QUARTERLY REPORT ON INFLATION

FEBRUARY 2004

The analyses in this *Report* have been prepared by the Economics Department staff under the general direction of Ágnes Csermely, Head of Department. The project has been managed by Barnabás Ferenczi, Deputy Head of the Economics Department, together with Attila Csajbók, Head of the Monetary Assessment and Strategy Division, Mihály András Kovács, Deputy Head of the Conjunctural Assessment and Projections Division, and Zoltán M. Jakab, Head of the Model Development Unit. The *Report* has been approved for publication by István Hamecz, Managing Director.

Primary contributors to this *Report* also include Zoltán Gyenes, Gábor Kátay, Mihály András Kovács, Zsolt Lovas, András Oszlay, Zoltán Reppa, András Rezessy, Zsuzsa Sisak-Fekete, Gábor Vadas, Barnabás Virág, Balázs Vonnák and Zoltán Wolf. Other contributors to the analyses and forecasts in this *Report* include various staff members of the Economics Department and the Monetary Instruments and Markets Department. This *Report* has been translated by Csaba Kertész-Farkas, Éva Li, Edit Miskolczy and Péter Szűcs.

The *Report* incorporates valuable inputs from the MNB's other departments. It also includes the Monetary Council's comments and suggestions following its meeting on 9 and 23 February 2004. However, the projections and policy considerations reflect the views of the Economics Department staff and they do not necessarily reflect those of the Monetary Council or the MNB.

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 LVIII of 2001 on the Magyar Nemzeti Bank, 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 and fiscal 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

Higher risk perception of forint-denominated investments

Since the publication of the previous *Report*, risk premia on forint-denominated financial investments have increased despite the continued low level of euro and dollar interest rates and the improving overall perception of emerging market risks. The rise in premia were reflected in a weaker forint exchange rate and higher yields in the previous quarter as well as in 2003 as a whole. The key factors behind the lack of investor confidence were the concerns over the sustainability of medium-term economic processes. Due to the high current account deficit the uncertainty of the exchange rate expectations has increased, it was reflected in the higher exchange rate risk premium. The departure of the 2003 government deficit from the targets, modified on several occasions during the year, hit risk perception hard.

Expected date of euro-area accession postponed

Higher risk perception also relates to expectations about the pace and manner of Hungary's accession to EMU. Available information suggest that market expectations have shifted towards a slower accession timetable.

Higher risk perception reflected in monetary conditions

The rise in risk premia were also reflected in monetary conditions – the real-effective exchange rate depreciated, while the real interest rate edged up. The level of the real exchange rate is, currently, 15 percent higher than before the exchange rate band widening. The current real interest rate is higher than the average in recent years, though not entirely unprecedented. The last time the real interest rate stood at a similar level was during the 18 months following the Russian crisis, and that situation was also brought about by an upsurge in risk premia.

Inflation continued to pick up at end-2003

2003 Q4 saw a pick-up in inflation, which was discernible in core inflation as well as among goods exogenous to monetary policy. However, while the pick-up in core inflation was in line with our expectations, inflation in other product groups, caused by an upswing in unprocessed food prices in 2003 Q4, was faster than forecast. As a result of the factors referred to above, the December inflation of 5.7 percent was substantially higher than our expectations.

Accelerating core inflation was fuelled by nearly all macroeconomic factors. On the cost side, inflationary pressure increased as a result of continuing rapid growth in unit wage costs and the effect on import costs of the forint exchange rate, stabilising at permanently weaker-than-earlier levels after the June 2003 exchange rate fluctuation band devaluation.

The pressure on prices did not ease on the demand side either, since household consumption failed to slow significantly towards year-end. Moreover, disinflation was adversely affected by expectations – surveys of various groups of economic agents showed steadily rising inflation expectations in Hungary in 2003.

Rising inflation expectations

Compared with earlier issues, the present *Report* gives a more in-depth analysis of inflation expectations. The rationale behind this is that, in our view, inflation expectations may determine whether disinflation continues in 2005 or inflation, caused by the 2004 rise in indirect taxation (increases in VAT and excise duty), proves permanent. The latest data suggest that all economic agents expect rising inflation over the period ahead; yet, it is still uncertain how lasting that process

will prove to be.

Assumptions of our forecasts

Similarly to our previuos Reports, forecasts in this *Report* are conditional on a number of key assumptions. First, monetary policy is assumed to be unchanged, that is, we assume the January interest rate, yield curve and exchange rate to persist at the forecast horizon. This implies that the November 2003 interest rate increase is taken into account in terms of its direct channel on domestic demand and its indirect channel via developments in the forint exchange rate up to January 2004.

In terms of fiscal policy, we assume for 2004 that the deficit reduction measures announced towards the end of last year and early this year would be fully implemented. For 2005, our forecast is conditional on the assumption that the deficit would be reduced by 1 percent envisaged in the Pre-Accession Economic Program (PEP) of the Government.

Our forecasts are also conditional on the assumption that inflation expectations do not rise on the indirect tax increases of January 2004.

In the risk assessment, in preparing the fan chart of the inflation projection we consider some potential deviations from these assumptions, e.g. regarding fiscal policy or expectations. However, as we want to show what would happen given the current monetary conditions we do not take into account potential changes in monetary conditions.

A further rise in inflation in 2004 H1

In our projection, inflation in 2003 H1 rises above that brought about by autonomous market processes, due to the fiscal measures introduced in January 2004. Our analyses have concluded that the one-off price impact of the increase in indirect taxes (VAT, excise duty) amounts to 2 percentage points in the CPI. Over the short term, accelerating core inflation, rising inflation expectations and inflation of unprocessed food product prices make a further pick-up highly likely.

Over the longer term, disinflation likely to continue, if indirect tax hike does not spur growth in expectations

Whereas we expect inflation to pick up in 2004 H1, from H2 market goods are characterised by continuing disinflation which may be caused mostly by demand-side developments – we expect consumption growth to stall, while the planned fiscal contraction of demand is also likely to lead to disinflation. Inflationary pressure may also ease due to wage costs in H2, provided that economic agents consider the inflationary impact of the increase in indirect taxes as a one-off event which does not feed permanently through to price and wage expectations. Under such conditions, we expect inflation to run at 6.9 percent in December 2004.

If our strategic assumption about inflation expectations proves right, disinflation may continue in 2005, with consumer inflation down to 4.3 percent. In respect of meeting the disinflation path, 2005 will be of critical importance – given Hungary's inflation history, inflation is highly likely to grow as a result of permanently rising price and wage expectations, generated in turn by the increase in indirect taxes.

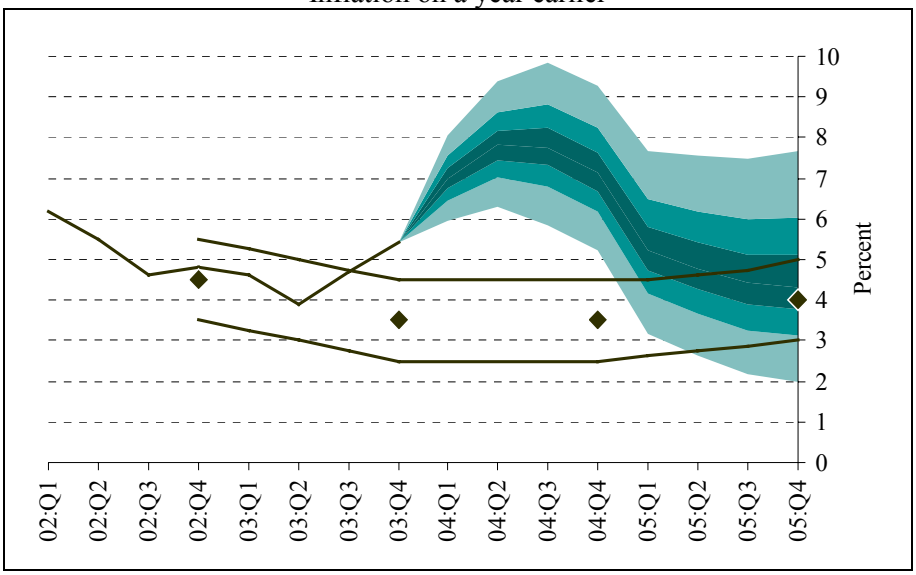
Considerable upside risks to inflation in 2005

Taken together, we detect no serious asymmetry in terms of risks to the projection in 2004. By contrast, we expect a relatively high upside risk in 2005. Regarding risks in 2004, a permanent rise in price and wage inflation expectations may be a key factor in inflation. This, however, may be at variance with a deeper slowdown in household consumption relative to the central projection on the demand side and/or a stronger real interest rate effect on domestic demand. Overall, the great uncertainty of the forecast for 2005 is demonstrated by the fact that the indicator incorporating all risks to the

projection is expected to be higher at end-2005 than the central projection by some 0.5 percentage points.

The fan chart of the inflation projection

Inflation on a year earlier



Rising projected inflation compared to November

As compared with the November projection, our central inflation projection for December 2004 has been revised up by 1 percentage point. That is ascribable to an faster-than-expected rise in wage costs, a weaker-than-earlier forint exchange rate assumption, and faster-than-expected consumption growth. In addition, the accelerating rise in unprocessed food prices at end-2003 has also raised our forecast. Our central projection for December 2005 has been revised up only slightly, by 0.3 percentage points, due largely to the base effect of inflation in 2004.

Modest pick-up in economic growth

We estimate GDP to have grown by 2.9 percent in 2003, which is a significant slowdown on a year earlier. We expect growth to slowly edge up by 3.1 percent and 3.2 percent in 2004 and 2005 respectively, as a result of various conflicting factors. Growth in domestic use also decelerates, stemming mostly from a lower level of household consumption and government investment activity. Simultaneously, heightened external business activity is coupled with a robust pick-up in exports, which, given the slowdown in growth in domestic use, increases the contribution of net exports to economic growth. These developments result in a change in the growth pattern seen in earlier years, growth driven by foreign trade rather than by domestic demand.

Fiscal tightening strengthens

After last year's tightening of -0.3 percent of GDP fiscal policy would contain domestic demand by -1.7 percent of GDP this year. In 2005 we assume a 1 percent tightening based on the PEP.

As the level of fiscal deficit has come under increasing attention in the context of European convergence process and also in that of the external balance, from now on we will analyse and forecast in a conditional way various fiscal deficit indicators in the *Reports*. According to our forecasting principles, given the currently announced fiscal consolidation measures we expect the ESA deficit to

decrease to 5.3 percent of GDP this year, implying that additional measures would be needed to reach the 4.6 percent target.

For next year we assume that the 1 percent deficit reduction of the PEP would be implemented. Given the currently known determinations on the revenue and spending side we estimate that this requires new measures to the extent of some 2.8 percent of GDP next year at the level of the ESA deficit.

Pick-up in corporate investment, and slowdown in household and government fixed investment activity

As a combined effect of various factors, corporate investment took a sharp upturn in 2003 H2. Both international confidence indices and international macroeconomic indicators suggest that the world economy has passed its latest recession, started back in 2001. This in itself encourages corporate sector capacity enlargement. In the meantime, macroeconomic developments in Hungary in recent years have forced companies to step up fixed investment spending. The underlying reason for this is that wage costs in the past two years have grown by far in excess of productivity, which has led to higher labour costs. Hence, given the upturn in the global business cycle, we expect a sharp pick-up in corporate investment activity, which may be subdued by rising capital costs generated by higher real interest rates over the longer term. At the same time, offsetting fiscal measures are likely to result in a drop in government fixed investment; and stricter subsidised housing loan conditions are reflected in the decline in household investment from 2004 H2.

Growth in household consumption slows down

2002 and 2003 saw an unprecedented rally in household consumption. Since the slowdown in consumption growth was not manifest up to December 2003, no rapid slowdown is likely to occur over the short term. However, from mid-2004 all factors suggest a major slowdown in household consumption. First, growth in household real income decelerates considerably, due to slower-than-earlier growth in real wages and in the real value of government transfers. Second, household uncertainty perception has also been sharply up recently, which may lead to lower propensity to consume. Third, as to some extent subsidised housing loans also financed consumption, restrictions in loan conditions contribute to the slowdown in consumption.

Outstanding industrial activity, stable services sector

Though industrial activity may have started to recover slowly in 2002 H1, the sharp pick-up in industrial production and export sales only provided clear signs of an upturn in external business activity in 2003 Q4. Meanwhile, the upswing in the services sector continued at a rate seen in earlier periods. At the forecast horizon, we expect the rise in industrial activity to accelerate, though such an extreme growth dynamics is unlikely to be sustained on the long run. Earlier growth in market services is expected to slow down as a result of a slow upsurge in household consumption and an upswing in external economic activity.

Increasing market share

The upturn in industrial activity was also reflected in the rapid increase in goods exports in 2003 H2. In our calculations, the fall in market share in 2003 H1 reversed as early as Q3 2003. At the forecast horizon, exports increase much more rapidly than expected in the November *Report*, and, as a consequence, Hungary's market share would rise consistently with the dynamic trend of recent years.

Contradictory labour market adjustment

Private sector wage inflation stalled in 2003 H2, reflecting opposing sectoral movements. In manufacturing, wage inflation stopped to decline along with a slow decrease in employment and a rise in productivity. Meanwhile, the some measures showed an upswing in labour demand: average working hours and the number of reported vacancies also went up. By contrast, in the market services sector, wage inflation started to pick up towards the end of the year, which was

ascribable mainly to permanently high household demand, while labour force and productivity maintained steady growth. As a consequence of all these developments, unit wage costs fell in manufacturing in 2003 H2, while in the services sector they soared even in comparison with the brisk growth seen in earlier periods.

Slowing pace of wage inflation

In 2004, no dramatic changes are likely to occur in the processes described above. In manufacturing, we expect wage inflation to slow down, while in market services a temporary pick-up in wage inflation is followed by another period of downturn. As a result, private sector wage inflation is forecast to remain broadly flat in 2004, followed by a slowdown in 2005. The latter may only occur if our strategic assumption concerning inflation expectations proves right, i.e. if economic agents regard the increase in indirect taxes as an event with a one-off inflationary impact. However, if they do not, wage inflation may remain at last year's level, putting stronger pressure on cost-push inflation. Falling consumer demand in the market services sector may also contribute to the slowdown in wage inflation.

Rising employment

In parallel with the modest slowdown in wage inflation, we expect a slow rise in private sector employment in 2004–2005. Whereas the pace of market services sector employment growth does not slacken considerably compared with that in recent years, the earlier fall in labour demand in manufacturing stagnates, then reverses slowly from end-2004, simultaneously with a recovery in external business activity and production.

Improving competitiveness in manufacturing

Recently, exceptionally high production activity and slowing employment in manufacturing has been coupled with robust growth in productivity. We forecast that rapid upsurge to continue; therefore, slowing wage inflation and the assumption of a weaker-than-earlier nominal exchange rate assumption are likely to result in a slight increase in cost competitiveness at the forecast horizon.

External equilibrium improves slowly

In 2003, the general government borrowing requirement declined by 0,7 percent of GDP, and the private sector financing capacity was down by nearly 3 percent of GDP. The change in external financing requirement was caused by changes in households' earlier net saving behaviour, due mainly to the rise in subsidised housing loans and an upturn in the corporate sector investment cycle, which also added to the external financing requirement. In 2004, the general government borrowing requirement is likely to fall by 1 percentage point. The private sector financing capacity diminishes only slightly, household sector's net financing capacity would improve slightly, as a result of housing loans regulation to the smoothing effect of consumption, while corporate sector investment activity continues to pick up.

Under the central projection, prepared on the basis of the Government's Pre-accession Economic Programme, 2005 is likely to see continuing fiscal contraction of demand. Household savings rise due to slackening growth in consumption and declining dwelling investment. Firms' capital expenditure remains high, while profitability increases more modestly. As a result of the sectoral changes described above, the external financing requirement in 2004 is expected to fall somewhat then more significantly in 2005.

Summary table of projections

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

	2002	2003				2004				2005			
	Actual data	Estimation				Projection							
		November		Current *Report*		November		Current *Report*		November		Current *Report*	
CPI*													
December	4.8	5.1		**5.7**		5.9		**6.9**		4.0		**4.3**	
Annual average	5.3	4.6		**4.7**		6.6		**7.4**		4.2		**4.7**	
Net inflation, december[1]	n.a.	n.a.		n.a.		n.a.		**4.8**		n.a.		**3.8**	
Net inflation, annual average[1]	n.a.	n.a.		n.a.		n.a.		**5.7**		n.a.		**4.2**	
Economic growth													
External demand (GDP-based)[2]	0.8	0.5		**0.5**		1.6		**1.9**		2.4		**2.5**	
Household consumption expenditure	10.5	7.8		**8.9**		2.3		**3.1**		2.6		**0.9**	
Gross fixed capital formation	7.2	3.6		**2.2**		3.9		**5.4**		4.5		**2.6**	
Domestic absorption	5.3	6.6		**6.1**		2.3		**3.0**		3.0		**1.7**	
Exports	3.8	3.4		**9.1**		7.5		**9.5**		8.1		**9.1**	
Imports	6.1	8.0		**12.8**		6.0		**8.9**		7.0		**7.0**	
GDP	3.5	2.9		**2.9**		3.2		**3.1**		3.6		**3.2**	
Current account deficit													
As a percentage of GDP	4.0	6.4	8.6[3]	**5.6**	**8.2**[2]	6.0	8.1[3]	**5,2**	**7,8**[3]	5.3	7.3[3]	**3,9**	**6,6**[3]
EUR billions	2.8	4.7	6.4[3]	**4.2**	**6.1**[2]	4.7	6.4[3]	**4.1**	**6.1**[3]	4.5	6.2[3]	**3,3**	**5,5**[3]
Fiscal stance													
ESA deficit as a percentage of GDP	9.2	n.a.		**5.8**		n.a.		**5.3**		n.a.		**4.3**	
Demand impact	4.2	(-0.4)		**(-0.3)**		(-0.8)		**(-1.7)**		(-0.8)		**(-1.0)**	
Private sector labour market													
Wage inflation	12.6	9.2		**9.3**		8.3		**9.3**		6.5		**8.0**	
Employment[4]	n.a.	n.a.		**1.1**		n.a.		**1.5**		n.a.		**0.4**	

** Actual data for 2003.*

[1] Net inflation defined as Net (2) on Chart 2.5., it excludes the effects of VAT and excise duty changes from inflation

[2] Summary tables in earlier Reports provided data on the size of export markets (i.e. import-based external demand), see Section 3.1.1.

