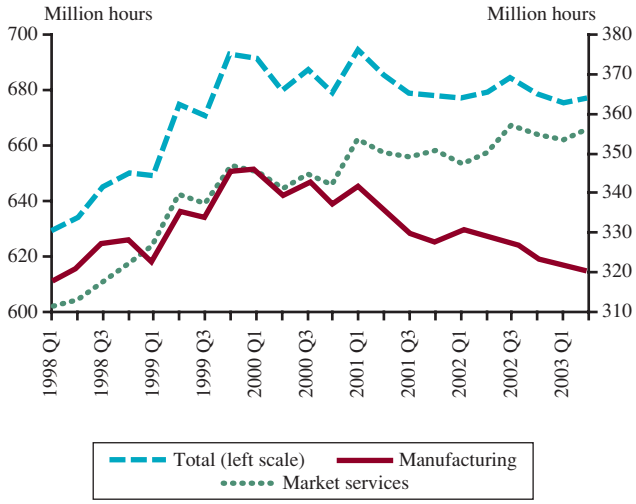
3.1 LABOUR USAGE

Total number of hours worked is considered a good indicator of labour usage as a factor of production. Total hours worked provides a combined appraisal of the effect of changes in staff and the hours worked per person (a type of labour intensity). The 2003 Q2 data show that total hours worked in the private sector continued to decline slowly. As a result, labour usage in the private sector has been moderate since early 2001. The underlying reason for this is conflicting developments in the labour market in manufacturing and market services.

Chart 3-1

Average weekly hours worked by manual workers in manufacturing

(Manufacturing and market services, million hours per month)

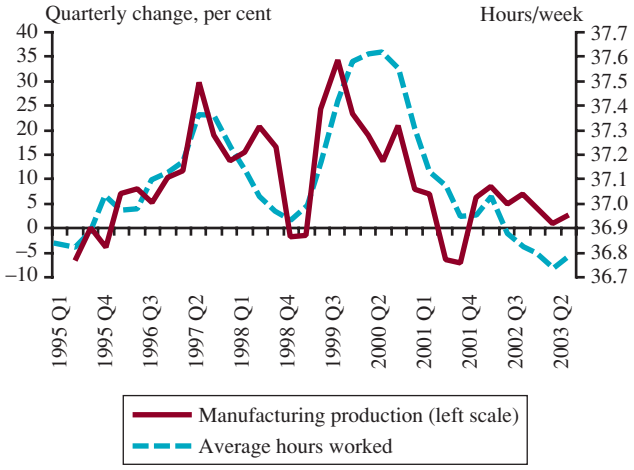


Total hours worked in *manufacturing* has plunged since end-2000, the underlying reasons for which are lower employment and a drop in the number of the average hours worked. Though the August *Report* stated that average hours worked by manual workers in manufacturing had started to increase at the start of 2003, based on recently revised CSO data, the turning point now seems to be in the last quarter. This continues to represent a large degree of uncertainty surrounding the perception of the relevant developments. Moreover, the increase in the total hours worked in the past quarter has not affected all the sectors identically: it was most pronounced in the chemical, timber and textiles industries. It has, however, left machinery (representing the largest weight and the strongest expansion in production) unaffected.

The business cycle and average manual hours in manufacturing moved in close conjunction between 1995 and 2001. That is, labour usage was on the increase in the upward phase of the cycle while in the downward phase companies chose to decrease working hours rather than resort to costly layoffs. Since 2002, however, there have been signs of incongruity in this co-movement. Despite a pick-up in the business cycle, the number of hours worked declined steadily until early 2003.

Chart 3-2

Co-movement of output and working hours in manufacturing



Due to the fact that data series on working hours are often revised, this is likely to be a transitory phenomenon. At the same time, however, permanent changes in earlier trends may suggest that, in addition to the business cycle, other factors also affect labour usage in manufacturing. Such factors include changes in the structure of production, i.e. in the ratio of input factors of production.

Reduced labour usage and slowly but steadily expanding production combined to generate robust growth in productivity in manufacturing from year-end 2002.

Either innovative production technologies (technological shocks) or substituting capital for labour to a growing extent may account for the increased productivity. We assume that the phenomenon of substituting capital for labour may be ascribed to the fact that labour costs have risen dramatically over the past two years. At the same time, subdued manufacturing investment and highly volatile data in the past quarters significantly add to the uncertainties surrounding this assumption.[26]

As any potential change in the structure of production is part of long-term corporate strategies, we assume that, despite further recovery in the business cycle, employment in manufacturing is unlikely to rebound to its 2000 level. Accordingly, we project changes in the sectoral distribution of employment. That is, in our assessment, a certain number of employees laid off in manufacturing will be absorbed by the market services sector.[27]

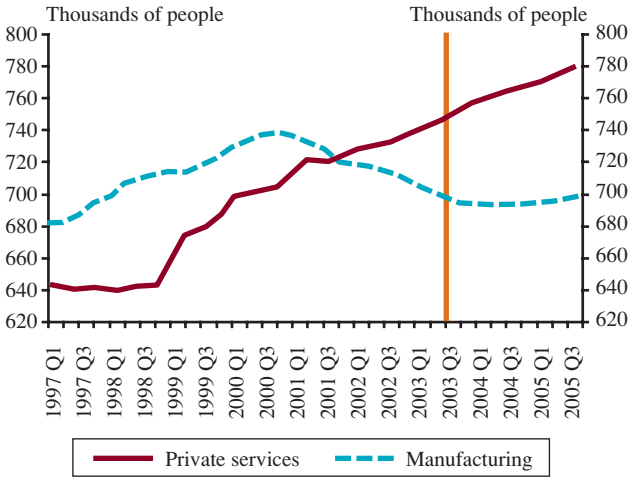
Labour usage in *market services* has been improving since 2000, which primarily means dynamic increase in employment with broadly flat average hours worked. The recent increase in employment in the market services sector can be attributed to consistently strong domestic demand. We assume that external demand will take over the role of weaker domestic demand in 2005. As a result, a stable recovery is expected in the market services sector in the future.

Our projection for employment is in keeping with the foregoing. The recovery in the global business cycle, deteriorating competitiveness due to a stronger real exchange rate and corporate decisions on production input ratios all combine to influence employment in manufacturing. Such factors are expected to reduce employment in manufacturing until the year-end 2004, and then boost it slightly in 2005.

In the market services sector the business cycle allows employment to rise steadily, with labour becoming available owing to redundancies in manufacturing. We project an annual average increase of 2% in employment in the market services sector between 2003 and 2005.

Chart 3-3

Number of full-time employees



In all, this year we expect a stagnating level of employment in the private sector as a whole. In 2004–2005 we project labour demand to revive somewhat, with a concomitant modest increase in private sector employment.

[26] Note however, that part of the decline in manufacturing employment is linked to a rather permanent fall in textiles industry. This is not likely to be part of a capital/labour substitution.

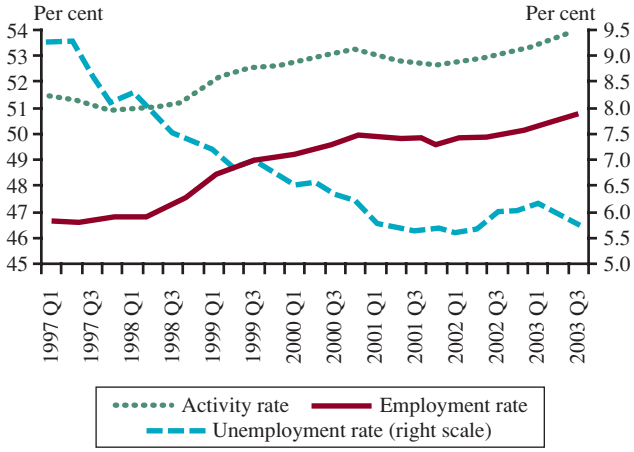
[27] Sectoral shifts are also expected to affect the government sector. Employment there is expected to fall by over 4% (equivalent to 30,000 persons) by the year-end 2005 (see Section 2. 1. 2). We project that a certain number of the employees to be laid off in the government sector will find employment in the market services sector.

3.2 Labour market reserves and tightness

Over the past one and a half years, the rate of unemployment, which is arguably a reliable near-term indicator of market reserves in economy, has only increased by 0.5 percentage point, despite downturns in the global economy and the real appreciation of the forint. This trend has been corroborated by data on registered unemployment. The reason for the moderate increase in unemployment is that although the participation rate has been rising steadily since early 2002, and no substantial labour demand has arisen in the private sector, dynamic growth in public sector employment has prevented the accumulation of significant labour reserves.

Chart 3-4

Rates of unemployment, activity and employment



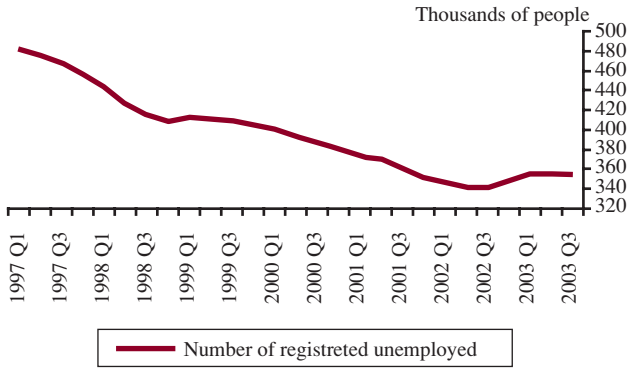
Based on the CSO Labour Force Survey.

Most recent data reveal that the upward trend in unemployment came to a halt in early 2003, with the rate already starting to fall slightly in Q2. The underlying explanation for this trend reversal is rising employment in the whole economy. Whether or not this trend will be permanent and, in turn, result in steadily falling unemployment in the coming quarters remains uncertain for several reasons.

One source of uncertainty is that *in the private sector* other information on labour demand fails to indicate a quick recovery in employment. Instances of announced mass redundancies have been on the increase since the start of 2002. Recent data, too, fail give any indication of changes

Chart 3-5

Changes in registered unemployment

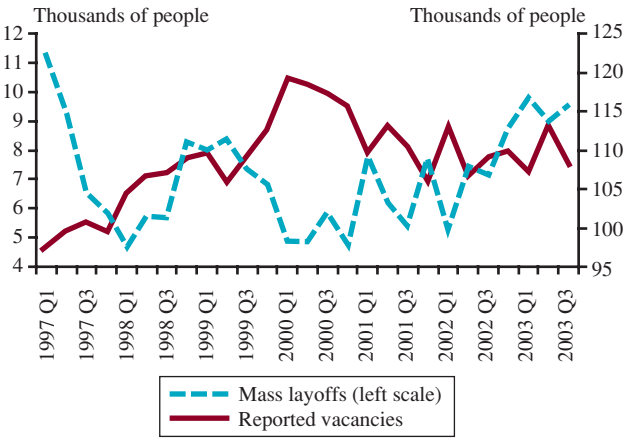


Based on data reported by the Employment Office

in earlier trends in Q2. At the same time, following a short period of increase, the number of reported vacancies has fallen. According to the data excess capacities seem to be present in the private sector, and we expect labour demand to strengthen over the longer term only.