[3] Including estimated reinvested earnings.

[4] As the current projections are based on a survey of different sectors, they are not directly comparable with earlier forecasts (see Section 4).

Forecast comparison table

	2004	2005
CPI (December on December, in %)		
MNB*	6.9	4.3
European Commission (October 2003)	5.1	3.8
Reuters survey (January 2004)	6.0	4.3
CPI (average annual growth, in %)		
MNB*	7.4	4.7
Consensus Economics (January 2004)[2]	6.6	4.3
European Commission (October 2003)	6.1	4.1
IMF (September 2003)	5.5	n.a.
OECD (November 2003)	6.5	4.5
Reuters survey (January 2004)	6.6	4.6
GDP (annual growth, in %)		
MNB*	3.1	3.2
Consensus Economics (January 2004)[2]	3.0	3.6
European Commission (October 2003)	3.3	3.9
IMF (September 2003)	3.5	n.a.
OECD (November 2003)	3.3	3.8
Reuters survey (January 2004)	3.0	3.6
Current account deficit (EUR billion)[1]		
MNB*	4.1	3.3
Consensus Economics (January 2004)[2]	4.1	3.7
Reuters survey (January 2004)	4.5	4.1
Current account deficit (as a percentage of GDP) [1]		
MNB*	5.2	3.9
European Commission (October 2003)	4.9	4.6
IMF (September 2003)	5.4	n.a.
OECD (November 2003)	5.5	5.5
ESA general government deficit (as a percentage of GDP)		
MNB*	5.3	4.3
Consensus Economics (January 2004)[2, 3]	4.7	3.9
IMF (February 2004)[4]	5.3	n.a.
Reuters survey (February 2004)[3, 5]	5.0	n.a.

** The MNB publishes so-called conditional forecasts. With certain economic policy variables (fiscal or monetary policy) and exogenous assumptions (dollar exchange rate, oil prices), forecasts are based on the rules rather than the most likely scenario. As a result, the MNB's projections may not be directly comparable with those of other institutions.*

[1] Based on the 2003 balance of payments methodology (excluding reinvested earnings).

[2] Based on a survey by Consensus Economics Inc. (London) entitled 'Eastern Europe Consensus Forecasts', in which balance of payments data were provided in dollars which we then converted using end-2003 cross rates.

[3] The responses given to Consensus Economics and Reuters surveys were considered as ESA deficit.

[4] The Preliminary Conclusions of Hungary's 2004 Article IV Consultation with the IMF .

[5] Based on an extraordinary Reuters survey conducted on 3 February.

1 Financial markets

1. 1 Foreign interest rates and risk perception

Given the small size of Hungary's economy and a very high degree of openness of its capital market, foreign, mainly EUR and USD, interest rates and global risk perception influence domestic financial markets considerably. Currently, most foreign investors consider Hungary to be a risky emerging market. Therefore, investors' risk tolerance and changes in their risk appetite for emerging markets are key to developments in demand for forint investments.

Short-term interest rates of the two key currencies have been broadly flat since mid-2003. Although recent data suggest an upturn in the US business cycle, uncertainty surrounding its durability remains. Therefore, the Federal Reserve rules out a raise in interest rates in the near future. Accordingly, an indicator of interest rate expectations, 30-day Fed funds futures seem to have got stuck on a 1 percent level. Nor are EUR returns likely to rise significantly. On the contrary, short-term yields and euro interest rate futures, a reliable indicator of expected changes in ECB's key interest rates, have fallen: the current 2.2 percent level of the three-month EURIBOR for September 2004 is 60 basis points lower than the futures price for late November. Interest rate expectations in Europe may have been dampened by the fact that the euro has appreciated by another 10 percent relative to the US dollar in the past 3 months.

Developments in long-term yields reflect expectations about Fed and ECB responses. Similarly to their last year's performance, 10-year EUR/USD yields have remained low and even decreased slightly since last November.

Chart 1. 1 Federal Reserve and ECB key rates

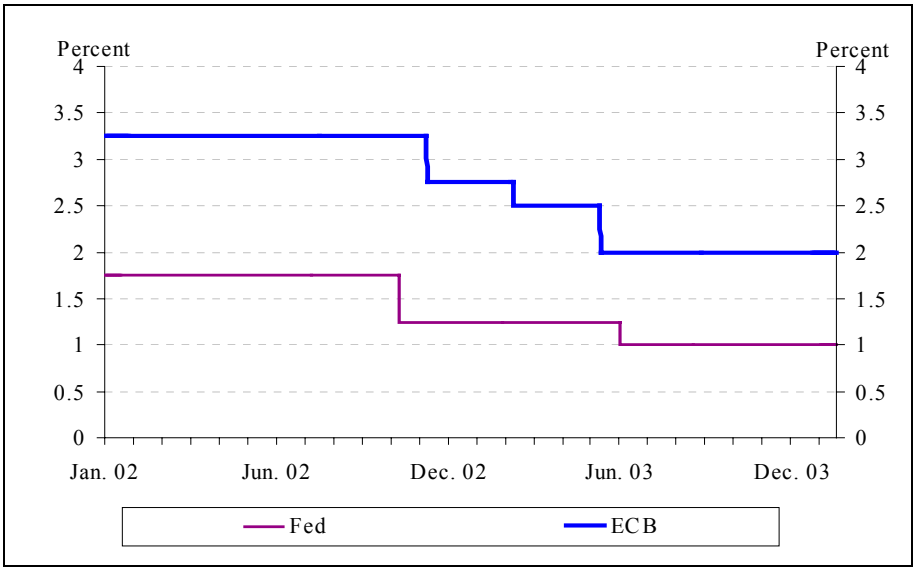
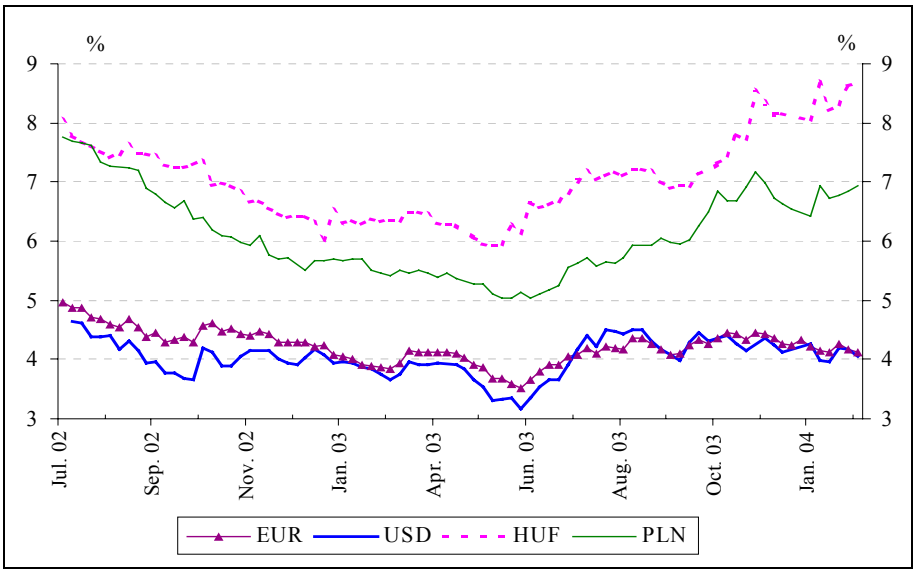
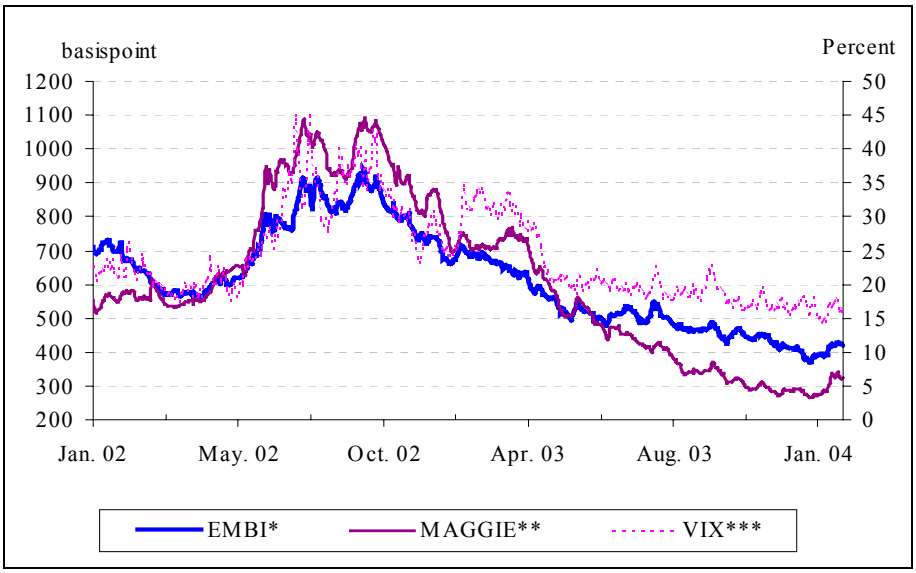


Chart 1. 2 Ten-year yields



Since our last *Report*, global risk appetite has not declined, which can be directly linked to the fact that the interest rates of the two key currencies have been low since mid-2003. International investors define their yield expectations vis-à-vis market instruments relative to low-risk assets. Over the past one and a half years, due to low EUR/USD interest rates, attributable to a long-drawn-out downturn in the business cycle, investors have been looking increasingly to emerging markets and high-risk assets offering higher yields. Investor interest remains high, which is proven by the fact that during the period under review all indicators examined sank to a historically low level. If no change occurs in expectations about the interest rate cycle in developed countries in 2004, the risk perception of emerging economies may also remain favourable.

Chart 1. 3 Global indicators of risk



**EMBI Global Composite.*
***MAGGIE – the index (bp) of euro-denominated government and corporate bonds calculated by JP Morgan-Chase.*
****VIX – Implied volatility derived from options for the S&P100 index.*

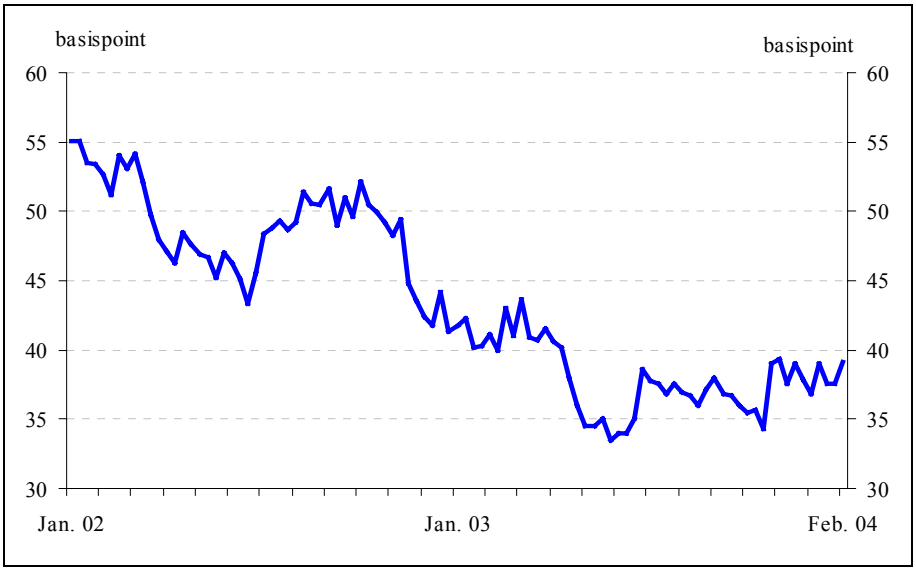
As opposed to a general overall improvement in the risk perception of emerging countries, uncertainty surrounding the CEE region has not diminished significantly. With euro yields remaining flat, the rise in ten-year zloty yields around September and October has proven lasting. Long-term forint yields also rose in November and December. Entrenched debates about fiscal adjustment in Poland have had an unfavourable impact. The future perception of the region is adversely hit by the fact that debates on fiscal reforms in Poland may have political implications. The reason for this is that the Polish government is threatening with early elections if the Parliament rejects the reform bill.

Regional events and domestic economic developments both increased risk premium on the forint. Worries about the medium-term sustainability of economic processes continue to be the underlying reasons for the loss of foreign investor confidence. Opinions of market participants are divided on the issue to what extent the treatment of the current account deficit will dominate other economic policy objectives. The departure of the 2003 government deficit from the targets, modified on several occasions during the year, hit risk perception hard.

No significant change has occurred in the interest rate premium on foreign currency-denominated Hungarian government bonds since our last *Report*. This suggests that the recent rise in risk premium is primarily due to increased exchange rate risk. The perception of the Hungarian government's solvency has not deteriorated substantially. This is reflected in both interest rate premia and credit rating, the latter remaining, for the time being, unchanged. The Fitch credit rating agency, which revised down its projection for the rating outlook for Hungarian government debt last autumn, has not changed its rating of either foreign currency or forint-denominated debt. Uncertainty,

however, seems to have prevailed during the period under review, which is clearly reflected in the permanently negative rating outlook.

Chart 1. 4 Interest rate premium on EUR-denominated Hungarian government bonds

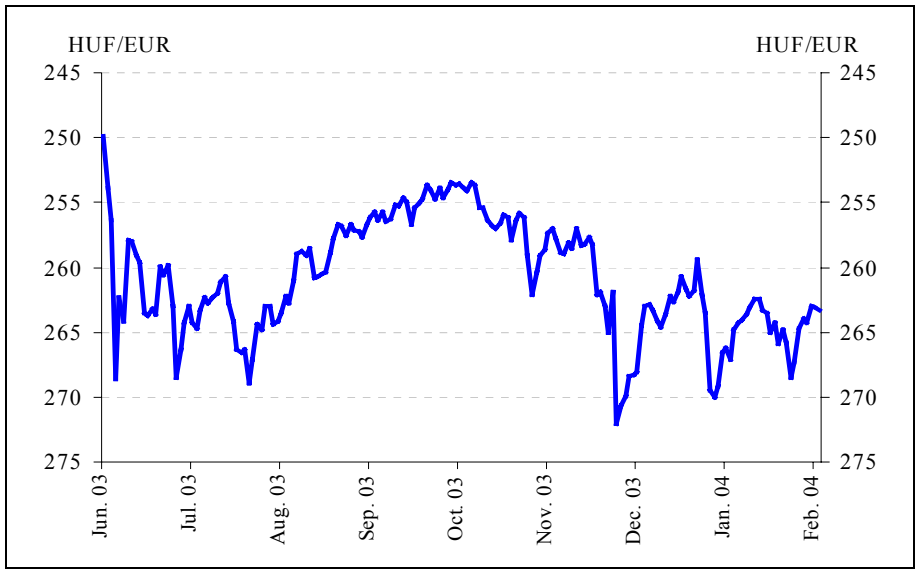


1. 2 Exchange rate developments

The forint's exchange rate depreciated by approximately 2 percent between November 2003 and January 2004. Simultaneously, exchange rate volatility increased significantly. After a relatively stable period between August and October, the exchange rate started to fluctuate from November similarly to that experienced in June and July.

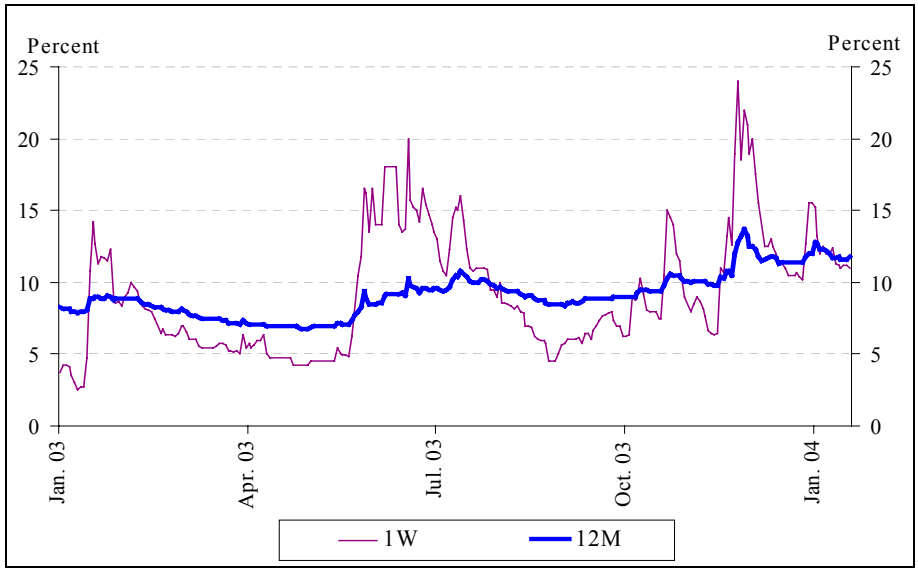
The exchange rate plummeted on two occasions during the period under review: once in late November, and then in early January. However, the impact of neither incidence of depreciation proved lasting, for either was followed by moderate correction. In response to the depreciation, the Bank raised its base rate by 3 percentage points in late November. December saw correction in the exchange rate, only to be followed by another instance of depreciation in early January. It was at this time that the government publicly disclosed the higher-than-planned general government deficit, and the issue of revising the strategy of the adoption of the euro was raised. The depreciation in early January did not last long either, and like the depreciation in November, it was followed by a spell of moderate appreciation.

Chart 1. 5 The exchange rate of the forint



As exchange rate volatility strengthened, so the indicators of market uncertainty further increased. Implied volatility calculated from FX market option prices rose at both the one-week and one-year horizon. This suggests that uncertainty about future exchange rate developments increased. Uncertainty at the one-week horizon reached the level it stood at in January and July 2003. Implied volatility has never been this high since January 2003 (beginning of our time series). While exchange rate outlook used to be unpredictable only in the short run, it seems that it is here to stay over the longer term as well.

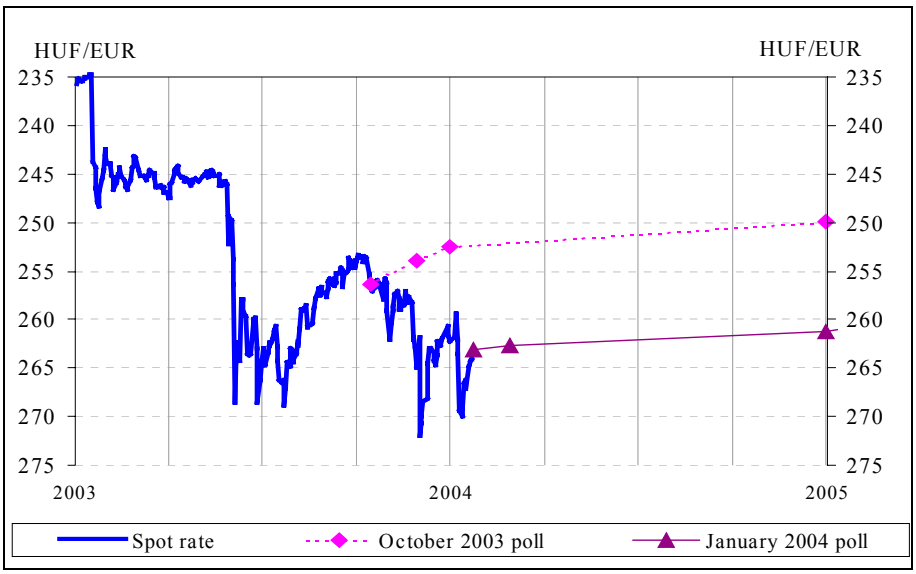
Chart 1. 6 HUF/EUR implied volatility



At the same time, Reuters survey of professional forecasts reveal that in addition to the increased uncertainty about the exchange rate, its expected path has also been modified. The average end-2004 exchange rate expectations of analysts fell by nearly 4 percent

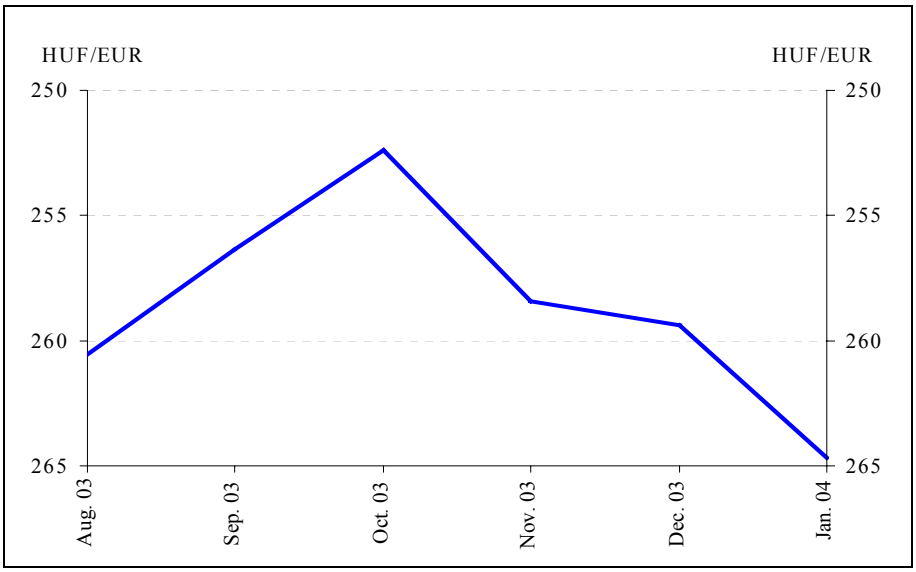
between October 2003 and January 2004. Meanwhile, the spot exchange rate weakened by 2 percent. Thus, while in October 2003, analysts still expected the exchange rate to appreciate considerably before end-2004, in January 2004, they appeared to be more inclined to expect it to remain flat. It should be noted, however, that projections for end-2004 in the Reuters survey in January were more widely distributed than earlier. While most participants projected HUF/EUR 250 to 262, some foreign analysts expected the exchange rate to stand at HUF/EUR 280 to 293 at year-end 2004.

Chart 1. 7 Average of Reuters analyst exchange rate expectations



Accordingly, Reuters surveys also revealed that analysts expected a lower central parity in ERM II. Expected central parity between November and January was approximately 2 percent weaker, while the date of ERM II entry remained roughly as scheduled. Analysts expect it to take place some time between 2004 H2 and 2005. This is all the more important as the timing of ERM II entry and the expected central parity also influence exchange rate expectations.

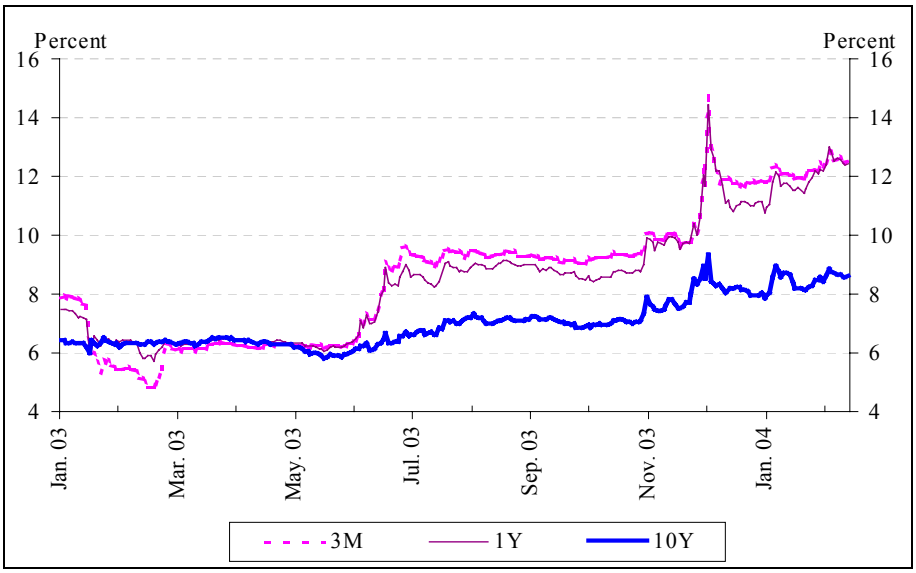
Chart 1. 8 Average of Reuters analyst expectations of the forint's ERM II central parity



1. 3 Yields

Following the Monetary Council's decision on 28 November 2003 to raise the base rate by 300 basis points, yields on government securities rose significantly. The fact that three-month benchmark yield permanently remained two hundred basis points suggests that the raise took even markets by surprise. Apart from an initial overshooting, one-and 10-year yields increased by 100 and 50 basis points respectively. In January and February yields rose further, especially around one-year maturity.

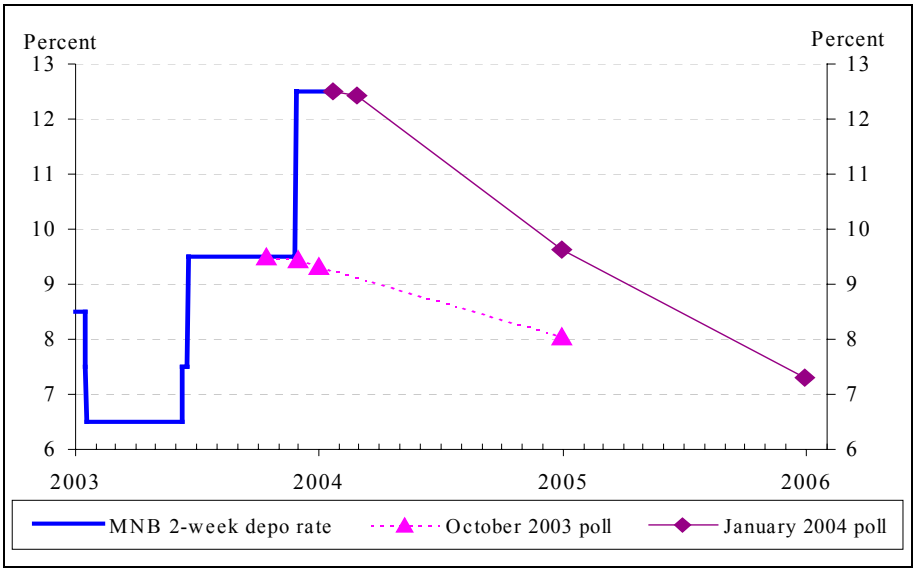
Chart 1. 9 Benchmark yields in the government securities market



The extent of the rise in 1-2-year yields suggests that market participants do not expect a fast and significant cut in interest rates. By contrast, the Reuters January business

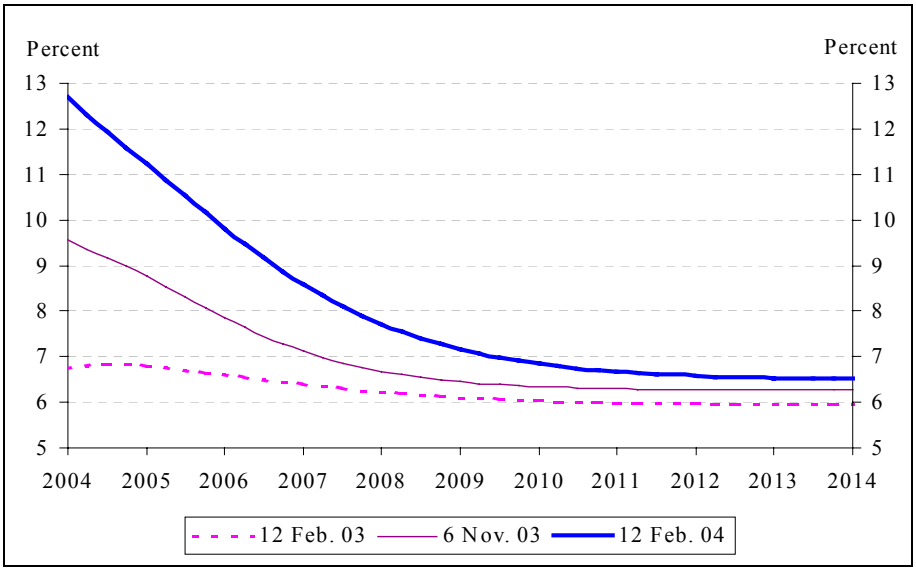
survey reveals that nearly all analysts included in the survey expected the key policy rate to return to 9.5 percent prior to end-2004.

Chart 1. 10 Analysts' key policy rate expectations
Reuters survey



From shifts in implied forward rates conclusions can be drawn on interest rate expectations at various horizons. In addition to the spot one-year rate, forward rates related to various maturity dates in the future also rose significantly between early November 2003 and February 2004. For instance, the forward rates in two and four years' time rose by 200 and 100 basis points respectively. Consequently, the forward rate curve suggests that in the years to come, the market expects a significant drop in yields and considerably higher yield levels relative to expectations in early November 2003.

Chart 1. 11 Implied one-year forward rates for different dates*

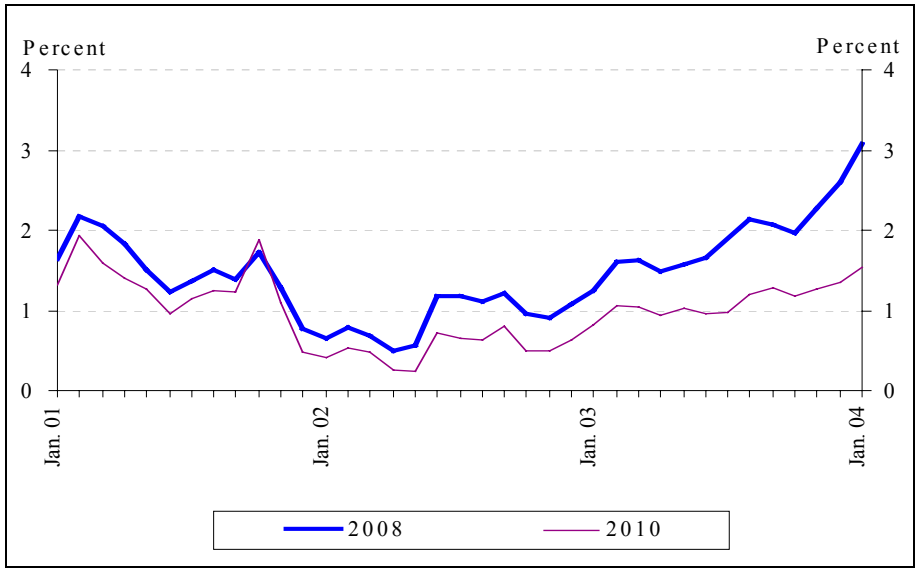


**The horizontal axis indicates the start of the one-year forward rate.*

In the meantime, the euro yield curve shifted downwards, thus the forward differentials grew even more significantly. Neither an increase in the risk premium nor expectations of more rapidly depreciating (or more slowly appreciating) exchange rate can be ruled out as the main reason why market participants require forint instruments to produce higher returns. The Reuters survey reveals no significant change in short-term expectations for average appreciation, though, in contrast with a slight appreciation envisaged earlier, analysts forecast near stagnation for 2004. It is important to note, however, that some foreign investment banks, perhaps underrepresented in the survey compared to their market share, expect rapidly falling central bank interest rates and a considerably depreciating exchange rate in their analyses. The heterogeneity of the market may be attributable to increased uncertainty and invariably hectic exchange rates and yields.

For some time, exchange rate expectations and long-term yields have also been influenced by the strategies of entry into EMU and ERM II. Last July the government specified 2008 as the target date of EMU entry. In the past three months, the one-year EUR/HUF (implied) forward rate for this date has risen by nearly one percentage point, exceeding 2.5 percent. This has been the highest value since early 2000. Although to a far less extent, the differential for 2010 has also risen. Its January 2004 average of 1.5 percent corresponds to the 2001 annual average. In EMU the interest rate differential is highly likely to fall below one percentage point, which means that a fast entry is priced at a low probability. It should be noted that the Government also started rethinking the entry strategy in the period under review (in January), which the market may have interpreted as a probable postponement of the date of the EMU entry.

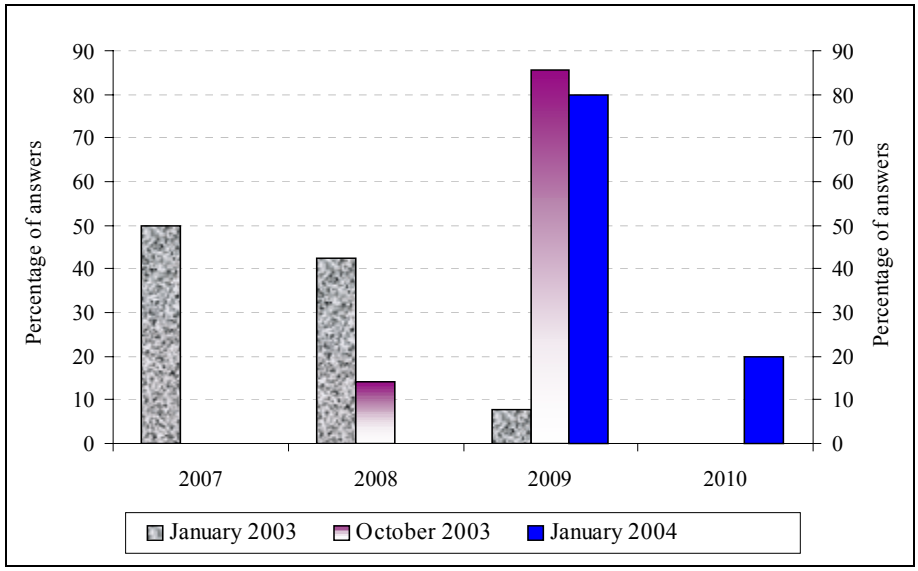
Chart 1.12 Implied forward rate differentials for fixed dates



The Reuters survey underpins the explanation that the expectations related to the postponement of EMU entry may have had a role in rises in yields and the weakening of the exchange rate. Contrary to the movement in yields, this trend continued throughout 2003 as a whole, and not only over the past quarter. In January 2003, the majority of macroeconomic analysts considered an early (2007 or 2008) EMU entry as likely. In the course of the year, expectations shifted towards 2009. A further slight shift towards a

later date could be seen even during the period between the October 2003 and January 2004 surveys, although they did not suggest a degree of change that was suggested by the yield curve.

Chart 1. 13 Reuters analysts' EMU entry date expectations



Evaluating exchange rate and yield developments as well as the international environment unambiguously suggests a considerably deteriorating risk perception of forint investments. This trend holds true for 2003 as a whole and the events of the past three months fit in this trend. Instead of a continuous rise, risk premium increased abruptly, in discrete jumps. Temporarily, during these periods there were instances of significant overshooting, followed by the stabilisation of the exchange rate at a lower and of the yield curve at a higher level.

Market opinions clearly suggest that the main reason why many participants think the risk of a permanently more depreciated forint exchange rate has increased is the deficit of the current account, though many also consider the difficulties concerning the lowering of the general government deficit as a reason, too. The uncertainty surrounding expectations increased both during the entire year and in the past three months. The mainly country-specific (non-contagious) risk factors are reflected in higher exchange rate risks. Simultaneously, global risk assessment improved, while the regional one remained unfavourable.

As a result of the broken external and internal equilibrium, the market expects economic policy to take a course that rules out an early EMU entry. Postponement of the expected date of EMU entry may have contributed directly to the weakening of the forint exchange rate and rising yields through an expected higher future risk premium.

1. 4 Monetary conditions

Monetary policy affects real economy primarily through real exchange rates and real interest rates. Given the weight of foreign trade in Hungary, the forint exchange rate plays a more important role. What follows briefly outlines changes in these two variables and how market participants perceive future changes in them. This description

of market expectations relies on the macroeconomic analyses in the Reuters survey, which, though not a properly representative sample of all economic participants, provides a good picture about tendencies.

The depreciation of the forint exchange rate last year resulted in a nearly 5 percent weakening of the real effective exchange rate despite Hungary's excess inflation of over 3 percent. This weakening followed two-year appreciation. Macroeconomic analysts expect real appreciation for 2004, owing to primarily to the inflation differential. The level calculated from end-2004 expectations would still be below the early 2003 level. However, given that part of the excess inflation is generated by changes in indirect taxes, neutral from the perspective of corporate sector competitiveness, the expected real appreciation can be deemed as a result of actual tightening of monetary conditions only to a lesser extent.