Chart 3-6

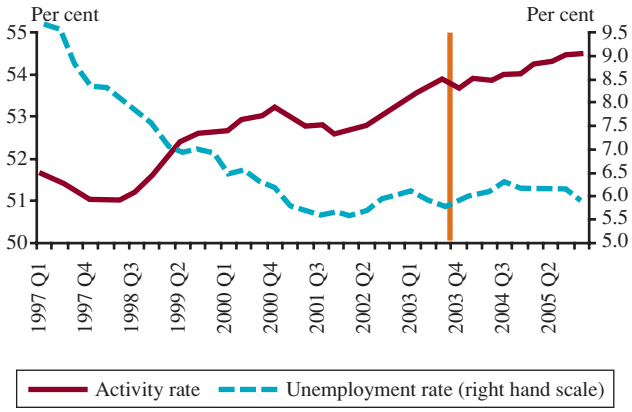
Number of announced mass layoffs and reported vacancies



The number of those included in the relevant quarterly report and the number of the reports in a given quarter (Source: National Employment Office).

Chart 3-7

Projection for activity and unemployment



The other source of uncertainty that adversely affects future whole-economy employment is the development of labour demand *in the public sector*. We anticipate that planned layoffs in the government sector will reduce labour demand in the public sector more markedly in 2004 and to a lesser degree in 2005. Taking into account slowly recovering labour usage in the private sector, this will result in rising unemployment. For lack of relevant information, at present no projection can be made as to how many of those to be laid off in the public sector will become inactive or how many will remain in the labour market and become unemployed. As there is no further relevant information, in preparing our forecast, we relied on the assumption that those to be laid off in the public sector would become either inactive or active in the labour market in equal numbers. So our projection is for a halt in the previous rise in the activity rate, with a renewed increase in the rate expected to begin in 2005. Unemployment rises slightly and remains around 6% over the forecast period.

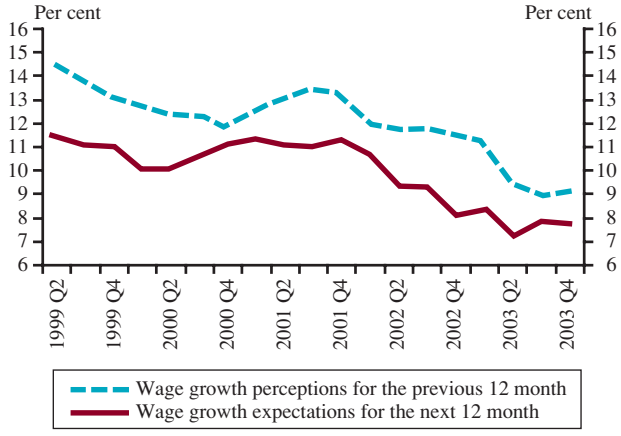
3.3 WAGE INFLATION

Corporate nominal wage adjustment to disinflation has slowed further since the August *Report*. Monthly data show that wage inflation in manufacturing has been flat since early 2003, and that nominal wage growth in the market services sector has yet again started to rise. As postulated in the August *Report*, the interruption in nominal wage adjustment can be attributed to buoyant demand and rising inflation expectations.

The most recent TÁRKI business survey reveals that firms' wage growth expectations have got stuck at the level recorded in July, indicating that the continuous decrease in wage expectations have come to an end. With wage growth expectations stuck, firms' inflation expectations have increased considerably (see Section 1.3).

Chart 3-8

Wage growth expectations



In addition to inflation expectations, the effects of strong demand may be contributing to this interruption in nominal wage adjustment. This particularly holds true for market services, while contrary to our previous assumption, no current signs of an upswing in labour demand are discernible.

In the market services sector wage inflation has been increasing for the past few months. However, due to the noisiness of monthly data, acceleration in wage growth cannot be interpreted as a long-term trend. In our opinion, the rather moderate growth that businesses in the market services sector has experienced in their labour-side profitability[28] over the past period does not allow for the possibility of the adoption of a more lax wage policy over the short term despite current strong demand. Accordingly, we assume that the recent data of an accelerating wage inflation in this sector show momentary effects.

Overall, wage inflation is expected to remain broadly flat in both manufacturing and market services during the rest of the year, which is corroborated by information on rising inflation expectations and a buoyant domestic demand. However, steady growth in the market services sector, wage inflation may pose upward risks to our near-term projection.

Relative to the August *Report*, our current long-term projection for developments in private sector wages remains basically the same. The reason for this is that in preparing our projection, we maintained two assumptions for firms' wage setting policy. One is that firms come to realise that increase in consumer prices generated by indirect taxes will not produce extra sales revenues in 2004. As producers do not interpret rising prices as a general inflation shock, they will not adopt a softer wage policy. The other is that firms' bargaining power is strong in wage negotiations, so they can defy all potential, higher inflation-induced demand for wage increase. In so doing, they will be able to practically pass increased tax burden on to consumers.

Changes over the past quarter in other exogenous factors embodied in the projection have modified our expectations of wage dynamics in the individual sectors. A stronger exchange rate, slightly subdued external and vigorous domestic demand and anticipated moderate labour demand in manufacturing all point to faster nominal wage adjustment in manufacturing and slower nominal wage adjustment in the market services sector. Sales prices of tradables kept low by the stronger exchange rate and lengthy sluggishness in productivity owing to subdued external demand

[28] Firms' labour-side profitability is approximated using the inverse of real ULCs.

provide little room for nominal wage increase in manufacturing. Substantial labour reserves in this sector may also result in lower wages.

By contrast, higher sales prices in market services and productivity growth induced by vigorous demand may well lead to more vigorous growth in nominal wages. Labour reserves are tighter in this sector, which may give employees an edge in wage negotiations.

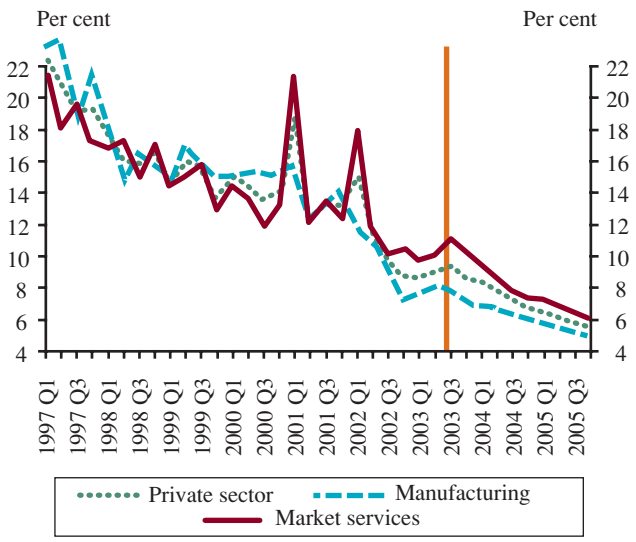
Given these factors, we project nominal wage growth of 7% and 9.4% in manufacturing and market services, respectively, in 2004. Wage inflation is expected to be 5.9% in manufacturing and 7.1% in market services in 2005.

Our projection includes strong upside risks to wage inflation. Continuation of the upward trend in wages in the market services sector experienced in Q3 over the short term may result in a higher inflation, and also the assumption on firms' inflation expectations leads to upside risks. Past experience has shown that wage inflation in the private sector usually exceeds the upper limits approved by the National Interest Reconciliation Council (NIRC) by 1-2 percentage points. If this pattern reoccurs next year, then the risks carried by wage increases in excess of our 8.3% baseline forecast for next year would be high despite the 7-8% target approved by NIRC. On the other hand, higher unemployment may lead to lower wage inflation.

Chart 3-9

Wage inflation projection*

(Annualised quarter-on-quarter indices)



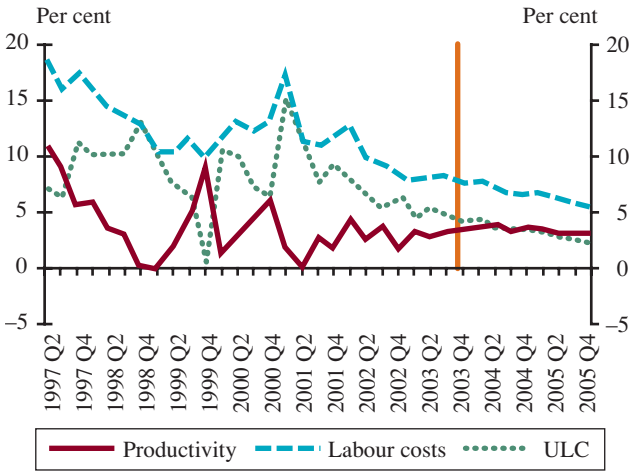
** Based on actual data available up to August 2003.*

3.4 Unit labour costs and competitiveness

In 2003 Q2, unit labour cost growth in the private sector was somewhat stronger than in the previous quarter, with an annual rate of approximately 5%. Positive dynamics means that the growth rate of wage costs is still well in excess of expansion in productivity. Furthermore, continuous slowdown in the dynamics of unit labour costs that started in late 2000 seems to have faltered in the past quarter. This can be attributed to slower nominal wage adjustment.

Chart 3-10

Productivity, wages and unit labour costs in the private sector *(Annualised quarter-on-quarter growth rates)*

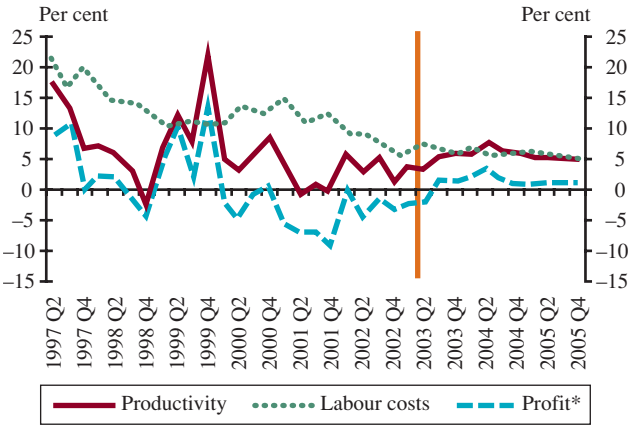


As described in detail in our earlier reports, domestic companies had to adjust to both external and domestic shocks in 2001 and 2002. Slack external demand led to flat productivity in manufacturing. Falling prices of tradable goods as well as wage inflation that—even with a stronger nominal exchange rate—was stuck at an earlier level of dynamics in productivity reduced firms' labour-side profitability significantly.

The fact that nominal wage adjustment failed to materialise in 2001 did not mean a complete lack of corporate adjustment. Corporate adjustment took place through curbing labour usage: first through the reduction of the hours worked, and then through layoffs. As a result, manufacturing productivity did not decrease. It remained flat in 2001, and then started to increase.