Chart 1. 14 Monetary conditions: the real exchange rate*

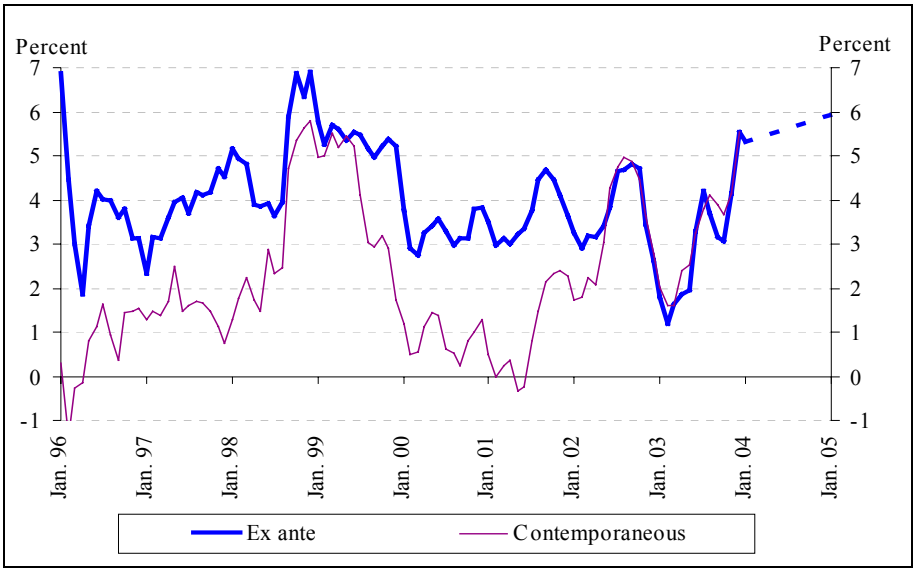
** CPI-based real effective exchange rate. Average of 2000 = 100 percent. Higher values denote appreciation. End-2004 expectation is calculated on the basis of the Reuters inflation and exchange rate consensus, assuming no change in the trading partners' inflation relative to 2003 and that effective exchange rate appreciation expectations correspond to HUF/EUR exchange rate expectations.*

A significant rise in yields in the last few months of 2003 fed through to forward-looking real interest rates, because it exceeded the increase in inflation expectations. Currently, the one-year forward-looking real interest rate is above 5 percent, slightly exceeding the corresponding figure last year. (The historic average has been 4 percent since 1996.) However, this is by no means unprecedented. The last time the forward-looking real interest rate was as high as the current one was in the period following the Russian crisis, that is, in the second half of 1998 and in 1999. Like now, the high real interest rate then too was attributable to a rise in the risk premium.

With regard to future real interest rate developments, market participants expect a further increase: implied forward rates suggest lower expectations of a decline in yields than the decline in inflation, thus the real interest rate expected by the beginning of 2005 approaches 6 percent.

A significant rise is shown in the contemporaneous real interest rate, which is less significant from the point of view of its economic content, including the assessment of monetary conditions, but easier to calculate and therefore frequently used.[1] In an environment of low inflation or in the case of increasing inflation expectations, the two kinds of differently defined real interest rates naturally approach each other.

Chart 1.15 Monetary conditions: real interest rate*



**Monthly average yields on one-year government securities, deflated with the contemporaneous 12-month inflation and Reuters one-year forward-looking inflation consensus (value computed by interpolation from year-end and average inflation expectations). The expectation relevant to January 2005 is calculated from the implied forward rate from the inflation consensus applied by Reuters.*

The concurrent and combined changes in monetary conditions reflect the risk premium rise already established in the previous chapters. The decline in the nominal forint exchange rate exceeded Hungary's excess inflation over other countries, while the rise in nominal interest rates exceeded higher inflation expectations.

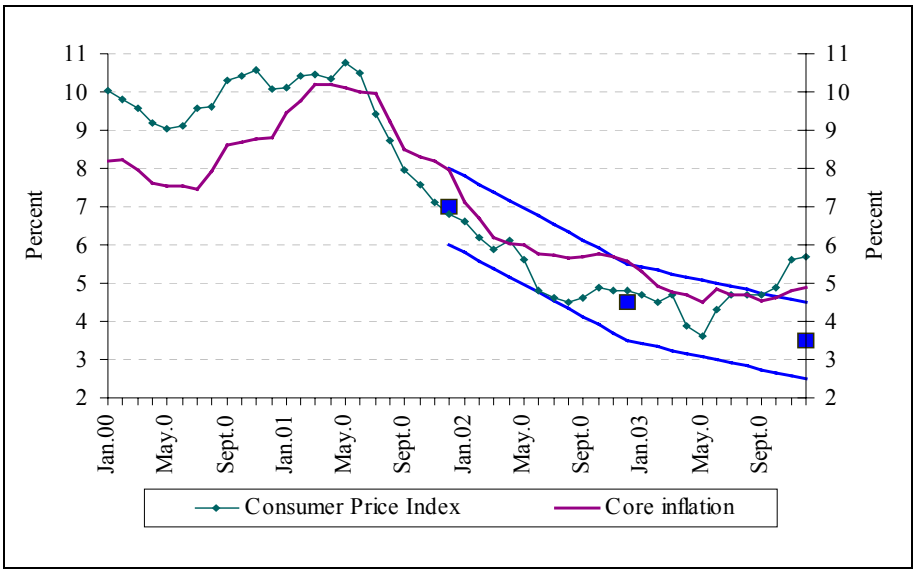
[1] For more details, see Box II-1 *Different methods of calculating the real rate of interest* in the December 2000 *Quarterly Report on Inflation*.

2 Inflation

2. 1 Inflation in 2003

In December 2003, consumer price inflation was 5.7 percent, which was substantially higher than the target set by the Magyar Nemzeti Bank for end-2003 (below 4.5 percent). Although the target was set for the headline consumer price index (CPI), the fact that core inflation was up to 4.9 percent indicates that even underlying inflation was above target.[2]

Chart 2-1 CPI and core inflation relative to target band of inflation
Year-on-year growth rates



In terms of inflation developments, 2003 may be divided into two distinct periods. The first quarter saw a continuation of disinflation following the widening of exchange rate band in 2001, complemented by price movements of factors endogenous to monetary policy and, in some periods, by certain exogenous factors. In 2003 Q2, the disinflation trend, which had started in mid-2001, was interrupted. And, from H2, consumer price movements were determined by factors generating higher inflation.

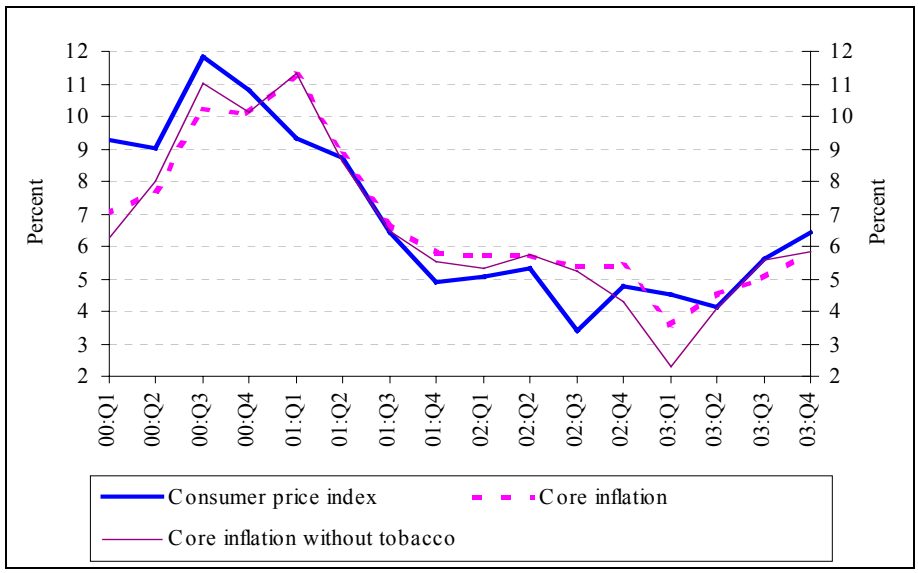
After January 2003, our short-based (month-on-month) indices showed a pause in the downward trend in core inflation. However, as a positive effect of some exogenous items (a temporary drop in oil prices, stagnating, or falling unprocessed food prices, a slowdown in regulated price increases), up to May no indices showed clearly a change in the overall inflation trend at the level of the CPI.[3]

[2] For a detailed analysis of inflation forecasts for end-2003, see Section 5.1.

[3] The 3.6 percent annual growth in consumer prices recorded in May 2003 was a thirty-year low in Hungary in terms of year-on-year inflation.

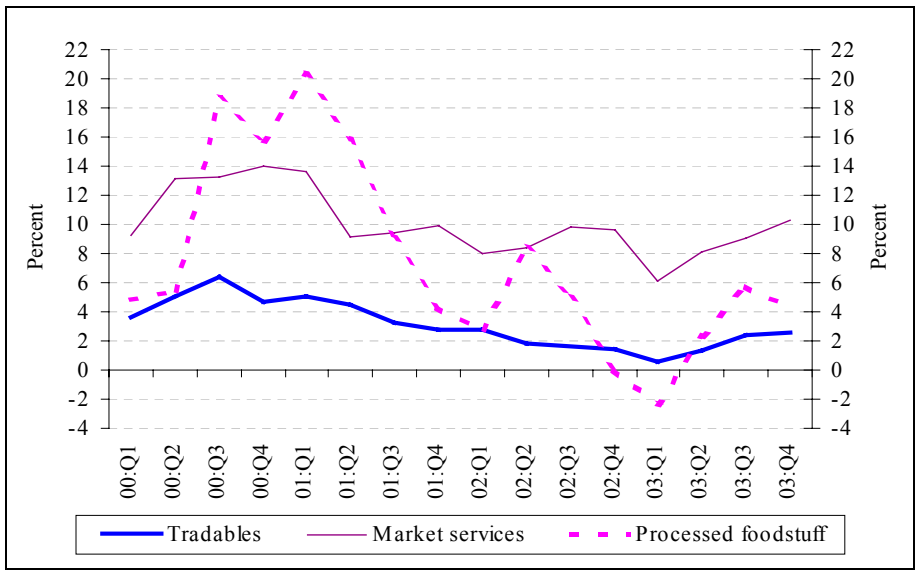
In H2, however, the upward trend of core inflation continued and was coupled with an upsurge in the prices of items exogenous to monetary policy. As a result of the two trends, annual increase in CPI in the entire period was higher than that in core inflation.

Chart 2-2 CPI and core inflation developments
Annualised quarterly indices and seasonally adjusted data



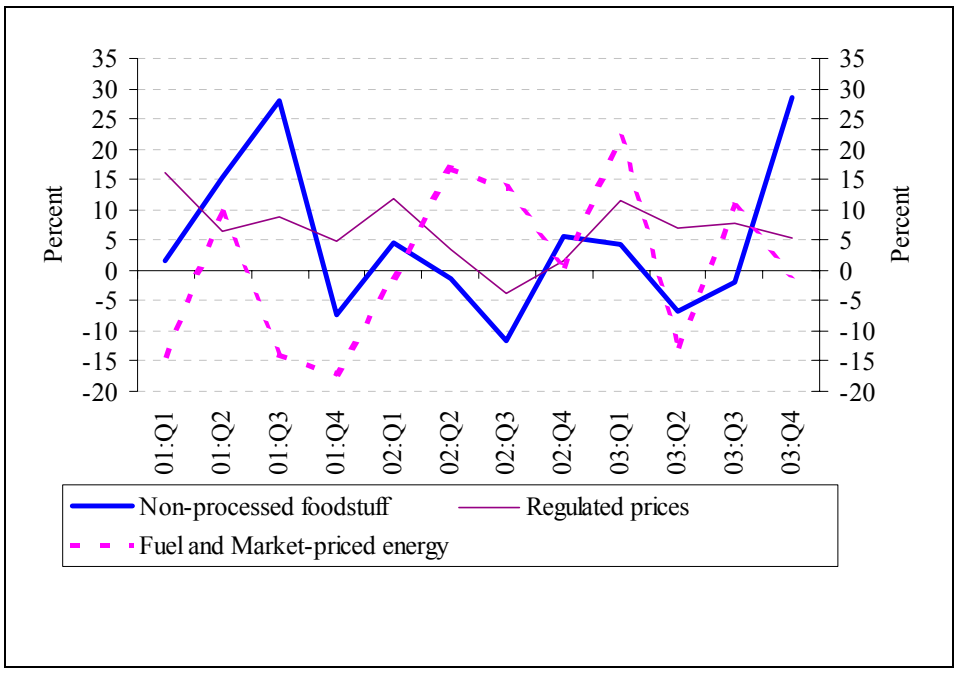
The accelerating of price growth could be perceived generally in all items of core inflation. The price dynamics of tradable goods, which cover over a quarter of the headline CPI basket, was on the decrease since the exchange rate band widening; in mid-2003, however, it rebounded and has been edging up since. Simultaneously inflation of market services which was already high started to increase and the growth rate of processed food prices rose as well.

Chart 2-3 Changes in the main constituents of core inflation
Seasonally adjusted data, annualised quarterly growth rates



By the items excluded core inflation unprocessed food prices increased sharply and rapidly at end-2003, significantly rose the prices of market priced energy in 2003 H2 and only the dynamic of regulated prices declined slightly.

Chart 2-4 Developments outside the core inflation
Seasonally adjusted and annualised quarterly growth rates



Major macroeconomic factors affecting inflation in 2003

In all market-priced product groups, the pricing behaviour of domestic market participants is profoundly influenced by domestic demand and inflation expectations. The slowdown in growth in household consumption expenditure was hardly noticeable after the conspicuously strong rise in 2002. Soaring household consumption expenditure may be explained by the high private sector real wage growth and also by government impulses influencing consumption (see Section 3.1.3).

Fiscal measures taken in 2002 and 2003 also contributed to the pick-up in inflation in 2003. The expansion of demand was caused primarily by the delayed effects of the changes coming into effect at end-2002; however, the rise in civil servants' salaries in mid-2003 might also have bolstered domestic demand.

The inflationary impact of strong domestic demand was enhanced by an upsurge in inflation expectations following the announcement of tax changes for 2004 (see Section 2.4). These two influences (i.e. high domestic demand and rising inflation expectations) in themselves would have caused a slowdown or stagnation in the earlier disinflation path.

Growth in private sector nominal wages (e.g. market services), which are slow to adjust to a low-inflation environment, continued to far outstrip the sum of inflation the growth in productivity. That caused strong cost-push inflationary pressure particularly in the labour-intensive sectors.

Buoyant domestic demand and rising inflation expectations led to inflation in all product groups. At the same time, the economy was hit by exogenous supply shocks which in some product groups resulted in a reversal in the already slackening pace of disinflation and a pick-up in the inflation rate. The immediate effects of such shocks were reflected in the prices of only few goods or services in the short run; yet, with a few months' delay their longer-term feed-through effects (e.g. a rise in production costs) pushed up the total CPI.

Soaring oil prices in 2003 Q1 dipped temporarily following the end of the war in Iraq, and then stabilised in H2 at levels seen at the beginning of the year. The inflationary impact of oil prices on consumer prices was not fully offset by the gradual strengthening of the euro (and simultaneously that of the forint) against the dollar, either.

In the last two months of 2003, the sharp rise in unprocessed food prices, which spilled over across the entire region, induced a strong supply shock. Since, in our experience, for processed food price movements to pass through usually takes longer than two months, the indirect (cost-push) effects are likely to be felt only this year. By contrast, their direct effect already contributed a great deal to the upsurge in inflation at end-2003.

The effects of the forint/euro exchange rate

The forint exchange rate appreciated against the euro as a trend from the time of the band widening to early 2002, and then stabilised within a relatively narrow range (HUF/EUR 242-245) throughout three quarters. Following the speculative attack at the upper limit of the band in early 2003, the forint rate first fell slightly, and then sharply after the shift in the intervention band in June. On average, monthly exchange rate data for 2003 H2 were over 7 percent weaker than a year earlier. The negative effects of the weak exchange rate were reflected directly in domestic sector prices with the highest exposure to import activity and competition with foreign producers, while its indirect effects were delayed and spread across almost the entire CPI.

Our analyses suggest that in 2003 H2 virtually all the factors with some influence on consumer prices contributed to the pick-up in the pace of inflation. Moreover, even this year's annual inflation may be fuelled by the full-year effects of these factors. And, considering the increasing pace of inflation in recent months stemming from the base effect, that in itself may present a case for higher inflation projections.

Other factors

Regarding some other factors the changes in unprocessed food prices had dominant effect in 2003. Despite unfavourable weather conditions and a poor crop, the prices of agricultural products fell or remained broadly flat in the first nine months of 2003 on a year earlier, only to skyrocket throughout the entire region (e.g. in the Czech Republic) in Q4, particularly in November. Whereas the changes in market energy prices were largely determined by the prices of substitutes (piped gas, motor fuel), the price dynamics of regulated goods were mostly affected by an increase in duties levied on excise goods (alcohol and tobacco), and another one in regulated gas prices in May.

2. 2 Inflation projection

Our central projection is for inflation to be 6.9 percent at end-2004, which is by far in excess of the target defined as 3.5± 1percent. That is attributable mainly to supply-side shocks and, more importantly, to a rise in indirect taxes in early 2004. In addition, the first third of the forecast period is likely to see unfavourable underlying inflation developments.

Provided that higher indirect taxes do not raise inflation expectations, the slowdown in domestic demand growth is likely to cause steady disinflation over the forecast period from 2004 H2. In that case, inflation is expected to be 4.3 percent in December 2005, which may be within the upper range of the 4.0 ± 1 percent target band.

The strategic assumption that supply-side shocks are not built in inflation expectations has a major role in our projection. Yet if they do, mainly through corporate pricing and rising wage inflation, they may cause inflation to overshoot the central projection. That upside risk has been included in the probability distribution around the central projection, which is plotted on the fan chart (see Section 2.4).

Table 2-1 Central projection for the CPI

On a year earlier, in percent

	Weight	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	4.8	6.2	7.0	7.2	7.0	6.0	5.2	4.8	4.6
Unprocessed food products	6.3	-0.8	-2.3	0.1	5.7	8.9	11.2	13.6	7.9	3.4	4.0	4.6	5.0
Motor fuel and market energy	6.2	12.5	3.7	2.9	2.3	0.9	6.0	2.9	2.2	-1.4	-1.6	-1.2	-0.9
Regulated prices	19.4	3.0	3.9	6.9	7.8	11.2	10.1	9.5	8.9	5.3	5.6	4.9	4.9
CPI	**100**	**4.6**	**3.9**	**4.7**	**5.4**	**7.0**	**7.8**	**7.8**	**7.1**	**5.2**	**4.8**	**4.4**	**4.3**
Annual average		4.7				7.4				4.7			

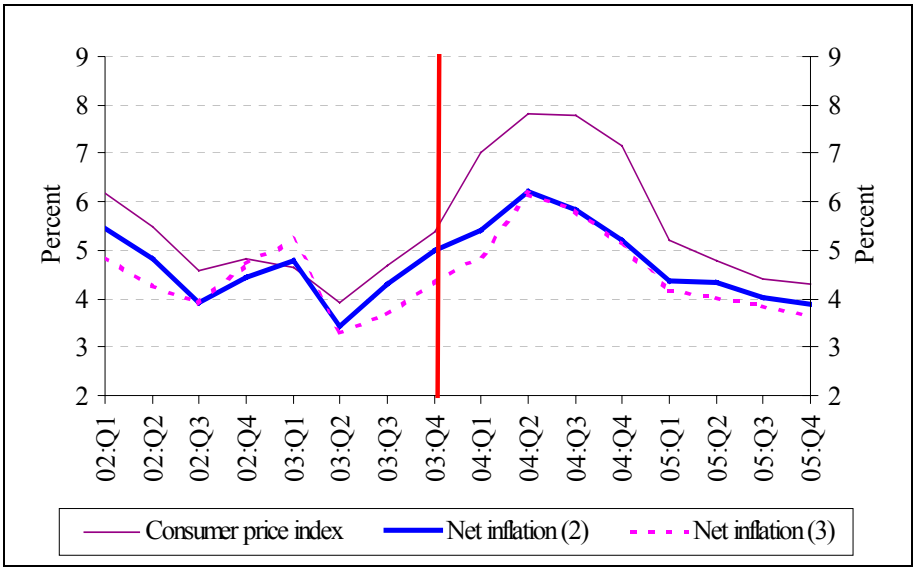
	December 2003	December 2004	December 2005
Core inflation	4.9	7.0	4.4
Unprocessed food products	7.4	5.6	4.5
Motor fuel and market energy	3.6	1.0	-0.8
Regulated prices	7.8	8.8	4.9
CPI	**5.7**	**6.9**	**4.3**

Table 2-2 Differences between the current and the November 2003 projections
Projections for December in the respective year

	November projection		Current projection		Difference (between the current and the November projection)	
	2004	**2005**	**2004**	**2005**	**2004**	**2005**
Core inflation	5.7	4.0	7.0	4.4	1.3	0.4
Unprocessed food products	4.3	5.1	5.6	4.5	1.3	-0.6
Motor fuel and market energy	-0.4	0.4	1.0	-0.8	1.4	-1.2
Regulated prices	8.8	5.0	8.8	4.9	0.0	-0.1
CPI	**5.9**	**4.0**	**6.9**	**4.3**	**1.0**	**0.2**

Since general demand-supply developments of the economy increase inflation in short-term, the net inflation indicators also show the acceleration of inflation during the first half of 2004. On the other hand, net indicators will show a restart of disinflation from the second half of 2004, owing to the slowing of households' consumption and our assumption on inflation expectations. Our projection for these net indicators are below 4 percent by the end of 2005.

Chart 2-5 CPI and various net indicators*
On a year earlier



** The net indicator (2) excludes the effects of VAT and excise duty changes. The net (3) indicator also excludes regulated prices from the basket.*

Table 2-3 Various net inflation indicators*
(year on year indices, in percent)

	Q4 2003	Q4 2004	Q4 2005
CPI	5.4	7.1	4.3
Net (2)	5.0	5.2	3.9
Net (3)	4.3	5.2	3.6

** The net indicator (2) excludes the effects of VAT and excise duty changes. The net (3) indicator also excludes regulated prices from the basket.*

Short-term projection[4]

In our forecast, inflation is 7.0 percent in 2004 Q1, and 7.8 percent in 2004 Q2, i.e. rises sharply in H1 as a whole. The major underlying factor is the heavier indirect tax burden as well as unfavourable trends in net inflation.

We estimate the direct primary effect of the VAT increase on CPI to be around 1.4 percentage points.[5] However, we assume that retailers will not fully pass this increase on to consumers, so the increase in consumer prices will only be 1.2 percentage points. Besides, the projected increase in consumer prices attributable to the increase of excise duties is 0.8 percent. As we have already pointed out in the August and November 2003 *Reports*, the increase of indirect taxes occur mainly among regulated prices, prices of foods and tobacco products. As the prices of these product groups are very transparent, and they also constitute a significant proportion of the average consumer's basket, there is a high risk that consumers will perceive the inflationary shock resulting from the tax increase to be higher than our estimated primary effect.

Regarding the dynamics of the effects of VAT increase, we assume that half of the primary effect is likely to be reflected in consumer prices as early as January, while the full primary impact is not expected to unfold until end-Q1. The rise in excise duties is likely to cause the CPI to grow by 0.8 percentage points, most of which is ascribable to tobacco products. Here we have assumed that the rise exerts a gradual influence on consumer prices which is likely to take six months, starting from March, to be fully reflected.[6]

Our short-term projections assume falling oil prices, slow and steady inflation of imported tradables prices and a flat exchange rate (264.6 HUF/EUR and 1.26 USD/EUR, which are equivalent to the January average). Following the January 2004 futures prices of IPE (London petroleum exchange), a drop in oil prices will immediately manifest in motor fuel prices, hence we expect a more modest inflation in this product range as of end-Q1. At the same time, the assumed forint rate is remarkably weaker than that over the two years preceding 2003 H2. Import prices rising as a result have a gradual influence on domestic consumer prices, while with some food products, and durables in particular, the pace of inflation is likely to become more rapid than in previous periods as early as 2004 H2.

[4] The CPI data for January 2004 was received after the projections had been finalised. The 6.6 percent CPI data has no effect on our long-run projection, but it highlights some risk factors. It seems, that the VAT increase is feeding through consumer prices faster than we expected and the overall effects might also be higher. In some product groups these was accompanied by an increase in net prices which might be an early sign of rising inflation expectations.

[5] For details of the 2004 indirect tax measures see the August and November 2003 *Reports*.

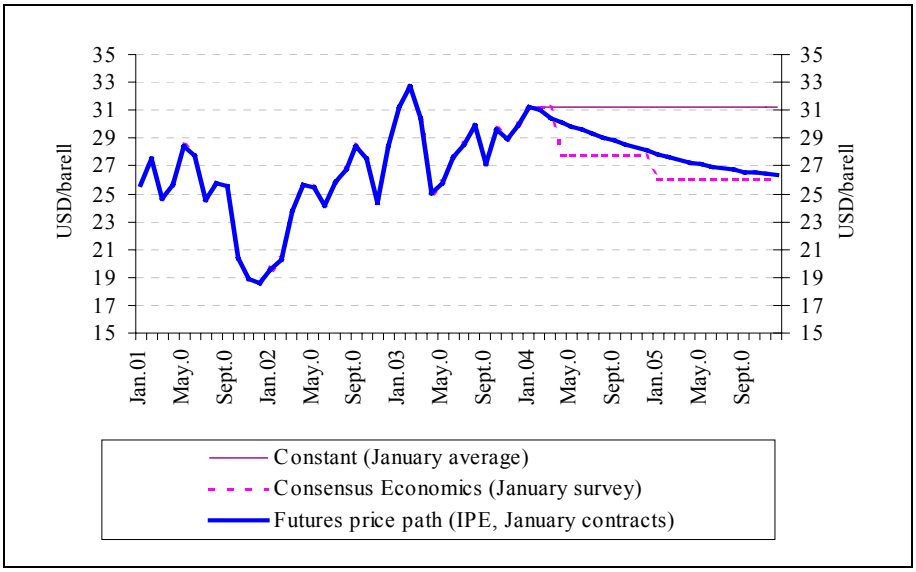
[6] We have assumed that tobacco producer prices remain intact in 2004, and that producers pass the entire tax increase on to consumers.

Table 2-4 Major assumptions in the current and in the November *Report*

	November 2003 projection		Current projection		Difference	
	2004	**2005**	**2004**	**2005**	**2004**	**2005**
HUF/EUR exchange rate (HUF)*	255.5		264.6		3.6	
USD/EUR exchange rate (cent)*	116.9		126.1		-7.3	
Brent oil price (USD/barrel)**	25.5	23.8	29.5	27.0	15.8	13.3
*Memo: Brent oil price (HUF/barrel)***	*5572*	*5193*	*6192*	*5656*	*11.1*	*8.9*
Imported inflation of tradables (%)***	1.0	1.0	1.0	1.0	0.0	0.0
Private sector wage inflation (%)****	8.3	6.5	9.3	8.0	1.0	1.5
Nominal private sector ULC (%)****	4.6	3.0	4.1	3.6	-0.5	0.6
Purchased household consumption (%)****	2.3	2.6	3.1	0.9	0.8	-1.7

** The January 2004 average.*
*** Projection calculated according to oil futures prices in January 2004 (IPE).*
****Annualised month-on-month growth rates. Tradables inflation in euro-area-11, source: Eurostat, New Cronos Code: igoodsxe.*
*****Annual average.*

Chart 2-6 Alternative oil price assumptions



Furthermore, short-term real economic developments also reflect a trend towards rising inflation. Whereas growth in corporate sector labour costs (particularly in the services sector) are not set to slow down in the next six months, economic agents incur considerably higher costs on account of the rises in producer gas prices and in certain indirect taxes (e.g. energy tax).

Meanwhile, household consumption demand remains buoyant in the next two quarters. Consequently, we expect growth in production costs to be largely reflected in rising inflation rather than in the decline in average profit margins.

Overall, the expected upsurge in inflation in 2004 H1 is caused primarily by supply-side shocks, which feed through intensely to consumer prices due to high aggregate demand.

Although the November *Report* took most of these developments into account, our current short-term projection is higher than that published a quarter earlier. That may be explained partly by the changes in assumptions (lower exchange rate, higher oil price assumption) and by higher wage inflation expectations, and partly by the fact that actual CPI data for 2003 Q4 exceeded our earlier expectations. Most of the difference related to the latter factor was caused by inflation in unprocessed food items. And since most of it affects seasonal foods, we do not expect prices within this product group to return to levels projected in November.

Longer-term projection

We expect a slowdown in inflation from 2004 H2. In our forecast, the CPI runs at 4.3 percent at end-December 2005, which is mostly attributable to a slowdown in domestic consumer demand as well as the fading influence which strong inflation, fuelled by supply shocks, exert on the price index. Our forecast is based on the strategic assumption that the indirect tax shock of early 2004 is not built in economic agents' inflation expectations.

The disinflation unfolding the second half of 2004 is driven by the slowdown of the domestic demand, which is caused mainly by deceleration in households' consumption. In fact, households will begin to detain their consumption from early 2004, but this will be felt in consumer prices only after the second half of 2004. Concurrently, the assumed level of real interest rates, which are set to exceed the historic average[7], are likely to raise corporate sector capital costs, which may in turn put a break on growth in investment and output, and hence ease longer-term inflationary pressure. A rebound in household consumption growth in 2005 is expected to have only a marginal inflationary effect until end-2005.

In aggregate, the factors referred to above result in a lower-than-potential level of economic growth. The gradual widening of the negative output gap and the decline in the share of domestic demand within aggregate demand point towards disinflation.

Overall, supply-side factors also act in favour of disinflation in 2005. As a result of our strategic assumption (i.e. the indirect tax shock of 2004 does not bolster economic agents' inflation expectations), private sector wage inflation shrinks, which, in tandem with an upsurge in productivity, causes a sharp fall in ULC. Since July 2003, the forint exchange rate has stabilised at permanently lower-than-earlier levels. Fixed as the January average, the forint rate is expected to have a diminishing contributory impact on inflation from end-2004.

Among items exogenous to monetary policy, we expect a decline in inflation from end-2004. We assume that the rapid hike in unprocessed food prices at end-2003, which was due primarily to the summer drought, is not repeated in 2004–2005. Hence, from 2004 Q3 both unprocessed and, with some delay, processed foods are likely to be characterised by rapid disinflation. In addition, the decline in oil prices, which has also been incorporated in our projection, curbs the increase in market energy and motor fuel prices.

[7] Our projections are based on the assumption that current monetary conditions remain unchanged.

Another assumption of our forecast is that there is no repeat of the strong rise in indirect taxes in early 2004. Accordingly, our calculations are based on unchanged VAT rates. For tobacco excise duty, we assume a linear trend towards fulfilling the tax harmonisation criteria by 2009. [8]

In our projections the inflationary effects of joining the EU have been taken into account.[9] The effect of tax-harmonisation and the regulatory steps that have to be taken might altogether be neutral. On the one hand, tax-harmonisation, which includes the directive on the minimal excise-duty on tobacco, and the minimal VAT rate will cause prices to increase. On the other hand, the abolishment of tariffs and quotas that exist between Hungary and the EU and other accession countries will cause import prices to drop. This effect might especially be pronounced among certain foodstuffs and tradable products imported for investment purposes. [10]

As concerns regulated prices, we forecast that rapid growth in 2004 Q1, fuelled mainly by the rise in VAT, is followed by falling inflation over the entire forecast period. The reason for this is that, while the effects of announced and existing price increases gradually wear off in the price index, for new measures we follow a different assumption – where information on prospective price movements is uncertain, annual average inflation of regulated prices is considered to be equal to that of market services. And since we project a steady decline in market services inflation between 2004 H2 and end-2005, our forecast for regulated prices are also declines.[11]

Our current projection is higher than the November one both for 2004 and for December 2005, which may be explained mainly by a quicker-than-expected rise among core inflation components. The factors underlying higher-than-expected inflation compared with the November *Report* include a lower-than-projected forint exchange rate, an upsurge in ULC and the feed-through effect on other products of the pick-up in unprocessed food prices at end-2003.

---

[8] The EU Directive on the excise duty on cigarettes stipulates that both the rates expressed per thousand cigarettes and those expressed as a percentage of the total retail price must be higher than 57% the retail price of the most sought-after brand, or, at least EUR 60 per one thousand cigarettes. In 2006 that will be raised to EUR 64. Following the dramatic increase in taxes, our calculations have concluded that the excise tax rate will amount to nearly 54% of the retail price, or EUR 49 per one thousand cigarettes. Meeting the minimum rate by the derogation deadline of 2009 along a steady growth-path will require the government to make annual increases which exceed the rate of inflation. Accordingly, our projections assume an 11% rise in excise duty on tobacco products, and producer prices which follow the inflation rate.

[9] A detailed analysis on this issue may be found in Section 5 of the May 2003 *Report*.

[10] On the impact of EU accession on food prices see MNB Background Studies 2002/1 [in Hungarian only].

[11] There is only one product group (telephone) where we have abandoned our rule-based forecasting methodology. In this case we expect an 0.4-percentage-point drop in prices in 2004, and stable prices in 2005.

2. 3 Inflation expectations

Our central projection is based on the strategic assumption that the rise in indirect taxes in 2004 is considered by economic agents to be a one-off event which does not lead to a permanent rise in price and wage expectations. This being the greatest upside risk factor to disinflation in 2005, here a greater emphasis will be placed on the analysis of inflation expectations.

Our analysis suggests that a economic agents in different sectors have revised up their inflation expectations since 2003 H2. The rise in expectations have been brought about partly by fiscal measures announced in mid-2003, and partly by a steady increase in actual inflation.

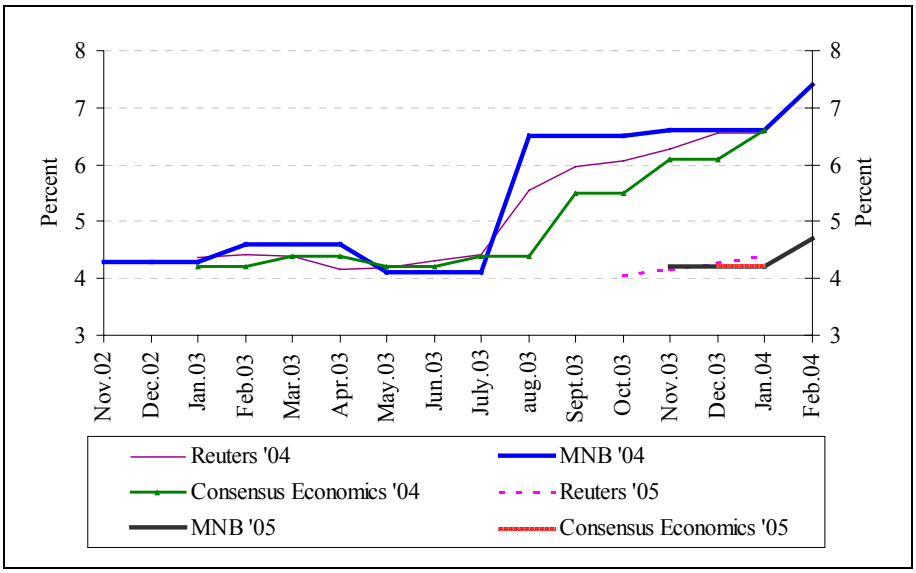
A crucial question is which sector's inflation expectation serves as the best overall inflation projection. At one end of the statistic spectrum of inflation expectations is a small group of macro analysts whose highly professional forecasts are made with a relatively small margin of error; nevertheless, their forecasts may not be regarded as representative of general economic agent behaviour. We analyse two such surveys of the CPI in Hungary, one conducted by Reuters and the other by Consensus Economics.[12] At the other end of the spectrum there are surveys which approach the household and corporate sectors directly. A clear strength of such surveys is their representative nature, while their drawback is their lower reliability and the wide distribution of expectations. Such surveys in Hungary include questionnaires by GKI and TÁRKI on business and household expectations.

Up to July 2003, both analysts and the MNB's staff projected average annual inflation for 2004 to be around 4.5 percent. Although forecasts diverted from each other following the announcement of the planned increase in indirect taxes, by early 2004 analysts' forecasts once again largely converged with that of the MNB. Nonetheless, our current forecast is once again higher than the January 2004 market consensus.

It is only four months since analysts first started to make projections for 2005. Throughout that period, the average of the projections for annual average inflation edged up in tandem with that of the year-on-year difference in December.