Chart 3-11

Productivity, wages and profits in manufacturing* *(Annualised quarter-on-quarter growth rates)*



** Changes in profits are approximated using the inverse of real ULCs. In fact, the category included in the chart denotes a term whose meaning is narrower than that of the rate of profit, for it does not comprise cost elements other than labour. In order to obtain Q3 data, data for September have been estimated with statistical methods.*

In 2002, nominal wage growth, too, started to adjust. This and improving productivity managed to prevent further substantial deterioration in firms' labour-side profitability that year. Nominal wage adjustment came to a halt again in early 2003. Yet, this failed to lead to further improvement in profitability, despite accelerating productivity.

The minimum wage hikes have amounted to cost shocks in market services in the past two years.[29] Though this sector has experienced a permanently buoyant business activity over the past quarter, increasing employment

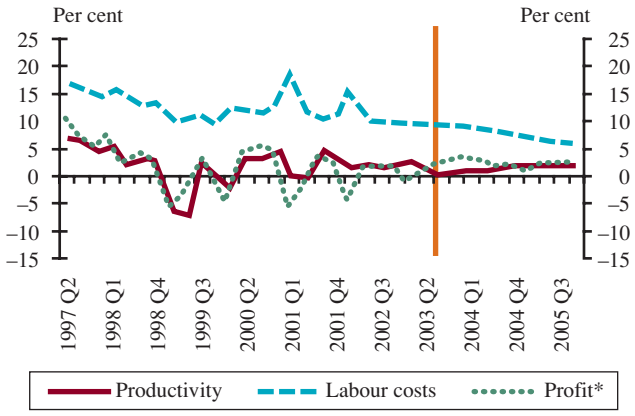
[29] Only part of the raises in the minimum wage actually adds to increase in wages because of the wages paid in the informal economy. (For details, see Manual on Hungarian Economic Statistics of the MNB.) The corrected time series that we have adopted allows for this actual effect.

has only allowed for the possibility of moderate growth in productivity. Firms' labour-side profitability in market services deteriorated in 2001 and 2002, owing to increases in the minimum wage. We believe that the increases in the minimum wage affect wage inflation only slightly in 2003. Nevertheless, wage adjustment, which is slower in this sector than in manufacturing, came to a halt in 2003 H1, with nominal wages starting to take off at an increasing pace. We assume that moderate expansion in productivity will prevent companies from adopting looser wage policies. Consequently, our projection is for flat wage inflation in 2003 and for a slow decrease from 2004.

Chart 3-12

Productivity, wages and profits in market services*

(Annualised quarter-on-quarter growth rates)



** Changes in profits are approximated using the inverse of real ULCs. In fact, the category included in the chart denotes a term whose meaning is narrower than that of the rate of profit, for it does not comprise cost elements other than labour. For Q3, data for September have been estimated with statistical methods.*

n keeping with its projections for wages, employment and output, we forecast different developments in the two sectors. The forint exchange rate, stronger than previously assumed, as well as a slow pick-up in external demand requires more significant adjustment. Accordingly, both employment adjustment and nominal wage adjustment are expected to take off from 2004. Vigorous expansion in productivity (6.1% and 5.7% in 2004 and 2005, respectively) may lead to a near-flat evolution of ULC (0.3% and 0.1%, respectively). As a result, corporate profitability may improve despite the stable prices for tradable goods.

Weaker domestic activity and recovery in the global business cycle in the market services sector are likely to generate steady demand. In addition, we forecast high market services inflation (see Section 1.2) which eases pressure for firms' adjustment in market services. Hence, in this sector wage adjustment is expected to be slower than in manufacturing, and lower productivity (1.0% and 1.4%, respectively) is likely to result in higher ULC dynamics (7.5% and 5.5%, respectively). We anticipate only slow improvement in profitability.

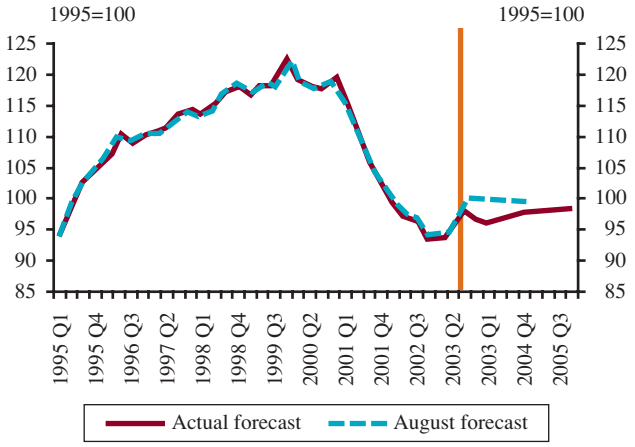
Overall, relative to the August *Report*, cost-push inflation in the private sector rises only slightly, with the individual sectors adding to inflationary pressure to varying degrees. Inflationary pressure will be negligible in manufacturing and rather considerable in the market services sector.

Based on manufacturing ULC, domestic firms' competitiveness has improved steadily this year. The main underlying reasons for this include a shift in the forint's exchange rate band and the subsequent nominal exchange rate depreciation. This is, however, a temporary phenomenon as in the longer term the real exchange rate—thus external competitiveness—depends on domestic price and wage cost developments.

With the technical assumption that the nominal exchange rate is constant, ULC should determine competitiveness in 2004. As domestic ULC dynamics is projected to lag somewhat behind that of foreign trading partners, competitiveness is expected to improve

Chart 3-13

ULC-based real exchange rate, manufacturing*

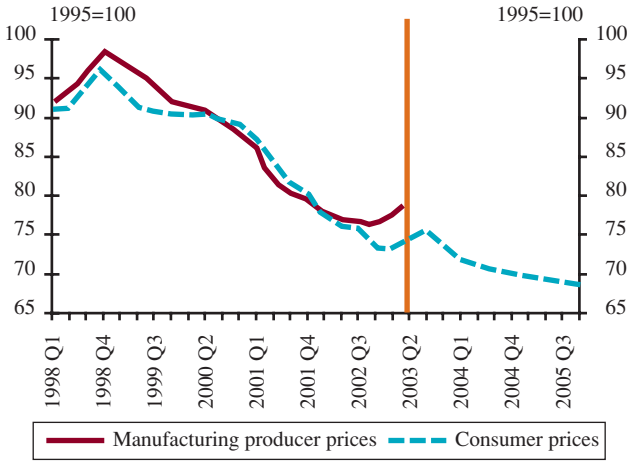


** Higher values denote real depreciation.*

already next year, though only slightly. Our projection is for a rise of 1.3% and 0.2% in 2004 and 2005, respectively, in domestic manufacturing competitiveness.

Chart 3-14

Price-based real effective exchange rate indicators*



* *Higher values denote real depreciation.*

Nominal exchange rate movement has also improved price-based competitiveness over the past period. Due to domestic inflation in excess of inflation in the non-resident sector, price-based competitiveness is expected to deteriorate gradually from Q4 onwards, amounting to a total of approximately 6% over a two-year period.

4 Monetary developments

4.1 International environment and risk perception

As Hungary is a small country with an open capital market, developments in the global economy affect its economic performance considerably. The Hungarian economy has become an integral part of the European economy through foreign trade and other forms of real economy co-operation. Due to close integration, developments in money and capital market rates in the euro area have a significant impact on both yields on domestic investments and the forint exchange rate. Euro yields are basically affected by the ECB's anticipated interest rate policy, which is currently greatly influenced by the outlook for the business cycle in Europe. Economic performance in Europe remains flat. Recovery is only likely to be experienced after the US economy and other overseas economies have started to pick up.

The growth outlook has improved in both the USA and Asia over the past few months. Brighter expectations in the USA can be attributed to improving indicators of profitability in the corporate sector. Cautious optimism may be justified by the fact that the corporate sector has managed to reduce excess capacity and the debts that it had incurred during the previous upswing in the business cycle. Such optimistic outlook is overshadowed by the fact that restructuring has added to unemployment and subdued investment activity. Nevertheless, business confidence has strengthened. Outstanding US Q3 GDP data (7.2%, preliminary) disclosed on 30 October further boosted the growth outlook. Expectations of a rise in interest rates heightened, longer-term interest rates rose and the prices of traded shares, mainly in Europe, increased. The improving outlook has, however, failed to spur on the Federal Reserve to change its monetary policy stance. Consequently, its key policy rate remains unchanged.

In the euro area, the economy barely scraped together 0.5% growth in 2003 H1. Moderate growth was mainly sustained by the increase in government deficit and an increased stock of inventories, and reduced by private consumption, investment and net exports. Both weak consumer confidence and inadequate demand for exports from Europe, owing to the lengthy sluggishness in global recovery, hindered growth. The lack of aggregate demand and a strong euro also put a brake on economic performance. Business cycle indexes in Europe suggests a moderate recovery in 2003 H2. The strength of the recovery, however, is still rather unpredictable.

Given these uncertainties surrounding the business cycle, it is hardly surprising that until October market participants still did not anticipate a rise in ECB rates for another few months. But a mid-summer increase in long-term euro yields suggests a possible reversal in the interest rate cycle over the longer term, which may well be 2004 H2. Outstanding US GDP data have boosted European bond yields. In October, there were signs of market expectations of an approximately 0.5% raise in interest rates by the ECB in the next 6 months. In response to improving outlook, traded prices at stock exchanges in Europe rose more rapidly and substantially than in the USA.

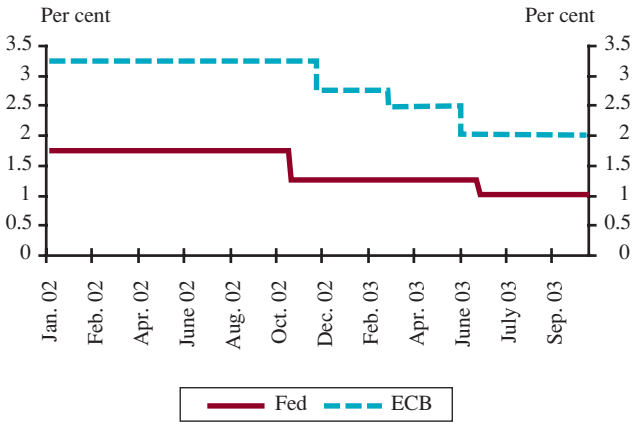
The rise in long-term yields early in the summer was not confined to the euro area. In mid-June, a slightly better outlook for the business cycle triggered a general wave of rises in long-term yields in the capital markets of advanced economies: first in Japan, then in the USA and finally in Europe. Markets responded to economic news rather asymmetrically: news of improving growth outlook enhanced expectations of interest rate rises promptly, whereas negative news with an almost identical amount of weight attached hardly affected interest rate expectations. Overall, yields continue to be at historical lows. Markets, however, are focussing on the anticipated start of a cycle of interest rate rises. Accordingly, expectations have become more volatile.

Global risk appetite has grown, while risk indicators have changed slightly for the better since the August *Report*. The credit rating of some emerging markets (e.g. Brazil and Russia) has improved. Low interest rates in advanced economies have also boosted non-resident investments. A number of observers point out, however, that an as yet uncertain turning point in the interest rate cycle expected to emerge in advanced economies in 2004 H2 may alter the investment climate that currently favours emerging economies.

Global improvement in the risk perception of emerging economies, however, has been accompanied with dete-

Chart 4-1

Federal Reserve and ECB key rates

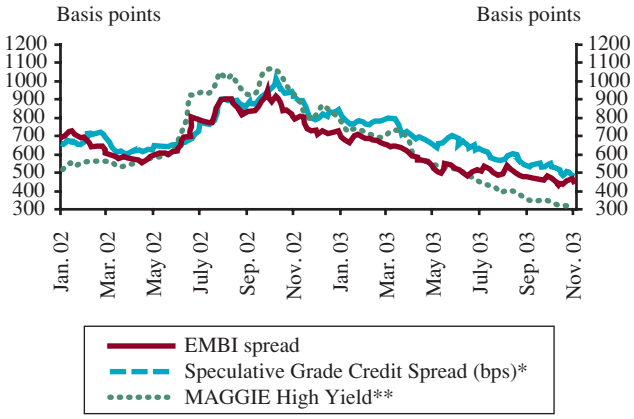


riorating risk perception of this region. In September, serious doubts were raised as to the feasibility of the 2004 budget in Poland, which in turn led to the zloty's significant depreciation in mid-September. Other countries in the region also face difficulties in the near future, which adds to uncertainties surrounding exchange rates and results in increased risk perception of the region. Growing uncertainties led Fitch credit rating agency to put a negative outlook on Hungarian debt in mid-July. On 4 November, leaving its ratings for Hungary and Poland unchanged, the agency changed its negative outlook on the FX debt of the other seven accession countries to a positive outlook. On 5 November, Standard & Poor's put a negative outlook on Poland's debt in zloty. The news of the Yukos affair broke on 25 October has further worsened the risk perception of the region.

Modification in the forint's intervention band in early June and information on the Government's proposal for next year's budget disclosed in July affected the risk perception of Hungarian economy adversely. Market participants were somewhat disappointed by the fiscal consolidation plan with increased tax revenues rather than expenditure cuts as its top priority. News of developments in the current account, especially the announcement of a higher-than-expected government deficit in mid-October, also sent a negative message.

Chart 4-2

Global indicators of risk



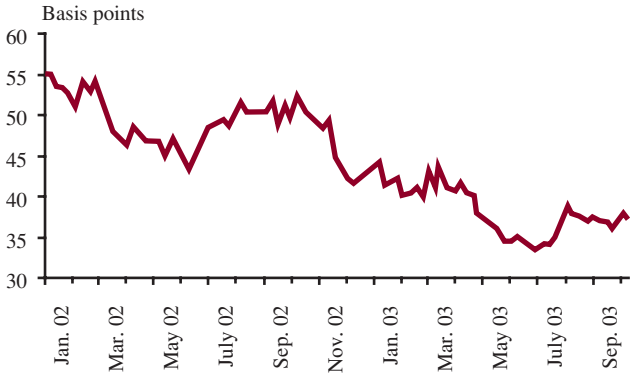
** S&P U.S. Industrial Speculative Grade Credit Index.*

*** S&P100 index option implied volatility.*

Spread on Hungarian FX-denominated sovereign bonds has increased somewhat since the August *Report*. This may be attributed in part to increased euro yields, but even more importantly to uncertainties surrounding Hungary's economic outlook.

Chart 4-3

Spread on Hungary's euro-denominated sovereign bonds

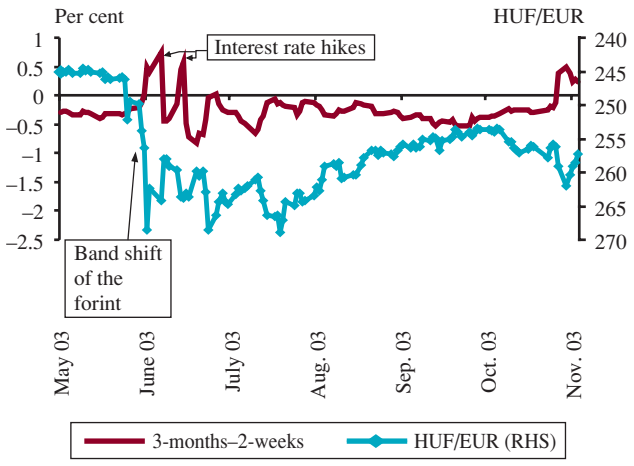


4.2 Short-term interest rates and exchange rate developments

Between early August and mid-October the forint exchange rate slowly appreciated and was more stable than in June and July. What points to the fragility of the relevant developments is that indicators signalling market-uncertainties started to increase again in September. Exchange rate appreciation, ongoing from August, also came to a halt. Turbulence in the bond market at end-October had further negative effects on the exchange rate developments. Short-term rates were mainly subject to expectations of our interest rate decisions. Our communication and exchange rate developments played a major role in shaping such expectations.

Chart 4-4

Exchange rate of the forint and the difference between the two-week rate and the yield on three-month government securities



As described in the August *Report*, the forint exchange rate was rather volatile and weaker than the fluctuation band that we consider as favourable. The reason for this is that the shift in the band in June 2003 added to uncertainties as to the exchange rate that economic policy wants to sustain. The fact that, as investors put it, general government and current account deficits were further causes of concern may also have contributed to the weakening of the forint exchange rate.

In its Statement attached to the August *Report*, the Monetary Council expressed its intention to raise interest rates if the forint exchange rate were permanently weaker than EUR/HUF 260. Immediately after the publication of the August *Report*, the exchange rate started to appreciate from a HUF/EUR 261 level. This was furthered by several statements by the MNB and the Government to the effect that the exchange rate that they considered as favourable was EUR/HUF 250–260. On several occasions the MNB announced that in order to deliver its objectives it would welcome an exchange rate stabilised in the stronger half of the EUR/HUF 250–260 band.

The exchange rate appreciation may also be brought about by a growing consensus among market participants that the announced exchange rate band of EUR/HUF 250–260 was roughly the one in which the Government intends to establish the central parity in ERM II. The 'average respondent' of the Reuters business survey has been expecting the central parity in ERM II to materialise around EUR/HUF 250–260.[30] Market participants are also confident that ERM II entry will have taken place by January 2005 at the latest.

There were, however, both external and internal factors that curbed exchange rate appreciation. Investors continue to express their concerns about the current accounts as well as the 2003 and 2004 budget deficits, which affect the former. The fact that budgetary adjustment in 2004 is based primarily on increasing revenues may raise certain doubts in investors as to the feasibility of further adjustment needed for convergence. External factors representing risks to the appreciation of the forint include the zloty's 6% depreciation in September.

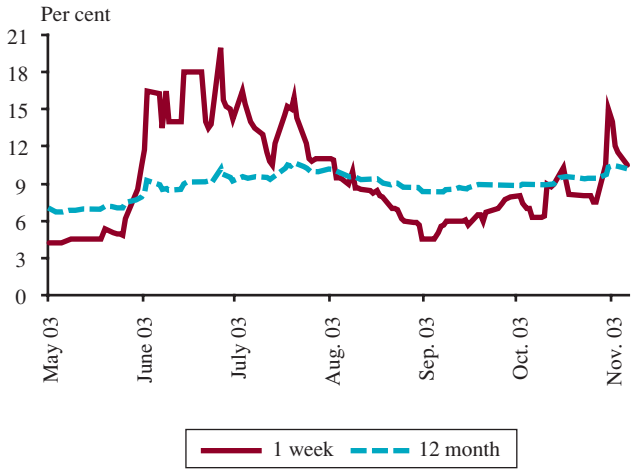
The fragility of appreciation is underpinned by the fact that although the forint had appreciated to EUR/HUF

[30] In August, Reuters surveyed 37 international banks and financial institutions on the expected process of convergence in the Visegrád countries. On the basis of the survey, the central parity of the ERM II is expected to stand at EUR/HUF 260 on average. Based on the Reuters monthly surveys, both Hungarian and foreign analysts expected an entry exchange rate of EUR/HUF 255–256 and EUR/HUF 252 on average in September and October, respectively.

253 by mid-October, uncertainties surrounding it started to grow already from September. Implied volatility in the prices of FX options also corroborates this. Implied volatility signalling uncertainties surrounding the exchange rate fell in August over every horizon. Decline in uncertainties came to a halt in September and started to increase over both 1-week and 1-year horizon. Following the bond market turbulence at end-October, both short-term and long-term implied volatilities showed a substantial increase.

Chart 4-5

Implied forint exchange rate volatilities



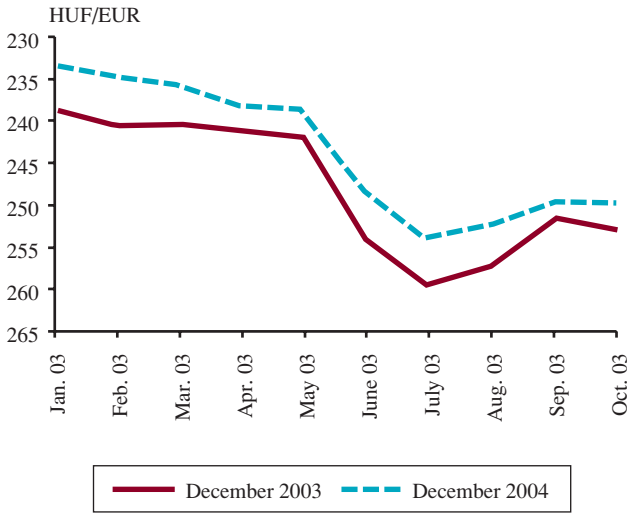
In mid-October, the exchange rate itself weakened, leaving the stronger half of the EUR/HUF 250–260 exchange rate band. The higher-than-expected current account deficit and regional uncertainties are most likely to have contributed to depreciation. The Reuters survey in October, however, suggests that market analysts found it transient: relative to what was projected in earlier surveys, only minor changes occurred in the exchange rate projected for December 2003 and December 2004, respectively.

On 20 October, the Bank and the Government formally announced their joint 2005 target of 4% with a tolerance band of ±1%. Though it left the market broadly unaffected, the announcement caught market participants somewhat unawares as they had been expecting a slightly lower inflation target.

Loss in investors' confidence in late October caused by Polish bond sales prior to 24 October and the news of the Yukos scandal dampened non-residents' earlier stronger interest in Hungarian sovereign bonds, as experienced at the 30 October auction. As a result, yields also plummeted. On 31 October a wave of sales on the secondary government securities market and, due to the lack of buying interest, a dramatic increase in yields were experienced, which the MNB found fundamentally unjustified. In a rapid response to the liquidity

Chart 4-6

Average value of exchange rate expectations of Reuters analysts in 2003



shortage in the market, the Bank entered the secondary market, purchasing long-dated sovereign bonds in an open market intervention. As the initial surprise at the unusual step wore off, the markets understood our intention and accepted its reasoning. After the attenuation of the liquidity shortage, yields started to fall on 3 November.