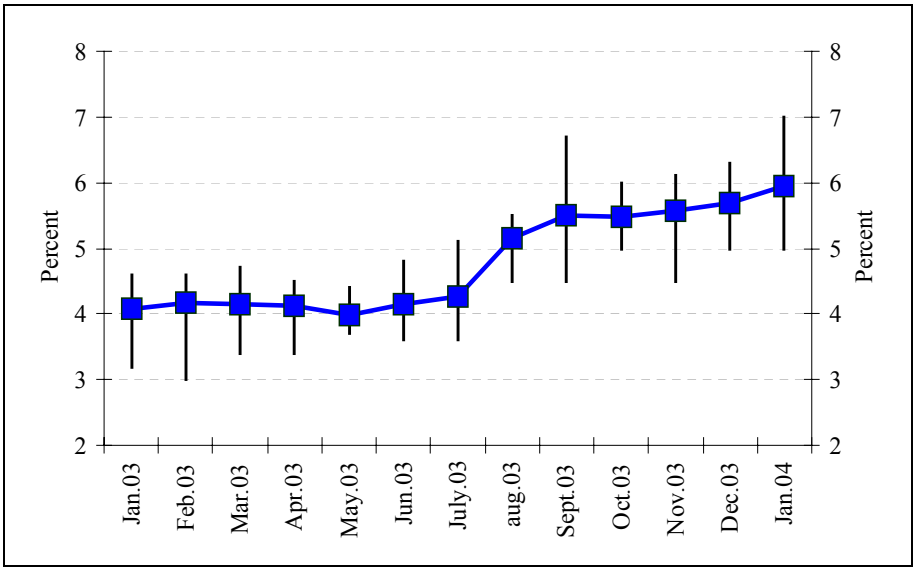
[12] For further details of the characteristics of the Reuters survey, see *MNB Background Studies* vol. 2001/1. [in Hungarian only]

Chart 2-7 Average annual inflation forecasts for 2004 and 2005



It should be noted, however, that, while the average of analysts' inflation projections rose steadily, individual forecasts spread over an increasingly broad range of values. Given the fact that an increasing amount of information becomes available as we move into the reference year, a broadening range of projections may be indicative of growing uncertainty.

Chart 2-8 The average and range of analysts' inflation projections*
(Reuters survey**)

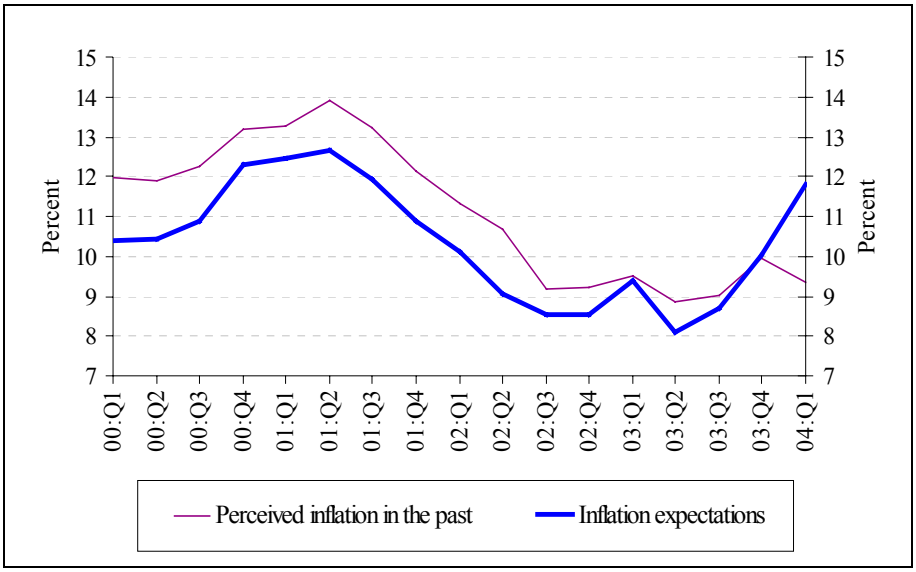


** Range = maximum value – minimum value.*
*** Forecasts are for December 2004*

As both analysts and the MNB's staff revised up their inflation projections, the corporate sector followed suit in the past 6–9 months. Of particular significance is the

fact that it is the first time in five years that companies' inflation expectations for the next 12 months have exceeded their perception for the previous year.

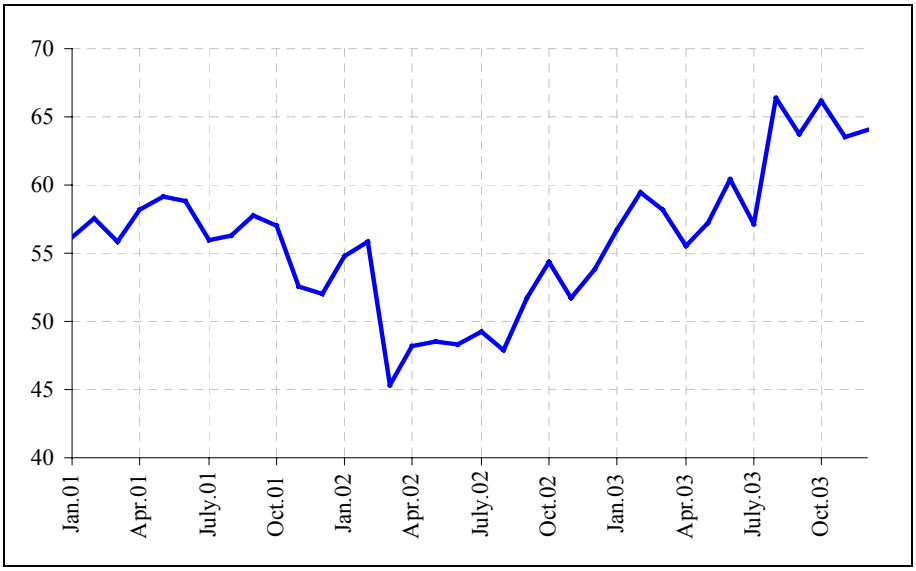
Chart 2-9 Inflation perception by corporate executives*



** Based on TÁRKI's survey of corporate executives.*

In the meantime, household inflation expectations were also deteriorating in 2003. Whereas strong disinflation, which started in 2001 Q2, lowered household expectations, the reversal of that trend in 2002 Q4 have set household expectations on the upward path again.

Chart 2-10 Household inflation expectations*



** Based on GKI's survey of households. It is a balance indicator, in which rising values correspond to upward movements in inflation expectations.*

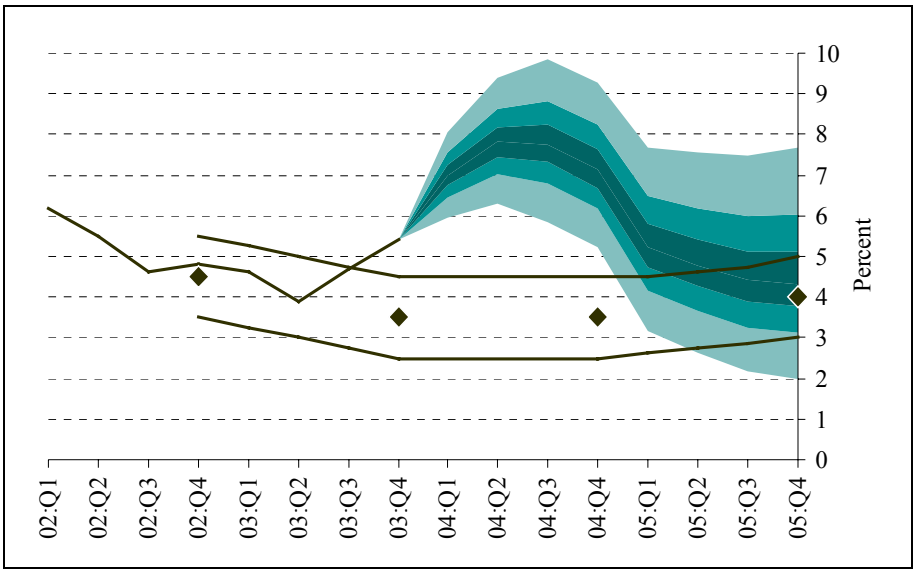
2. 4 Risks to the central projection

Of the vast number of uncertainties surrounding the central projection, we have considered the effects of four risk factors in drawing the fan chart for the reference period. In our view, inflation expectations continue to play the most dominant role in 2004 and 2005, affecting inflation mainly through private sector wages and household consumption.

As a combination of the various effects, the probability distribution for end-2004 is nearly symmetrical, while in 2005 it carries upside risks. The darkest band, which contains the possible outcomes for inflation with a 30 percent probability, is expected to remain within the target band, albeit in the upper range.

Chart 2-11 The fan chart of the inflation projection *

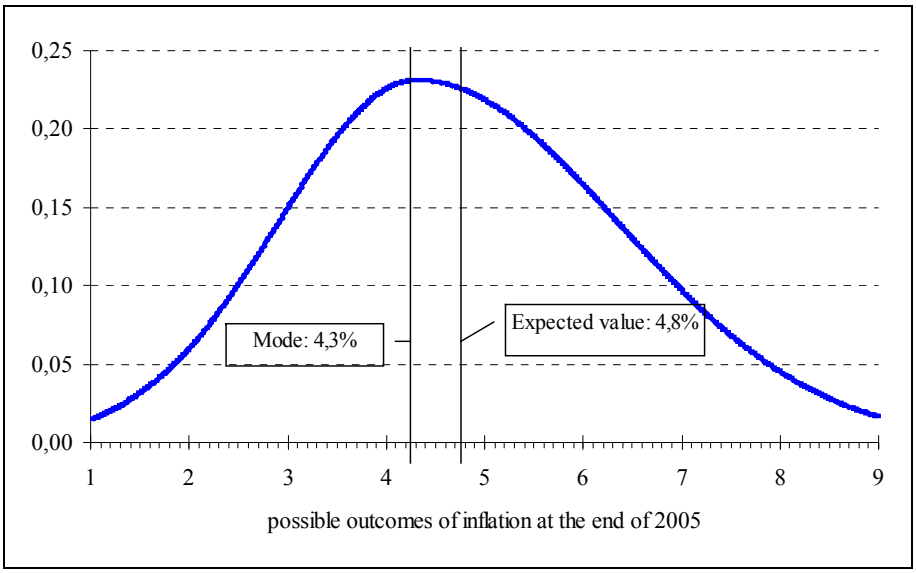
Inflation on a year earlier



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

Chart 2-12 is a cross section of the probability distribution at end-2005. The mode of distribution, which is equal to the central projection, is 4.3 percent. As a result of the upside risks, the probability-weighted projection, i.e. the expected value of the distribution, is higher than the central projection by 0.5 percentage points.

Chart 2-12 A cross-section of the probability distribution for 2005 Q4*



** Mode: baseline inflation projection (value of highest probability) for 2005 Q4. Expected value: risk-weighted central projection for 2005 Q4.*

Risks associated with household consumption[13]

While setting the central projection path, we assumed that, at the forecast horizon, the pick-up in household consumption seen in recent years halts and growth decelerates considerably. As a result, the current fairly high consumption to income ratio declines. While setting the central projection of household consumption, we assumed that ratio to drop, yet flatten out at levels higher than the historic average. Since it is not impossible that, contrary to our assumption, the consumption ratio reverts to the historic average, in this case we see a possibility of lower-than-baseline. As consumption tends to affect inflation with some delay, such risks become significant mainly in 2005.

Risks inherent in expectations

The effect of the increase in indirect taxes in 2004 on expectations and on private sector wage inflation are the most important of all upside risks to inflation. Our key assumption here is that the rise in indirect taxes and the resulting upsurge in inflation are considered by economic agents as a one-off event, which, as a consequence, has no significant effect on inflation expectations for 2005. That assumption, of course, carries great upside risk – if expectations go up, private sector wage growth may come close to 10 percent in both years of the forecast period, which in turn may lead to significantly higher consumer price inflation than the central projection.

Other risk factors

Other risk factors have an impact on the shape of the probability distribution chart mainly in 2004. Those deserving mention here are (i) our forecast of inflation in the unprocessed food category carries upside risk, as the effect of the November price shock

[13] For a detailed discussion of this risk see Section 5.2.

was considered by staff to be temporary; (ii) projections related to telephone rates are also laden with upside risk, given our assumption of a modest continuation of this years' decline into 2004.

By contrast, we see downside risk stemming from the fact that current real interest rates may have a stronger-than-expected disinflationary impact. This downside risk contributes to the fact, that the difference between the mode and the mean of the distribution at the end of 2005, despite all the risks pointing to higher inflation, is only half of the difference that has been projected in the November *Report*.[14]

[14] Note that getting closer to end-2005 than in November 2003 ceteris paribus implies a drop in difference of the mean and the mode. The downside risk in consumption and real interest rate impact added to this.

3 Economic activity

3. 1 Demand

In the Economics Department staff's forecast for this year, economic growth is only slightly higher than in 2003, reflecting an expected pick-up in foreign economic activity and a much lower rise in domestic demand growth. Accompanied by a continued positive outlook for external business activity, household demand growth is likely to fall further in 2005 as a whole. Accordingly, we do not expect domestic economic growth to gather considerable momentum.

Our forecast is conditional with respect to a number of key assumptions. We assume unchanged monetary conditions and no change in fiscal policy compared to the information available now. We also assume that the indirect tax increases of January 2004 would not lead to permanently higher price and wage expectations.

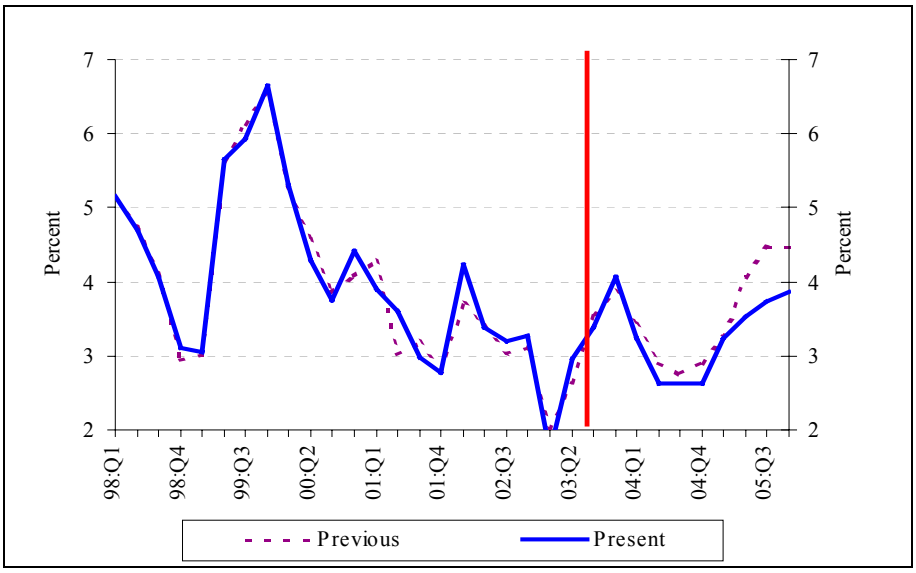
Table 3.1 Growth in GDP and its components
Percentage changes on a year earlier

	Actual			Estimation	Forecast	
	2001	**2002**	**2003 Q1–Q3**	**2003**	**2004**	**2005**
Household consumption	5.3	9.4	7.6	7.7	2.5	0.9
Household final consumption expenditure	5.7	10.5	9.0	8.9	3.1	0.9
Social transfers in kind	3.8	4.9	2.3	2.5	-0.5	0.7
Public consumption	4.9	5.0	1.7	1.5	0.8	1.5
Gross fixed capital formation	3.5	7.2	2.1	2.2	5.4	2.6
*'Final domestic sales'**	*4.8*	*8.4*	*5.8*	*5.8*	*3.0*	*1.4*
Domestic absorption	1.9	5.3	8.0	6.1	3.0	1.7
Exports	8.8	3.8	4.2	9.1	9.5	9.1
Imports	6.1	6.1	10.9	12.8	8.9	7.0
GDP	**3.8**	**3.5**	**2.7**	**2.9**	**3.1**	**3.2**

** Final domestic sales =household consumption + public consumption + gross fixed capital formation.*

Actual data for 2003 Q3 and information which has become available signal a pick-up in economic growth over the short term. According to the latest actual data, industrial output rose at an increasing rate and export growth grew robustly in H2. In our current forecast, whole-economy exports rise much more strongly relative to the forecast of the previous *Report*; however, the gap between export and import growth is expected to remain broadly the same as forecast previously. Consequently, GDP is estimated to have grown by 2.9 percent in 2003. Our forecast is for economic growth to be 3.4 percent in 2003 Q4 relative to the same period a year earlier.

Chart 3.1 Expected GDP growth
Annualised quarter-on-quarter growth rates



In 2004, rising external demand alone would contribute to economic growth. However, household demand growth is likely to slow as a result of fiscal restriction and higher inflation, coupled with a much more sluggish growth of domestic use than in the previous year.

Supported by the upturn in external business conditions, the pick-up in the corporate investment cycle which began in 2003 is likely to continue and export growth to accelerate. The slowdown in domestic demand and the pick-up in external demand, two opposing factors influencing economic growth, are expected to result in slightly higher economic growth this year relative to 2003. This year's economic growth is expected to be 3.1 percent.

Our forecast is for economic growth to be slightly higher, 3.2 percent, in 2005. As a consequence of the assumed 1 percentage point fiscal contraction of demand, household demand is likely to continue to fall and, as a result, the growth of domestic use will be below the rate of economic growth. Household investment demand is expected to decline, as the tightening by the Government of the conditions of subsidised housing loans will have their full-year effects in 2005, and this, in turn, will result in lower whole-economy fixed investment growth relative to the previous year.

As the balance of factors influencing external demand over the longer term are likely to shift towards positive, export growth is forecast to continue to be rapid in 2005, and net exports will make a strong contribution to economic growth.

Comparing our current forecast with the projection in the November 2003 *Report*, it should be noted that a number of exogenous assumptions have changed since the previous *Report*. Our assumptions for the nominal exchange rate, the interest rate and fiscal restriction have contributed to a change in our forecast of economic growth. The nominal exchange rate is assumed to be some 3 percent lower, which, together with the recent strong pick-up in productivity would result in a more depreciated real exchange

rate, and, consequently, a faster export growth. On the other hand, a stronger fiscal tightening and higher real interest rate have a negative impact on growth.