The turbulence in the bond market at end-October has also affected the forint exchange rate, which further depreciated, standing at EUR/HUF 262 on 3 November. In return, market participants, relying on earlier announcements by the Bank, anticipated an immediate raise in the official interest rate. This, concurrently with the open market operation and the consolidation of the bond market, led to the appreciation of the forint's exchange rate. By 7 November, it had appreciated to EUR/HUF 257.

In the quarter under review the Bank maintained its base rate at 9.5% in order to achieve the preferred exchange rate levels. The MNB's key policy instrument offered significantly higher (7.5%) yield than the ECB's key instrument. The MNB has reaffirmed on several occasions that it rules out an interest rate cut before the forint exchange rate becomes permanently stable at a level it deems as favourable.

The difference between the two-week rate and the yield on three-month government securities gives indication of whether market participants expect interest rate changes in a 3-month period to come. Market participants' conduct suggests that they found monetary policy-related announcements credible, and did not anticipate any interest rate cut before the forint exchange rate stood at EUR/HUF 250–255.

Expectations of an interest rate cut only heightened considerably when the forint appreciated to EUR/HUF 255 in mid-September. But the Monetary Council's statement on 22 September 2003[31] dampened expectations of an interest rate cut, which were further reduced by a weaker exchange rate in early October. The depreciation of the forint at end-October—in line with the earlier announcements of the Bank—resulted in a build-up of expectations of an official rate-increase. These expectations became substantial, when the exchange rate crossed the EUR/HUF 260 limit on 3 November.

Relative to the information that can be gleaned from the yield curve, the Reuters survey of the expectation of interest rate cuts show a somewhat different picture. A survey involving market analysts reveals that, as early as the August *Report* came out, analysts put off the date of the next interest rate cut. Later this date was further put off.

Yields on one-year treasury bills fell from 4.1% in July to 3.1% in October in real terms, and are below the 2000–2002 average (3.6%). Such decline was brought about by the rise of inflation expectations in excess of the one-year nominal interest rate increase.

Chart 4-7

Changes in the major policy rate

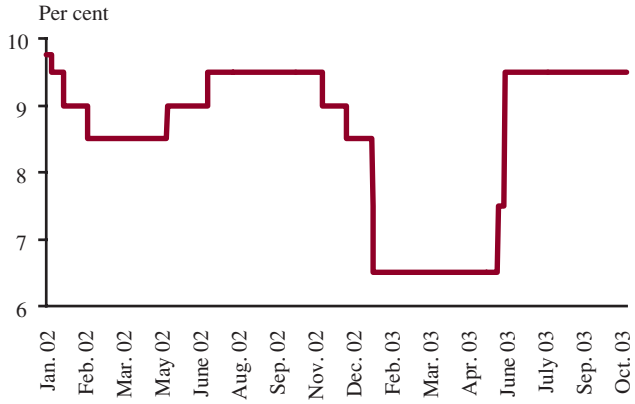
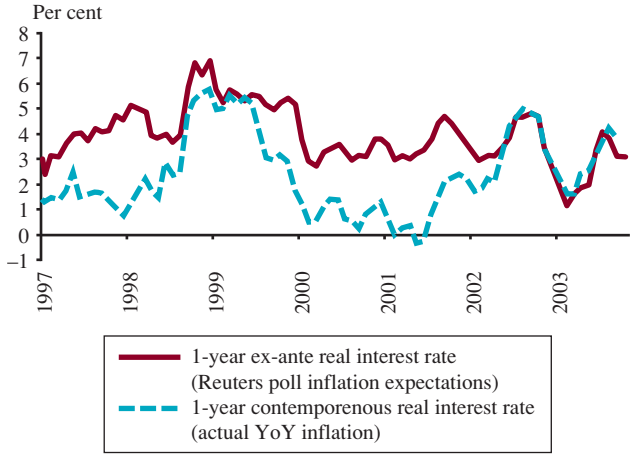


Chart 4-8

One-year real interest rates



[31] In its statement the Monetary Council expressed its opinion that, despite market expectations of an impending interest rate cut, they key policy rate should be lowered only when the exchange rate became permanently stable in the stronger half of the HUF 250–260 band.

4.3 Capital flows

In the first two months of 2003 Q3, the current account deficit continued to grow: it amounted to over HUF 200 billion. As direct capital outflow has continued to be significant, this item failed to contribute to deficit financing. In July, companies converted part of their domestic and foreign exchange credits into forints (HUF 140 billion).

While demand for equities was scarce in the two months under review (HUF 16 billion), once again non-resident bond investors purchased significant amounts of Hungarian government securities (HUF 211 billion). Thus, subsequent to the June sales, non-residents' total holdings increased again. The average time to maturity of government securities in non-resident hands is still rather long: it is around 3.5 years. However, as the average time to maturity has noticeably declined since June, it is worth examining portfolio changes in terms of the maturity profile, as it is essential to see whether the decrease in the average time to maturity is due to a powerful influx of capital into short-term securities. This could increase the exposure of the forint exchange rate to the fluctuation of capital flows.

Both prior and subsequently to the June 2003 shift in the exchange rate band, non-resident investors altered their government securities purchasing strategy. In a breakdown by times to maturity and relative to the portfolio in January, cumulative changes in non-residents' portfolio indicate that the rapid portfolio increase was due primarily to demand for medium-term and longer-term securities. Non-resident holdings of short-term securities decreased significantly. As a result, the average time to maturity continued to increase.

Subsequently, the increase in the average time to maturity of government securities stopped and then started to decline. This drop may be attributed to the fact that since

Table 4-1

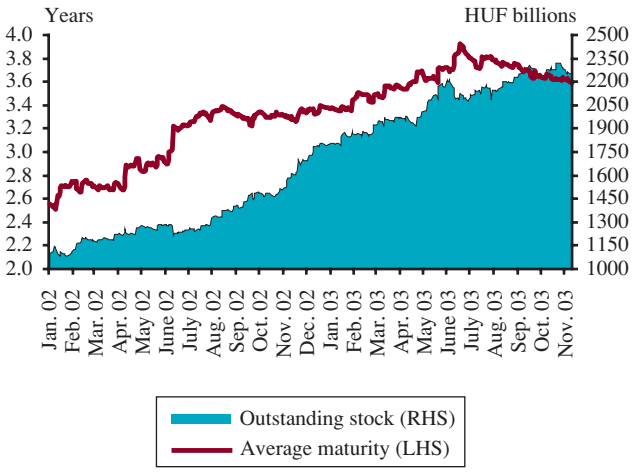
Components of foreign exchange market demand and supply (HUF billions)*

	2002				2003			
	Q1	Q2	Q3	Q4	Q1	Q2	July	August
I. Current Account	-117	-176	-70	-306	-207	-386	-108	-104
II. Capital Account	13	15	6	13	-25	2	-1	2,6
III. Direct investment (excluding revenues from privatisation)	27	80	19	28	-164	-53	-61	-75
IV. Demand for forints arising from conversion of domestic foreign currency deposits	60	-62	26	-40	87	2	-23	4
1. Companies	25	-70	13	-41	62	-15	-30	5
2. Households	35	8	13	0	24	17	8	-1
V. Net portfolio investments (1+2+3)	217	11	113	350	295	109	149	63
1. Government securities	144	33	236	310	177	56	127	84
2. Equities	14	-16	-25	-36	48	16	7	9
3. Forint deposits	59	-7	-98	76	70	37	15	-30
VI. Corporate foreign currency credit (1+2)	-230	-182	-167	-79	19	139	140	3
1. Domestic	45	55	70	-23	95	74	46	-14
2. Foreign	-275	-237	-237	-56	-75	66	94	17
VII. Net forint demand of other credit institutions	26	119	114	138	45	87	33	22
VIII. Other	11	125	28	152	92	114	14	40
IX. Net demand for forints of participants outside the banking sector (I. + II. + ... + VIII.)	**7**	**-70**	**68**	**256**	**142**	**49**	**142**	**-46**
X. Change in banks' on-balance-sheet long forint positions	-7	70	-68	-256	371	-288	-142	46
XI. Net central bank intervention (IX. + X.)	**0**	**0**	**0**	**0**	**513**	**-238**	**0**	**0**

** Positive values represent forint demand and negative figures mean forint supply. The central bank's intervention (XI.) is an exception to this rule, as the situation is just the reverse: positive values stand for sales.*

Chart 4-9

Government securities held by non-residents

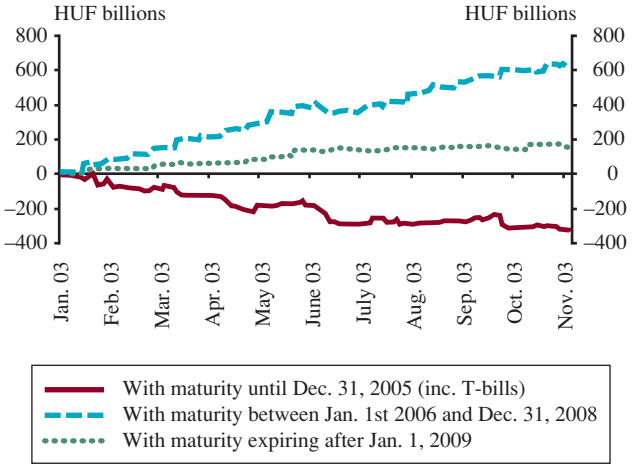


August non-resident investors have shown increasing demand for securities with a 2-4 year time to maturity, whereas there is no perceptible trend of change in any of the other maturity brackets, whether longer or shorter.

For this reason, it may be established that the mere shortening of the portfolio should not be deemed as indicative of the predominance of short-term investors and long-term investors biding their time. Rather, the increase in holdings is a result of a massive rise in demand for medium-term bonds which on average mature slightly earlier than the securities outstanding in the market.

Chart 4-10

Government securities in a breakdown of time to maturity

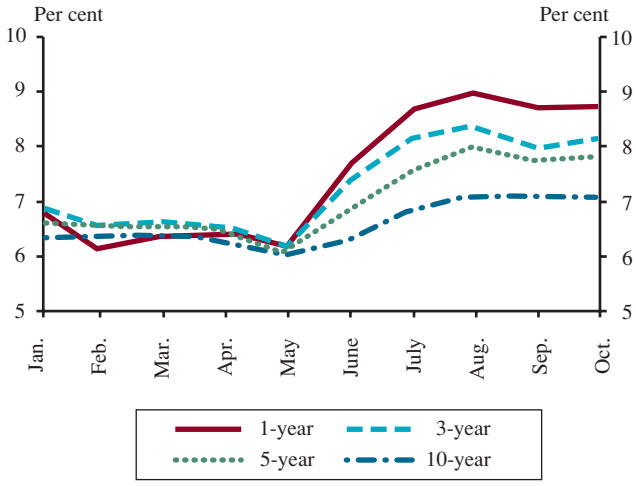


4.4 Long-term yields and inflation expectations

Movements in long-term yields are influenced by domestic market participants' inflation expectations. However, foreign investors, with a dominant share of the forint-denominated bond market, compare long-term yields with movements in euro yields, the expected change in the forint exchange rate and required risk premium. The discussion below traces movements in the forint yield curve beyond one year to variations in the factors noted above.