3. 1. 1 External demand

There continued to be increasing signs of a pick-up in external demand in 2003 Q3. Consumer confidence appears to recover in countries of the European Union, in addition to the strong improvement in business confidence which has been underway since Q2. But a few indicators of the German economy continue to reflect counter-cyclical trends, which carries uncertainties for Hungary's short-term economic outlook. However, external demand is expected to rise robustly over the medium term.

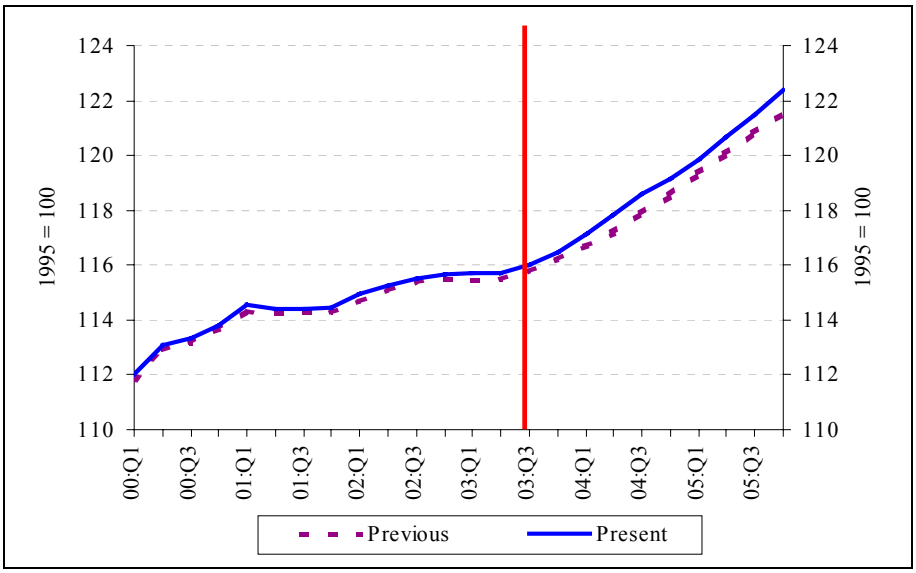
Hungary's export market size, serving as an effective indicator of external demand in the Bank's earlier *Reports*, provides evidence of a slight drop in 2003 Q3, resulting mainly from a decline in German imports. In view of the fact that Germany's data on trade have often been revised in the past and that other indicators of business activity (for example, output, the IFO business confidence, etc.) appear to reinforce the pick-up derived from data for other countries, we do not attach great importance to the latest weakness of actual data. Over the short term, however, the projection of Hungary's export market size will be lower.

The balance of factors shaping external demand over the longer term has shifted slightly towards the positive. The United States business cycle, preceding the European business cycle by 2–3 quarters, have reached a particularly intensive phase. In addition, business activity in Japan and the Far Eastern region has picked up unexpectedly. Although in terms of costs we expect oil prices to be slightly higher in early 2004 and materials prices to be static or slightly rising compared to the earlier fall, crude oil and materials prices are likely to have a neutral impact from end-2004, declining slightly towards the forecast horizon. Accordingly, Hungary's export market size is expected to be close to the projection consistent with assumptions underlying our earlier forecast which contained an increase in 2003 Q3.

Taken together, our indicator of the size of Hungary's export markets is exposed to data revision risks over the short term, due to substantial recurring revisions to German import data. Consequently, from this *Report* the weighted data for GDP growth of Hungary's major trading partners and Hungary's export market size account for equal importance. Although the former pinpoints cyclical turns less markedly (for example, the turnaround in the latest recession in early 2002 is less obvious than in the case of the latter), revisions to GDP data are much smaller. Consequently, the direction of economic developments is more perceptible over the short term, with the result that variations in Hungary's real economic indicators, with this external demand indicator in the background, are more convenient to interpret.

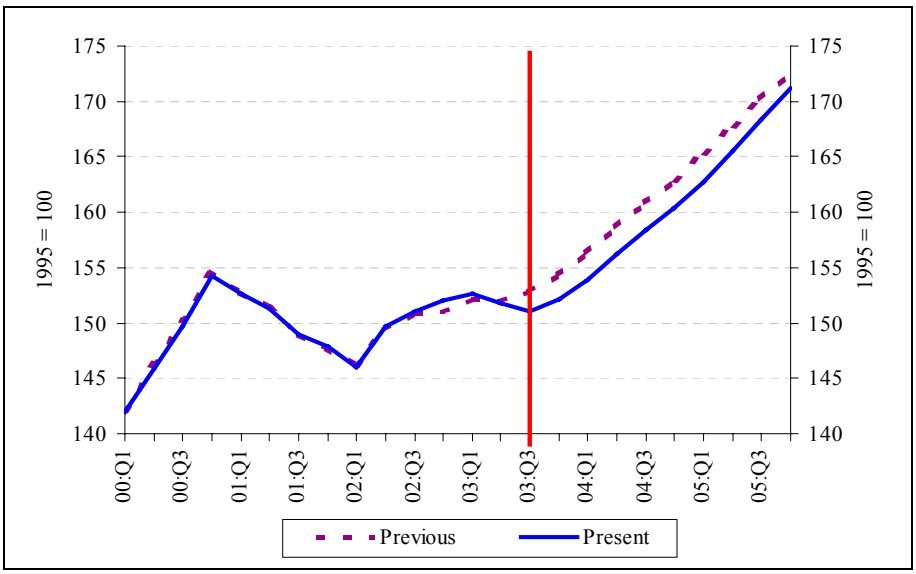
This GDP-based external demand indicator provides evidence that the European economic cycle clearly entered its upward phase in 2003 H2. And, over the medium term, the indicator signals the same robust pick-up in external demand as the indicator of Hungary's import-based export markets. As a consequence, in the current forecast the path of this latter is higher than the path based on the previous projection, not shown explicitly. In other words, our forecast of external demand has become more positive, despite the slight fall in the path of Hungary's export markets.

Chart 3.2 GDP of Hungary's major trading partners*



** The volume of GDP of Hungary's major trading partners, weighted by their share in Hungarian exports.*

Chart 3.3 Size of Hungary's export markets*



** Import volume of Hungary's major trading partners, weighted by their share in Hungarian exports.*

In accordance with these developments, our projection of GDP growth of Hungary's major trading partners over the entire forecast horizon reflects that the assessment of the business cycle has improved since November so that we have revised up our forecast of this indicator for both 2004 and 2005. But our forecast of growth in Hungary's export market size for 2003 and 2004 has become much lower relative to the November forecast, due to the lower-than-expected actual data, and it has become higher for 2005, explained by the improved medium-term outlook. The institutions providing relevant international forecasts have not updated their projections since the November *Report*; however, the OECD has since published its forecast prepared around that time.

Table 3.2 Various indicators for Hungary's external demand
Average annual percentage growth

	Estimate		Forecast			
	2003		2004		2005	
	Previous	Current	Previous	Current	Previous	Current
GDP growth of Hungary's trading partners						
MNB	0.5	0.5	1.6	1.9	2.4	2.5
European Commission*	1.0	0.5	2.2	1.8	-	2.2
OECD**	1.1	0.5	2.2	1.5	-	2.6
IMF***	1.0	0.5	2.2	1.8	-	-
Hungary's export market size (import growth of Hungary's trading partners)						
MNB	2.3	1.5	4.5	3.5	5.8	6.2
European Commission*	3.9	2.2	6.4	5.5	-	6.9
OECD**	4.1	2.1	6.8	3.8	-	6.4
IMF***	4.4	3.0	6.3	6.2	-	-

** Source: Economic Forecasts, Spring 2003 / Economic Forecasts, Autumn 2003.*
*** Source: Economic Outlook (April 2003) / Economic Outlook (November 2003).*
**** Source: World Economic Outlook (March 2003) / World Economic Outlook (September 2003).*

The distribution of risks around the central projection is more on the upside for 2004, as oil prices may even fall more rapidly (the projection, calculated from oil futures, is higher than that deriving from the consensus forecast of analysts) and it is broadly symmetrical around the central projection in 2005.

3. 1. 2 Fiscal stance

In this *Report*, two separate sub-sections, based on different approaches, deal with the analysis of fiscal policy. Below, we will focus on the fiscal demand impact, similarly to previous *Reports*, as variations in the fiscal demand impact greatly determine our forecasts of macroeconomic events and inflation. However, beginning with this issue, we will prepare conditional forecasts of the various categories of deficit, in addition to analysing the impact of fiscal policy on demand, in accordance with the Monetary Council's decision. By analysing fiscal policy in more detail and placing greater emphasis on the underlying principles of our projections, our intention is to inform market participants of our assessment of the position of the general government sector and the uncertainties surrounding fiscal policy. These categories of deficit are analysed in detail in Section 5.5.

Table 3.3 Overview of fiscal indicators*
As a percent of GDP

	Preliminary 2003 data	Forecasts for 2004	Forecast for 2005**
GFS deficit	-5.8	-6.5	-4.7
ESA deficit	-5.8	-5.3	-4.3
Augmented (SNA) deficit	-8.2	-6.8	-5.7
Fiscal demand impact* **	**-0.3**	**-1.7**	**-1.0**

** The deficit indicators, calculated on GFS, ESA and SNA bases, are presented for information purposes. For details, see Section 5.5.*

*** Normative scenario: it is based on the assumption that, according to the Government's Medium-Term Economic Plan, the ESA deficit falls by 1 percentage point relative to the deficit expected for 2004.*

**** Change in the augmented (SNA) primary balance.*

The indicator showing the fiscal demand impact signals a slight contraction of demand, equivalent to –0.3 percent of GDP, in 2003. Contributing to the contraction of demand despite the shortfall in tax revenues, local authorities made a deeper than expected reduction in investment spending in 2003.

In the November *Report*, we estimated the 2003 contractionary impact on demand to be -0.4 percent of GDP. Preliminary data suggest that the size of the demand impact turned out to be broadly as anticipated. However, the composition of the demand impact was slightly different from the expectation. In contrast with the previous forecasts, the actual outcome for tax revenues was more negative, which may make it more difficult to reduce the deficit and contract demand in 2004.

In our central projection, the 4.6 percent deficit target on an ESA basis for 2004 is unlikely to be met, unless further measures to improve the balance are not implemented in the course of the year. There are uncertainties because the adaptation of the ESA 95 methodology has not been finalised yet, in other words ESA deficit can be different from our forecast because of methodological reasons. At the same time, by strongly reducing its aggregate demand impact, general government may greatly contribute to the gradual adjustment of macroeconomic imbalances.

The central projection is based on the assumption that the January average monetary conditions (the yield curve and the exchange rate) will prevail at the forecast horizon and that the Government's measures to reduce expenditure, announced in January 2004, will be implemented in full.[15]

For 2004, the indicator of fiscal demand impact, deriving from the changes in the primary balance of the augmented (SNA) deficit signals the greatest contraction of demand in the period since 1996 to date (-1.7 percent of GDP). The strong contraction of demand in 2004 results from the fact that the Budget, approved for 2004, already included a contractionary impact equivalent to nearly 0.8 percent of GDP. Assuming that it will be implemented in full, the January package of measures to reduce expenditure will have a broadly comparable effect, in addition the one envisaged in the 2004 Budget. The details of the latter were not available at the time writing this *Report*.

[15] We have taken into account the HUF 120 billion saving on expenditures, announced by the designated Minister of Finance in early January, as a net HUF 120 billion saving in the GFS balance. We have also treated the freezing of budget estimates of HUF 35 billion as effective.

It is assumed that the deficit reduction will be implemented mainly through curbing current (typically non-wage) and capital expenditure.

Looking at the 2004 forecast in more detail, our projection is for general government sector wages to increase to the extent of the full-year effect of the 2003 increase in civil servants', judges' and public prosecutors' wages as envisaged in the Budget Act and a 6 percent increase in the wages of other general government employees. Taking account of the fact that these basic principles were not built in the Act at the level of basic salaries and that the budgetary institutions and the sub-sectors of the sector will not even receive the required coverage in the form of government grant, wages can only be increased if employment is massively reduced in general government. Under the provisions of the Budget Act, general government employees will receive their 13th month salaries for 2004 in January 2005. Consequently, on a cash basis of accounting, the average increase in earnings in 2004 may be lower than the rate of actual wage increase.[16]

The macroeconomic effect of the strong contractionary impact of fiscal policy on demand, expected for 2004, is reflected in the lower GDP growth for 2004–2005 in our forecast and, simultaneously with this, in the forecast of gradual improvement in the current account balance.

Our central projection of a 1.7 percent contraction of demand as a proportion of GDP for 2004 is surrounded by a number of uncertainty factors, the distribution of which, however, is largely symmetrical. The extent to which demand is contracted may turn out to be stronger than the central projection, if inflation or wages, two factors presented in the macroeconomic forecast as carrying risks, are higher or implementation of certain government investment programmes suffer a delay. In addition, if VAT receipts, previously falling below trend deriving from the tax bases, corrected upwards, it would also add to the contractionary impact. However, if quasi-fiscal expenditure rose, or certain open-ended expenditure items were overrun relative to our current estimates, it would lead to a smaller contraction of demand. On balance, the –1.7 percent contractionary impact is surrounded by uncertainty estimated to amount to ±07 percent.

Table 3.4 Uncertainties surrounding the 2004 fiscal demand impact
As a percent of GDP

Central projection of demand impact: -1.7%			
VAT shortfall of base period reverses	0.4	Quasi-fiscal expenditure is higher	-0.2
Effect of macroeconomic developments (tax revenue, pension indexation)	0.2	Effect of macroeconomic developments (tax revenue, pension indexation)	- 0.1
Delay in implementation of investment projects	0.1	Overruns in certain open expenditure items (e.g. due to base or smaller effect of measures)	- 0.1
		Higher offsetting effect of autonomous fiscal developments (local government, institutions)	- 0.3
Demand impact under extreme scenario	**-2.4**	**Demand impact under extreme scenario**	**-1.0**

[16] However, in forecasting household income, we have accounted for general government wages on an accrual basis, so the payment of 13th month salaries in January 2005 is treated as affecting 2004. In this case, the expected increase in average earnings is 7%–8% in 2004.

Given that the Budget for 2005 has not yet been approved, we will attempt to evaluate fiscal policy by simultaneously presenting two different types of fiscal forecast, as in earlier *Reports*.

Once again, our central projection is based on the assumption that the ESA deficit will be reduced by 1 percent of GDP in 2005, consistent with the Government's medium-term economic programme. This baseline scenario, therefore, is treated as a conditional forecast, or a normative scenario. In this projection, the contractionary impact of general government on demand is assumed to fall by the same rate as the ESA deficit, i.e. by 1 percent as a proportion of GDP.

Our conditional forecast for 2005 is associated with a considerable risk of a more expansionary fiscal policy. Guided by the principle of 'no change in fiscal policy', this alternative, rule-based forecast takes account only of the government measures already enacted.[17] Under this assumption, the ESA deficit would not fall, rather it would increase in 2005, due to the existing determinations. Along this fiscal projection, the fiscal demand impact would not fall next year, but increase by 1.3 percentage points. Consequently, fiscal risks, uncovered by the current measures, are estimated to be 2.3 percent as a proportion of GDP at the level of the augmented (SNA) deficit.[18]

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

In 2003, households continued to rearrange their consumption and saving decisions, as seen in the previous year. This change in the sector's consumption behaviour is explained by the long-term developments derivable from Hungary's position as a catching-up economy (i.e. the shift to a path characterised by higher consumption and household indebtedness) and certain transitional measures related mainly to the role played by the government sector (e.g. subsidised housing loans).

The real value of household sector consumption expenditure rose more strongly in 2003 than we expected earlier. After rising by 10 percent in the previous year, annual average consumption expenditure growth was around 9 percent in 2003 Q1–Q3. As our estimate for Q4, based on data which has become available, does not contain a significant slowdown in the rate of consumption growth either, the rise in household consumption expenditure is likely to have been considerably higher than household disposable income growth. According to our calculations, permanently high household consumption and the robust increase in capital expenditure reduced the net lending capacity of the household sector, previously having registered significant net financial savings, practically to levels around zero in 2003.

[17] For more details on the framework of the rule-based forecast of fiscal policy, see Section 5 of the August 2003 *Report*.

[18] To reach a 1 percent reduction in the ESA deficit in 2005, however, a higher, 2.8 percent of GDP tightening would be needed as a result of the ESA deficit declines more this year due partly to temporary factors. See more on this in Section 5.5.

Table 3.5 Household income, consumption and fixed investment
Annual average growth rates, percent

		Household real net income	Real consumption expenditure	Real value of fixed capital formation
2002	Actual/Estimate	12.4	10.1	20-30
2003		8.7	8.9	0-10
2004	Forecast	2.3	3.1	(-5)-5
2005		1.9	0.9	(-10)-0

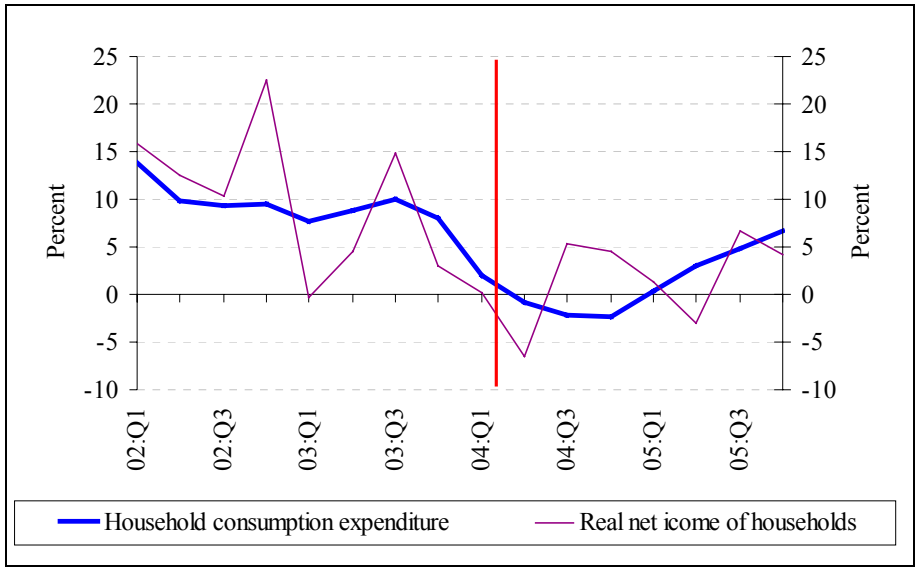
Forecast of household consumption

At the forecast horizon, the growth rate of household consumption is expected to decline sharply. We have attempted to incorporate in our forecast the major developments considered as lasting and temporary. Nevertheless, there have remained certain variables whose effects could not be taken into account, due to a lack of relevant information (for example, the changes to the Sulinet programme, the Government's subsidised computer purchase scheme, or the restrictions imposed on car imports). Consequently, these have been taken into account as additional factors of risk.