Chart 4-11

Benchmark yields in the Hungarian government securities market *(Monthly averages)*



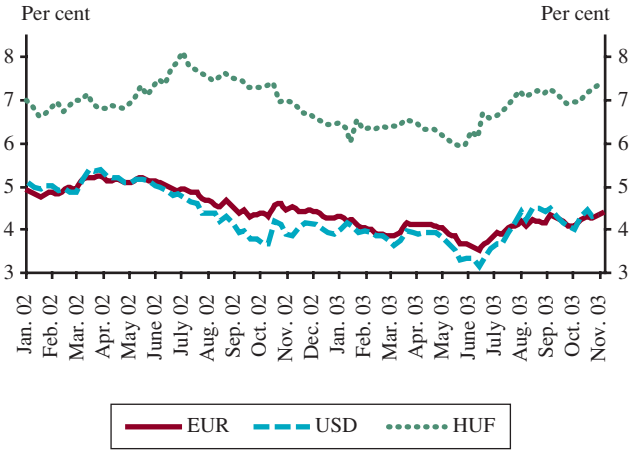
Longer-term (at least one-year) forint-denominated government securities yields changed little in the period between early September and end-October. Here, the ten-year benchmark yield fell 30 basis points in the second part of September; however, it rose above 7% by the second part of October. Movements in long-term forint-denominated bond yields were broadly aligned with those in long-term euro and dollar yields. However, the variations in yields experienced in the three months under review were not significant and, consequently, they do not suggest considerable changes in long-term inflation expectations or the risk premium.

Due to inadequate liquidity in the market, the wave of bond sales witnessed at end-October led to a considerable rise in long-term yields, amplified by stop-loss selling. Between 29–31 October, 3- and 5-year government securities yields surged by 120–130 basis points. A jump in yields of similar magnitude has not been seen in the market for several years.

In the Monetary Council's view, the rise in yields was mainly attributable to technical factors, instead of a significant change in expectations. Accordingly, it attempted to channel market developments toward equilibrium by open market operations, which meant buying 5- and 10-year bonds, instead of raising official interest rates. As a result of the intervention, long-term yields fell 50-80 basis points, depending on maturity. The market appeared to have stabilised by 6 November, although at a higher level of long-term yields relative to that characteristic in period preceding the selling wave: 5-, 10- and 15-year benchmark yields were 30-40 basis points higher and the 3-year yield nearly 90 basis points higher than the level in period before 29 October.

Chart 4-12

Ten-year government securities yields

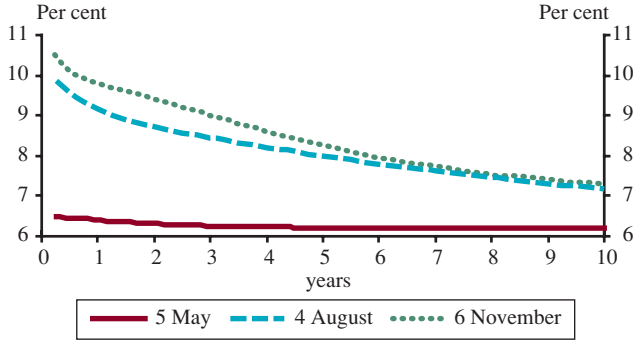


The shift in the zero-coupon yield curve is evidence of falls in required yields across the entire maturity spectrum in the period early August–end-October. At nearly 40 basis points, that fall was the largest at the 4 to 5-year maturities. The ten-year zero-coupon yield fell 20 basis points in the same period. However, the end-

October events shifted the yield curve upward again, which stood higher than its level in early August, even after the central bank intervention and consolidation of the market. At 60-70 basis points, the difference was largest in the 1- to 3-year maturity bracket.

Chart 4-13

Zero-coupon yield curves



Notes: Zero-coupon yield curve estimation by Svensson's method

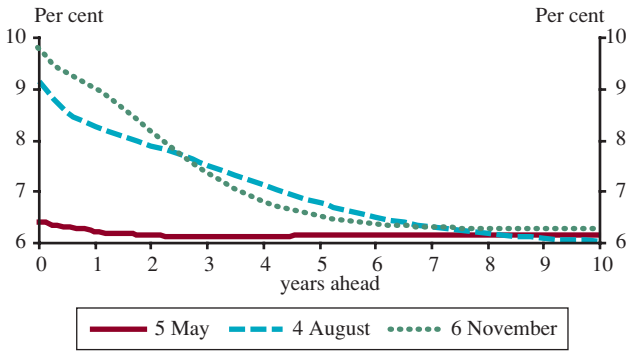
It can be inferred from the shift in the implied forward curve that a 30–40 basis point drop in interest rate expectations at the 1- to 4-year horizon may have been responsible for the slight yield drop which occurred up to end-October. The permanent part of the yield rise occurring at end-October to early November, can be attributed to the deterioration in expectations related to the 0–2 years horizon.

Meanwhile, the euro yield curve also shifted upwards. Consequently, the forward differential between the forint and the euro rose by only 40–60 basis points at 1–2 years and it fell by only 40–50 basis points at 3–6 years. If we interpret implied forward rates as interest rate expectations related to various future points in time, it should be taken into account that the rate expected for the same point (e.g. 2 years ahead) corresponded to different points of the forward curve in August than in November (to August 2005 and November 2005, respectively). Taking account of the 3-month shift in the curves, the rise in the short end of the curve is even more pronounced (80–100 basis points at 2 years, i.e. for 2005); however, the fall experienced at 3–6 years was only 25–35 basis points. Consequently, expectations for the forint-euro interest rate differential deteriorated considerably at the shorter horizon, and improved slightly for the date of EMU entry (2006–2009). It should be noted that the purchases by the MNB of 5- and 10-year bonds may have had an impact on the yield curve at the segment between 3–4 and 10 years and, consequently, it may not be a reliable reflection of market expectations for the corresponding days.

The survey of analysts' expectations conducted by Reuters may provide a picture of expectations attached

Chart 4-14

Implied 1-year forint forward rates



Notes: Zero-coupon yield curve estimation by Svensson's method

to inflation and the likely entry by Hungary into EMU, often influencing long-term yields. However, this only provides information about analysts' inflation expectations for end-2003 and end-2004. In July, analysts expected inflation to be 4.9% on average in December 2003. In October, they raised their average expectation to 5.1%, which remained within the margin of error. In respect of end-2004, the market consensus increased much more significantly, from 4.3% to 5.5%. This broadly amounted to the inflationary impact, which could be anticipated on account of the planned changes to indirect taxes.

If it was inflation expectations for 2004 that caused the rise in the 1- to 2-year segment of the forward curve, this would mean that, in the market's view, monetary policy wishes to offset this additional inflation caused by indirect taxes. However, the Monetary Council indicated that it targeted inflation of below 5.5%, i.e. it regards this a factor beyond its control which it would not attempt to neutralise by tightening monetary conditions. Assuming that the announcement was credible for the market (as market reactions suggested), this effect could not be reflected in nominal interest rates or interest rate expectations.

The November poll contained forecasts for end-2005, the average of which was 3.6%. However, no information is available on analysts' expectations at the end of the summer, so the trend of expectations for this horizon remained unknown for Bank staff. Consequently, the Reuters poll provided little evidence, which could have confirmed that the yield rise was caused by inflation expectations.

Exchange rate expectations changed slightly towards appreciation in the period between the July and October surveys—the average exchange rate expected for end-2004 changed from 254 to 250. However, the spot exchange rate rose more strongly between the two

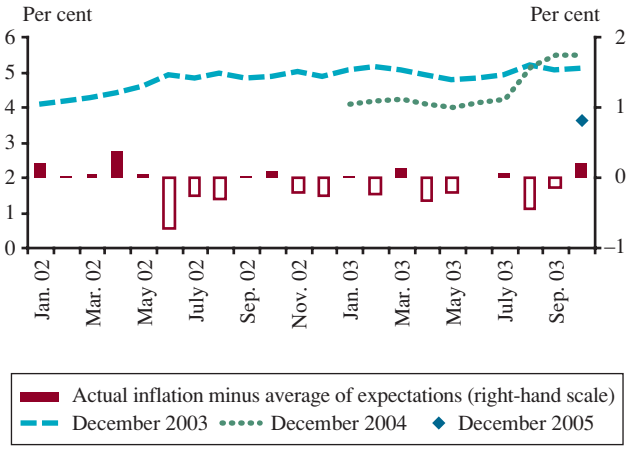
dates, so the expected appreciation actually drifted lower and therefore it does not provide explanation for the slight drop in yields which occurred up to mid-October.

Forecasts for the central parity in ERM II can be a proxy for longer-term exchange rate expectations, as it is a very likely value of an ultimate conversion rate to be determined at the time of EMU entry. Whereas analysts in a large international sample of a Reuters survey conducted in August expected a EUR/HUF 260 central parity on average, in the regular Hungarian poll[32] in October all analysts expected the central rate in ERM II to be in the 250-260 range, with an average of 252.4. If this can be treated as informative in terms of longer-term expectations, expectations of an exchange rate appreciation are little changed, given the similar rise in the spot exchange rate.

Chart 4-15

Changes in macroanalysts' inflation expectations

(Reuters survey; sample means)



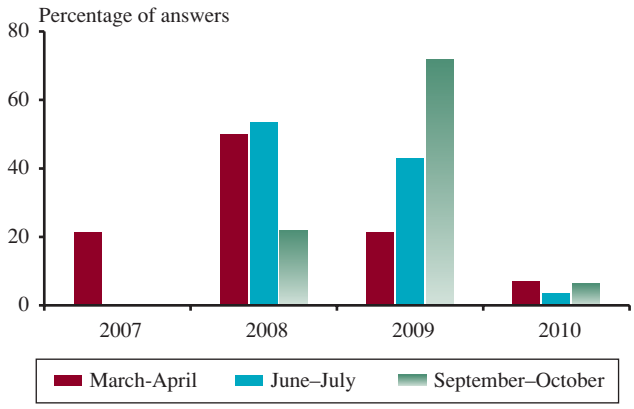
A higher risk premium required by investors may also explain the rise in yields. Global investor sentiment improved in the period under review,[33] which may have justified opposite movements in yields. Meanwhile, the region's risk perception worsened (Polish fiscal problems, the Yukos affair, etc.). The actions by large international rating agencies, already noted, also suggest that investors perceive greater uncertainties in respect of Hungary and Poland. If the rise in yields was indeed caused by the increase in the risk premium, then it deserves mention that, at least in the case of Hungary, this did not materially affect expectations attached to EMU entry. This is indicated by the fact that the premium of implied forward rates over the corresponding euro forward rates only rose in the maturity segment corresponding to the period up to 2005–2006. Implied forward rates mostly fell in the segment relating to the period after 2008, the earliest technically plausible entry-date.

The Reuters poll also contains analysts' responses to the question concerning the most likely date of Hungary's EMU entry, which painted a somewhat more pessimistic picture. None of the analysts has indicated dates later than 2010 in response to the question asked regularly since January. During 2003, the average of the dates considered to be the most likely has shifted gradually from 2008, characteristic in the early months of the year, to 2009. This tendency has been mildly characteristic of the past three months, even if the monthly changes were statistically insignificant. Whereas in the June and July polls analysts about equally expected 2008 and 2009 as the most likely date of entry, in September–October the majority voted for 2009.

Chart 4-16

Most likely dates of EMU entry

(Reuters poll; two-month combined samples)



Based on the information discussed above, it is difficult to explain the slight drop in long-term yields in August-October; however, the portion of the rise in yields at end-October to early November which appeared to be lasting can be traced to the increase in risk premium required by investors. The higher perceived risk stemmed mainly from region and country-specific sources, relates to the next 2–3 years, and is unlikely to be connected with the slight shift in expectations attached to EMU entry. Inflation and exchange rate expectations had little impact on movements in yields in the period under review.

[32] Which means a different sample.
[33] For more details, see the International environment section.

5 Special topics

5.1 Revised data on GDP in 2002

The CSO disclosed data, still preliminary, on GDP in 2002 for the second time on 21 October 2003. These revised data show higher growth in 2002 both on the output and the uses side than the original. Below we show the difference between the two data releases more in detail.

Table 5-1

The original versus the revised data for 2002*
(Percentage annual increase in the volume index)

	Original data	Revised data	Difference (recent-earlier data, in percentage points)
Uses side**			
Household consumption	8.8	9.4	0.6
Household consumption expenditure	10.2	10.5	0.3
Social transfers in-kind	3.0	4.9	1.9
Public consumption	1.5	5.0	3.5
Fixed capital formation	5.8	7.2	1.4
Exports	3.8	3.8	0.0
Imports	6.1	6.1	0.0
Production side (value added)**			
Industry	0.4	1.0	0.6
manufacturing	1.1	2.8	1.7
Market services	4.1	5.1	1.0
GDP	**3.3**	**3.5**	**0.2**
Nominal GDP			
GDP in bn HUF	16,981	16,744	-1.4%

* *Source: CSO.*
** *Average annual volume indices.*

Please note, that only revised annual data were published. A detailed quarterly breakdown of the production and uses side is only to be published on 19 December. There being no quarterly data, we were unable to update our projection. As a result, such data will only be incorporated in our next *Report* in February 2004.

It should also be noted that before the data revision it was difficult to provide a consistent picture of last year's macroeconomic developments. Departure from earlier data can be identified at several junctures that are in keeping with our assumptions. Annual data published recently are based on detailed budgetary and corporate data. Production and uses side data have been revised considerably. Corporate tax returns having been processed, manufacturing added value is substantially higher than previously disclosed.

On the uses side, data on exports and imports remained unchanged. Based on detailed budgetary data, the index of social transfers in-kind and public consumption is markedly higher than earlier projected. Data on fixed capital formation has been corrected upwards based on its projection for the sectoral distribution of investment. We conclude that upward correction can be mainly attributed to a slight decline in corporate investment.

Data on nominal GDP have also changed: compared to what was first disclosed there has been a downward modification in these data, owing to changes in deflators. In terms of quantification, changes in nominal GDP have barely affected the 2002 current account deficit as a proportion of GDP, amounting to 4%, calculated with the inclusion of the relevant new data. However, general government deficit in 2002 as a proportion of GDP is 0.1 to 0.2 percentage points higher.

One of the special topics in Section 5 of the November 2002 *Report* addressed the issue of GDP data revision policies. The reason was that the uses side suggested higher GDP data in 2002 H1 than did the production side. The current revision of 2002 data corroborates our earlier assumption regarding upward revision of data.

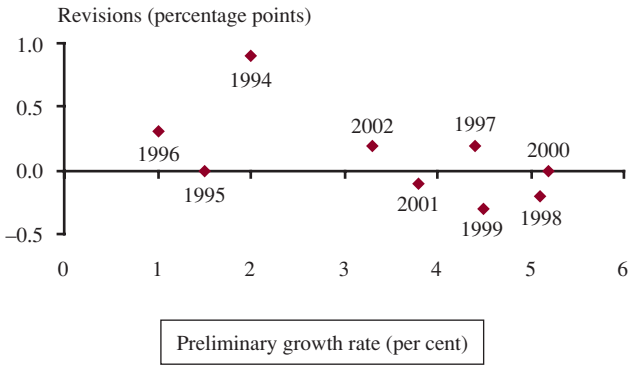
In accordance with international practice, the CSO revises GDP data in the first preliminary disclosure on a number of occasions. According to the current practice, earlier data generally remain unrevised when within-year data are published in the reference period. Within-year quarterly data are, however, revised on the basis of annual data. The preliminary annual GDP data are first

disclosed 3 to 4 months after the reference quarter is over. Then, revised data are published on another two occasions. The second preliminary disclosure occurs 10 months after a rapid processing of income tax returns. The third disclosure, which includes final data calculated on the basis of correlation tests, occurs 16 months after the reference period.

We studied the CSO's revision policy as to how preliminary data differ from final ones. The results suggest that subsequent annual data revision is less significant than quarterly data revision. The first revision of 2002 data has been included in the chart showing annual data. It reveals that, relative to the past years, an upward revision of 0.2 percentage point of 2002 data is not marked.

Chart 5-1

Preliminary annual GDP growth rates and revisions*



* *Source: CSO, MNB calculations*

5.2 Questions and answers: Recording of reinvested earnings

The following is a summary of frequently asked questions by analysts and experts about the recording of reinvested earnings in financial accounts. Our answers to such questions shed light on how reinvested earnings are recorded under the new methodology applied in the compilation of the balance of payments to be published on 31 March 2004.

– How can data on reinvested earnings to be published as of 2004 be derived from financial accounts?

The recording of reinvested earnings affects two instruments in financial accounts: 'Shares and other equities' and 'Other receivables/accounts payable'.

The rest-of-the world data on the former is the sum of the entries under 'Equity securities' in the portfolio investments of the balance of payments and 'Shares and other equity interests' in direct capital investment (including that part of the earnings which has not been distributed as dividend, i.e. reinvested earnings).

Approved, but undistributed dividend (i.e. distributed earnings) is (are) recorded under 'Other receivables/accounts payable' and 'Other capital flows' within 'Direct capital investment' in the financial accounts and the balance of payments respectively. The financial accounts provide data from the rest-of-the world perspective, whereas the balance of payments from Hungary's. Thus, what is recorded in the financial accounts as accounts payable in the rest-of-the world column is residents' debts vis-à-vis the rest of the world.

The table below compares the two types of statistics in respect of one aspect ('Residents' debts vis-à-vis the rest of the world') of one instrument ('Shares and other equity interests'), revealing it is the recording of reinvested earnings that causes the difference in the two values included in the two types of statistics. Accordingly, comparison can also be made in respect of the other aspect ('Residents' receivables from the rest of the world') as well as the other instruments ('Other receivables/accounts payable'). Note that unlike the balance of payments, financial accounts do not separate direct capital investment from portfolio investments on the basis of ownership share (10%).

– The recording of reinvested earnings affects data on direct investment stocks. Can data on foreign direct investment stocks be obtained from stock data included in financial data?

No data on direct investment stocks can be obtained from stock data included in financial data, since direct

Table 5-2

Transactions affecting equities based on the balance of payments and the financial accounts
(2003 Q2, HUF billions)

Financial accounts/Financial instruments/The rest of the world *Including reinvested earnings*		**Balance of payments/Financial account/Liabilities** *Excluding reinvested earnings*	
Shares and other equities			**Portfolio investments**
Quoted shares	14.7	10.7	Equity securities
Unquoted shares	–14.1		**Direct investment**
Of which: reinvested earnings	–6.1	48.0	Shares and other ownership shares in Hungary
Holdings	54.1		
Of which: reinvested earnings	2.5		
Investment fund units	0.2		
Total	**55.0**	**58.6**	**Total**
Of which: reinvested earnings	–3.6	0.0	*Of which: reinvested earnings*
Total excluding reinvested earnings	**58.6**	**58.6**	**Total excluding reinvested earnings**

capital investment and portfolio investments separated in the balance of payments statistics on the basis of investors' participating interests cannot be separated in either financial accounts, or their source of data, i.e. the database of APEH TÁSA (corporate income tax). Such data can only be obtained directly from business surveys.[34]

The table below shows the differences in stocks.[35]

– To what extent are the individual entries in the balance of payments to be published in 2004 likely to change, owing to the recording of reinvested earnings?

In order that earnings related to ownership share in direct capital investment can be recorded, the following data must be had:

(i) the amount of the after-tax earnings (profit or loss) of non-resident investors' enterprises in Hungary and resident investors' enterprises abroad as well as the years in which they are reported (made or incurred);

(ii) the authorisation by owners of the amount and disbursement date of dividend;

(iii) the amount of related dividend tax;

(iv) the date of the actual disbursement of dividend (in a lump sum or instalments).

(i) The investor's after-tax earnings (profit or loss) must be recorded as reinvested earnings in the balance of the payments for the year in which they are actually reported. Data on such earnings can only be obtained several months after the relevant business year is over. (As currently, the vast majority of companies prepare their respective reports in late May, the deadline for business surveys to arrive is adjusted to this practice and is slated for late June). After business surveys are processed, data are included in the balance of payments in the final months of the year following the reference one.

(ii) Dividend must be included in income during the period when owners authorise the payment of such.

(iii) When owners authorise the distribution of after-tax profit, investors must pay dividend tax to the state on the amount of the dividend authorised.

(iv) The actual sum of dividend is the amount of the dividend authorised less the dividend tax deducted. Thus, in contrast to current practice, when dividend is paid, no current account entry is involved. Both legs of the transaction only involve the balance of payments.

The methodological switch from the cash basis to accrual accounting for income affects the balance of the current account. Unlike accounting for income related to portfolio and other investments, where, in effect, both cash basis and accrual basis accounting leads to differences in the time distribution of a given value (the amount of annual interest is recorded on on-going basis or as a lump sum), and, as a result, the manner of accounting leaves the balance of the cur-

Table 5-3

The value of ownership share stocks based non-residents' investment position and the financial accounts *(30 June 2003, HUF billions)*

Financial accounts/Rest of the world/Liabilities *Including reinvested earnings*		Non-residents' investment position/Liabilities stock vis-a-vis the rest of the world *Excluding reinvested earnings*	
Shares and other equity	**8,896.1**	**6,507.3**	**Total**
Quoted shares	2,152.6		**Portfolio investments**
Unquoted shares	2,713.9	930.7	Equity securities
Holdings	4,018.3		**Direct capital investment**
Mutual fund shares	11.4	5,576.6	Shares and other equity in Hungary

[34] While APEH data are used to account for non-resident owners' receivables in the financial accounts, in the case of both direct + capital investment and portfolio shares, stock data cumulated on the basis of turnover are used in stock statistics related to the balance of payments (non-resident investment position) before disclosure at the year-end 2003. As a result, stock data cannot be compared with each other. Nor can they be derived from each other. From 2004, working capital stocks will be recorded in the balance of payments on the basis of the results of surveys on direct capital investment, complemented with APEH data from corporate tax returns.

[35] The table showing stock data compares the two types of statistics in respect of one aspect ('Shares and other equity interests') of one instrument ('Residents' debts vis-à-vis the rest of the world'), comparison in this case denoting the differences between the two types. Accordingly, comparison can also be made in respect of the other aspect ('Residents' receivables from the rest of the world') as well as the other instruments ('Other receivables/accounts payable').

rent account unaffected considering the entire period, both cash basis and accrual accounting for direct capital investment records different values at different intervals.

– ***For which periods are reinvested earnings in the current account to be published in 2004 based on factual data and for which periods are they based on estimates? What revision policies are adopted in data disclosure? When can data be considered final?***

In 1999, in agreement with the CSO, the Magyar Nemzeti Bank introduced its business survey regime in order to monitor firms' direct capital investment and for working capital transactions to be recorded. Reinvested earnings constitute the most important of all such transactions.

The data included in the balance of payments to be published in 2004 go as far back as 1995.

The after-tax profit and the amount of authorised dividend of non-residents' direct investment in Hungary as well as the stock value of direct capital investment are estimates based on APEH TÁSA data for 1995–1998.

Data on both income and stocks in the balance of payments to be published next year are based on the results of questionnaire surveys going back as far as end-1998.

The deadline for working capital surveys on the reference year's profit is 30 June following the reference year. After the surveys are processed, data are included in the balance of payments in the final months of the year following the reference one.

Estimates of the after-tax component of reinvested earnings are included in balance of payments statistics for the reference year and the year that follows it. At the end of the year following the year under review, after surveys are processed, the estimated after-tax profit in the balance of payments for the reference year and the estimated authorised dividend for the year following the reference one are replaced with preliminary actual data derived from the results of the relevant surveys.

On the whole, estimated data for 1995 to late 1998, final survey data, complemented with TÁSA ones for late 1998 to 2001, preliminary actual data (to be revised next year when final 2002 TÁSA data are published), complemented with TÁSA ones for 2002 are used to assess both components of reinvested earnings to be published on 31 March 2004. The MNB provides estimates for the 2003 after-tax profit, and survey data are used to calculate authorised dividend. Both 2004 after-tax profit and authorised dividend feature as estimated data.

5.3 Estimates for non-residential capital stock in Hungary

A good measure of the capital stock is important in order to be able to perform economic analyses from a number of aspects.[36] Production function approximations, generally used to determine supply and potential output, take, in addition to labour, capital stocks as production input into consideration. Academic literature on economic development pays special attention to how the individual factors of production (i.e. labour, capital and technologies) contribute to economic growth. Recent dynamic global growth in economic productivity (the new economy) has yet again underscored the importance of analysing capital stocks, and IT-based capital stocks, in particular.

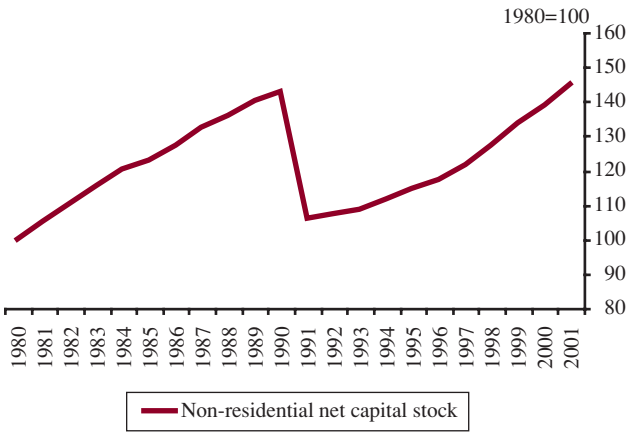
In recent years, there have been attempts to provide estimates for the net capital stock in Hungary. When preparing its analyses in 1999, the IMF relied on the CSO's capital stock statistics published before 1991.[37] However, these statistics were skewed upwards, for only investment recently included in the stock had been properly deflated. In order to compensate for these shortcomings, Darvas and Simon (2000) derived estimates for the initial level of the capital stock from a production function.[38]

Our recently developed procedure for providing estimates is based on two recent data disclosures by the CSO.[39] In late 2002, as a first step of a long-term project, the CSO published the results of a questionnaire survey on the stock of corporate assets. Furthermore, it also compiled a historic time series of investment, which, in a detailed breakdown of sectors and assets as well as in a uniform methodological approach, includes whole-economy investment spanning several decades. The use of these two sources of data resulted in materially different results: the net (i.e. gross capital less depreciation) capital stock estimated with the historic time series of investment hardly amounted to 50% of what was calculated on the basis of the CSO survey. Although the historic time series of investment is a less reliable source of data, lower estimates for capital stocks based on it are still more acceptable in international comparison.

While calculations were made for the capital stock, numerous problems arose which can be attributed to the characteristics of transition economies, and which international literature address in less detail. It is hard to find an acceptable method of assessing the depreciation of the assets commissioned prior to the 1990s and rendered uncompetitive by the new conditions. It is equally hard to provide a definitive answer as to how the length of time in service of these assets changed during the transition and ever since. Most recent research claims that estimates are less sensitive to changes in the above assertions, so results can be regarded robust despite the uncertainties surrounding the assertions.

Chart 5-2

Estimate for domestic net real capital stock*



** Source: Pula (2003) estimate based on the CSO's historic time series of investment. Volume terms, in 1999 prices.*

One of the shortcomings of the method applied is its combined treatment of IT and other capital assets.

[36] Non-residential capital refers to domestic capital excluding dwellings.
[37] IMF (1999) "Hungary Selected Issues", SM/99/28 and Doyle P, Kuijs L., Jiang G. (2001) "Real Convergence to EU Income Levels: Central Europe from 1990 to the long term", *IMF Working Paper* WP/01/146.
[38] Zs. Darvas and A. Simon (2000), "Capital stock and economic development in Hungary", *Economics of Transition 8(1)*.
[39] G. Pula (2003), "Estimates for Hungary's capital stock with the PIM method. Methodology and results", MNB Working Papers 2003/7.

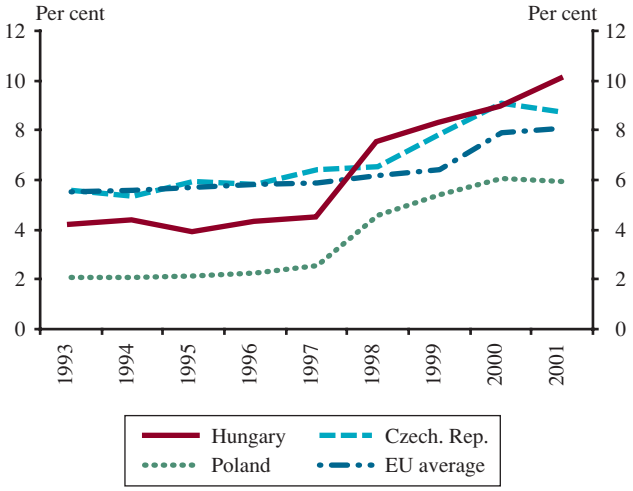
Impairment of IT and telecommunications assets is faster than that of other capital assets (their length of time in service is shorter), which can be attributed to highly dynamic innovation. As a result, the capital invested in IT assets should yield a higher return than other assets of a similar market price. This means that the productivity of IT assets should be higher than that of other assets.

Accordingly, when estimates are made, a separate treatment of IT assets means that allowances should be made for not only the materially higher depreciation, but also the higher productivity of such assets. This basically amounts to quality correction in capital stocks. VICS (volume index of capital services), though not the most recently adopted, has been tailored exactly for such corrective purposes. This method has only been in use for the past couple of years.[40] The essence of the VICS method is that, in contrast with traditional accounting for capital, it uses the rental price, rather than the market price of assets in order to aggregate them individually.[41] The price weighted with the rental price allows for the differences in asset productivity, so it provides a more accurate picture of how capital stocks contribute to production processes.

Currently, no official data on domestic IT capital are available. Though the CSO survey to assess corporate assets includes asset classes with rapid replacement (a service time of 1 to 5 years), official data disclosure fails to treat them as a separate category. The WITSA (World Information Technology and Services Alliance) database is, however, available, and provides a detailed breakdown (software, hardware, other services and telecommunications) of the time series of investment for a great number of countries, including Hungary. Data suggest that the ratio of domestic IT investment to GDP has been in excess of EU average since 1998. In 2001, it was the highest in the region. Convergence impact (the backwardness of IT technologies) is likely to have played a major role in this. The pace of expansion in IT investment suggests that the impact of IT may become more powerful also in domestic economy in the years to come, which adds to the pressing need for IT-related research.

Chart 5-3

IT investment as a percentage of GDP, 1993–2001



Source: WITSA (2002) "Digital Planet 2002: The Global Information Economy".

[40] The VICS method was first introduced by Jorgenson and Griliches in 1967 (Jorgenson, D. W. and Griliches, Z. (1967) "The explanation of productivity change", *Review of Economic Studies Vol. 34 pages 249–83*). It has been rehashed in connection with IT research in recent years. In the USA, Canada, Australia and the United Kingdom (Oulton, N. and O'Mahony, M (1994) "Productivity and growth: a study of British industry 1954-1986", *Cambridge: Cambridge University Press*) the VICS method has been officially adopted to provide estimates for capital stocks. For a comprehensive description of the method, see Oulton, N. and Srinivasan, S. (2003) "Capital stocks, capital services and depreciation: an integrated framework", Bank of England Working Papers No. 192 and OECD (2001) "Measuring capital: a manual on the measurement of capital stocks, consumption of fixed capital and capital services", Paris: OECD, (In Hungarian: KSH (2002) "Measuring assets, OECD Manual", *International Statistical Documents 7/1*)

[41] If market prices are equal to the net present value of future capital service, then from between two assets of the same market price, but with different economic lives, the one with a shorter economic life, hence with a shorter payback period, should produce higher return in one year. Accordingly, the rent should be different, too, on the two assets: the rent on the one with a shorter economic life should be higher.

BOXES AND SPECIAL ISSUES IN THE *QUARTERLY REPORT ON INFLATION*

November 2003

Quarterly Report on Inflation
November 2003

DTP-works: Iconos Advertising
H-1022 Budapest, Bogár u. 29.
Printing: Print-X