According to our basic assumption, households' consumption decisions do not exclusively change in line with current income, but also in line with income considered as permanent in the future. Consequently, we expect the path of consumption to be significantly more smooth than that of income.[19]

In our forecasts of the known components of household income, including gross earnings and social transfers in cash, household net income rises in real terms in 2004 and 2005.

Chart 3.4 Household purchased consumption expenditure and real net income
Seasonally adjusted and annualised quarter-on-quarter growth rates

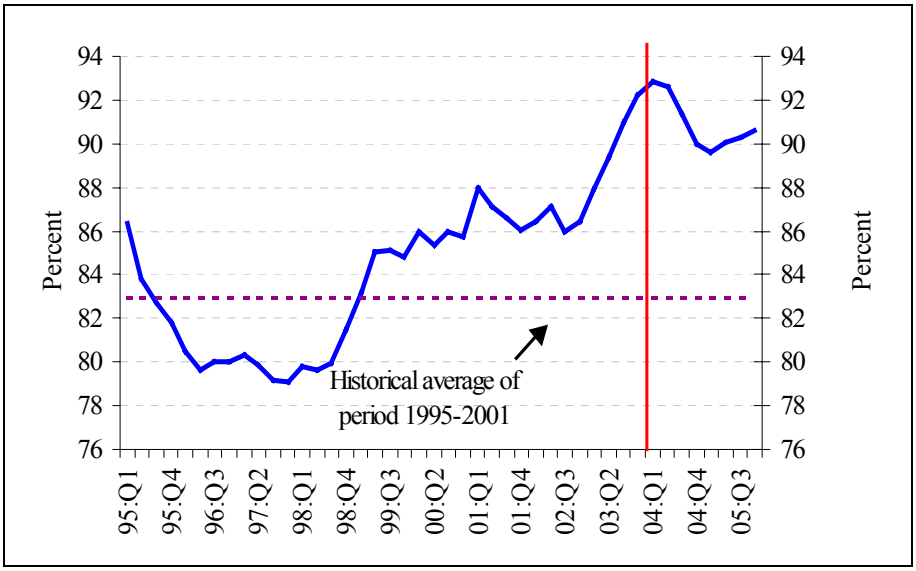


[19] Household consumption in 2004 is also influenced strongly by last year's developments in a technical sense, due to statistical carry-over effects. For example, even if consumption stayed at its end-2003 level, that is, if we fixed our estimate for 2003 Q4 as a forecast for this year, then we would expect an annual increase of some 3.2 percent.

The increase in the sector's consumption-to-income ratio, experienced in pasts years, is expected to be lasting. However, a value of more than 92 percent towards the end of last year, as shown by our calculations, is unlikely to be sustainable, as a major part of it was the result of temporary effects. According to our assumptions reflected in the current forecast, the household sector has shifted to an equilibrium path as a result of the previous years' developments. This path is characterised by a higher consumption-to-income ratio (assumed to be 89–90 percent) and is consistent with a higher level of indebtedness, as compared with a lower consumption-to-income ratio and lower indebtedness, seen in earlier years. In our view this progress is an outcome of easing up households' liquidity constraints stimulated by both supply and demand factors. On the supply side, continuously improving conditions offered by commercial banks in the face of fierce competition (mainly in those of access to credit, rather than the costs of lending) and, on the demand side, higher income expectations have led to a decline of saving propensity.

Chart 3.5 Household consumption-to-disposable income ratio

Seasonally adjusted



** The consumption ratio has been calculated as the ratio of consumption at current prices and estimated disposable income at current prices (for the latter, actual data are only available up to 2001).*

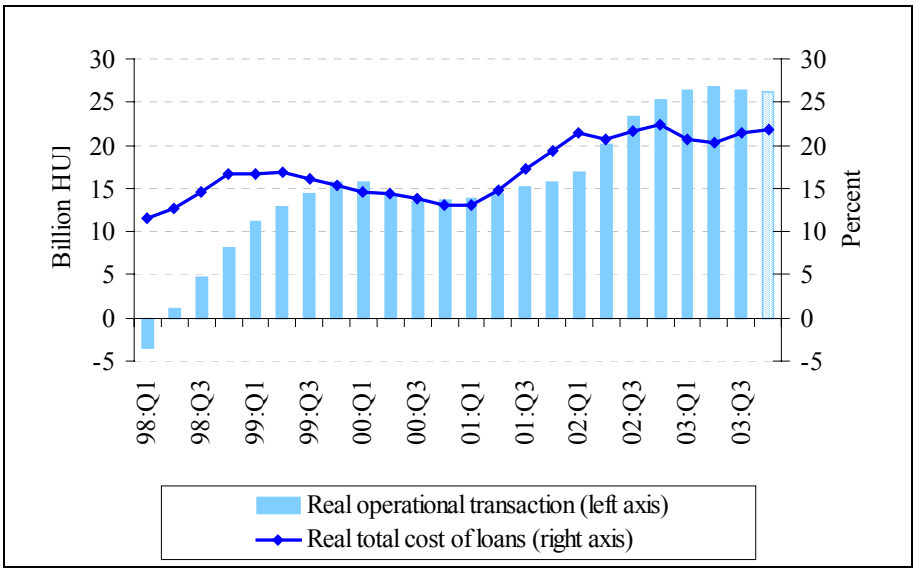
This year, the fall in the consumption-to-income ratio is likely to be caused mainly by the tightening of conditions of subsidised housing loans in December 2003. In our calculations, some 15–30 percent of subsidised loans ultimately encouraged further consumption, which, however, is not expected to be maintained in the coming years (for more details, see Section 5.3).

However, in a certain segment of consumer goods (for example, household appliances and furnishings) sales volumes may have picked up, due to the large amounts of housing loans taken out in the previous years. Explanation for this is that borrowings for house purchase, brought forward for last year due to concerns about the tightening of conditions, do not only influence capital formation as a whole, but also a considerable

part of consumption, as a full-year effect. This effect is likely to be more significant in 2004 than in 2005.

The extent to which the 2003 rise in interest rate levels will affect households' borrowing decisions is uncertain. Taking account of these influences explicitly on the forecast horizon carries a fair degree of uncertainty in the case of both credit aggregates, as other factors are likely to influence developments in outstanding household loans. With current government securities yields subsidised housing loans applications are expected to fall significantly. [20] As regards consumer credit, we maintain that the current high interest rates do not materially reduce demand for consumer credit. Outstanding consumer credit rose robustly in earlier years, despite high the costs of borrowing relative to inflation (moreover, data for 1998-2003 seem to suggest a positive correlation between real borrowing and real interest rates on such loans).

Chart 3.6 Real consumption loans and real costs of credit ∗
Seasonally adjusted



∗ The operational transactions is calculated from total stock changes with straining out revaluation from price changes, compensation for inflation included in interests and other changes in volume. Source: Financial accounts, Average household sector forint borrowing rates, MNB. Data 2003 Q4 is an estimation.

In the current forecast, consumption rises more strongly this year and less strongly in 2005, relative to the forecast of the previous *Report*. The revision to our forecast is the result of the combination of various pieces of information which have become available recently. On balance, we have revised up our earlier forecast for 2004, due to the base effect of the higher actual data, and the expected stronger increase in household income, caused by higher wage inflation and increasing social transfers in kind, as well as the contractionary effects on consumption of a fall in housing loans. By contrast, we have revised down our forecast of real wage growth in 2005; and we attach great importance

[20] Under the regulations currently in force, the interest rate on government subsidised housing loans (on both newly built and used homes) is established on the basis of the average yield evolving at the government securities auctions of the preceding three months.

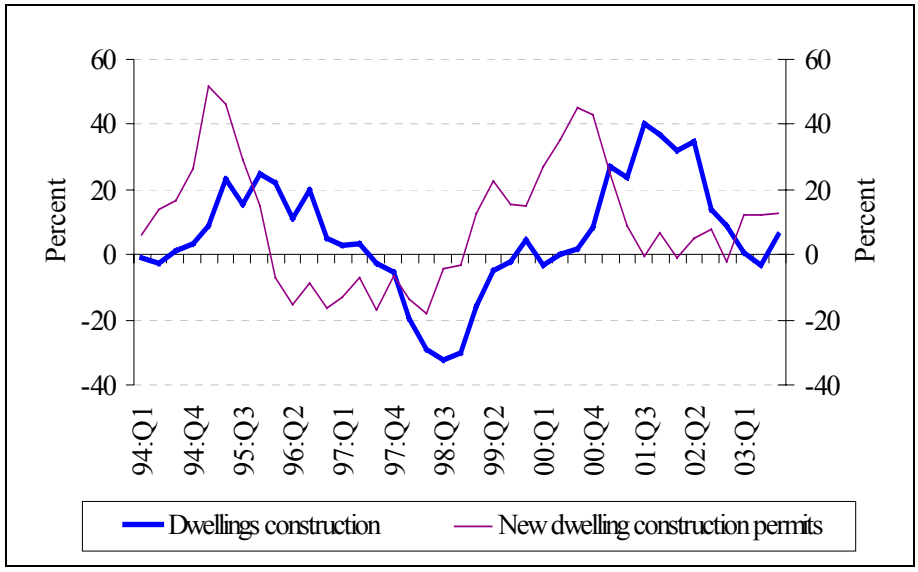
to the effects of the change to the subsidised loans scheme reducing household consumption, which are likely to unfold gradually over time.

Household fixed capital formation

As seen in the case of consumption expenditure, household fixed capital formation is likely be determined strongly by last year's developments. In the past two years, outstanding housing loans have soared by some 400 percent. Nearly one-third of this increase has resulted from borrowing in 2003 H2. The effect of the fear of the coming tightening of conditions of subsidised housing loans has also been reflected in the number of housing permits in 2003.

As a major part of hosing loans taken out in 2003 H2 is likely to realise as dwelling investment in 2004, and as a part of investment projects started in 2002 will be accomplished in 2004, in our forecast household fixed investment may rise slightly in 2004. In 2005, the measures aimed at tightening the conditions of housing loans, taken at end-2003, will be effective. Consequently, we expect households' capital expenditure to decline strongly in the period.

Chart 3.7 Numbers of houses built and housing permits
Seasonally adjusted and annualised quarter-on-quarter growth rates



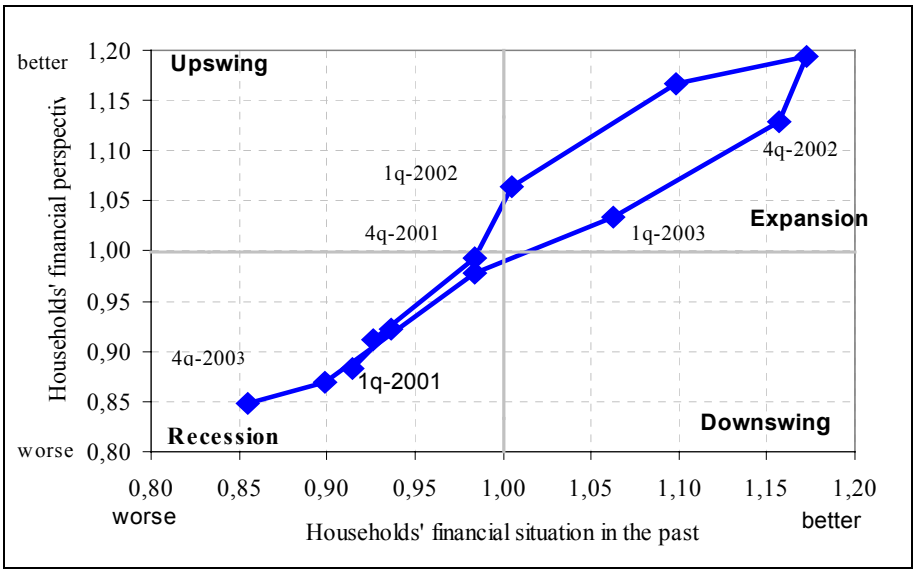
Household financial savings

We expect households' net savings to improve gradually over time in 2004-2005. Although this year there would be a drop in consumption and investment activity of households, the sector's net savings position is not expected to improve considerably due to a low real income growtht. As a result of the rise in the interest rate on subsidised housing loans, caused by the change to regulations, housing loans are expected to decline from 2004. Consequently, a robust rise in net financial savings is anticipated, reflecting a decline in housing loans and dwelling investment in 2005.

The sentiment indices, reflecting the sector's future expectations, have deteriorated significantly in the past 18 months, which may lead to increased caution when taking

decisions on the use of income. This factor is also expected to add to the increase in financial savings.

Chart 3.8 Households' assessment of their own income position



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

3. 1. 4 Corporate investment

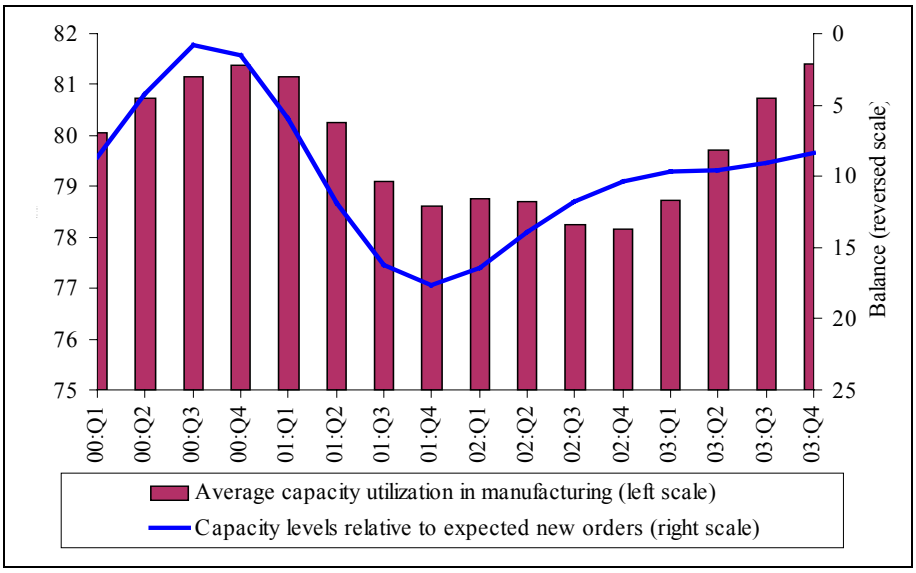
The global economic recession was most strongly reflected in corporate investment, and particularly manufacturing investment, in 2001–2002. Fixed investment activity started to pick up at a relatively robust pace only in 2003. In addition to the rise in external demand and a weaker real exchange rate, this process has been driven by the substitution of labour, becoming more expensive as a result of developments of the recent period, with capital. All this is likely to lead to strong growth in manufacturing and the entire corporate sector in 2004. Towards the forecast horizon, the increase in the costs of capital, caused by the assumed interest rate level, is expected to reduce this high growth rate. Consequently, fixed investment is forecast to grow at a slightly more subdued rate in 2005 relative to 2004.

Table 3.6 Business fixed investment
Annualised growth rates, percent

	Actual	Estimated	Forecast	
	2002	2003	2004	2005
Manufacturing investment	-9.0	2.1	7.8	5.6
Corporate investment	-2.1	4.5	7.3	6.2

Based on the survey by Kopint-Datorg for the final quarter of 2003, fixed investment activity may strengthen further, as capacity utilisation intensifies and the number of firms that judge their current capacities as insufficient to meet expected future demand for their products is rising.

Chart 3.9 Current and expected capacity utilisation in manufacturing
Based on the Kopint-Datorg survey

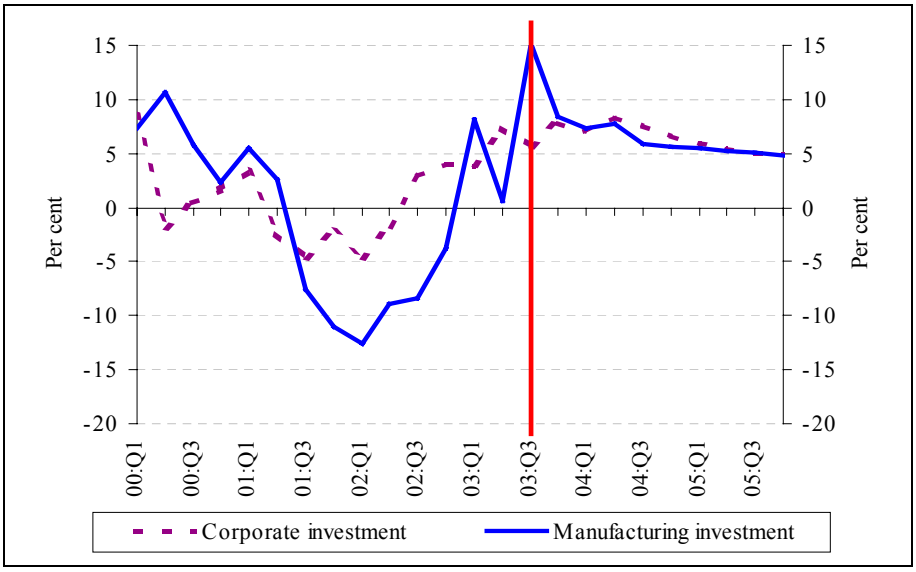


In 2004, strong external demand is likely to be associated with improving competitiveness through a weaker real exchange rate, ameliorating the investment environment for firms, particularly in manufacturing more heavily exposed to external influences. At the same time, fixed investment by market service providers is likely to fall slightly as a reaction to a slower rate of household consumption.

Rising costs of capital are likely to retard permanently high growth in 2005. Consequently, the volume of fixed investment in the corporate sector and manufacturing is likely to stabilise around 5 percent annually, through the slow decline in the quarterly growth rates.

Chart 3.10 Fixed investment volume in manufacturing and the corporate sector

Annualised quarter-on-quarter growth rates

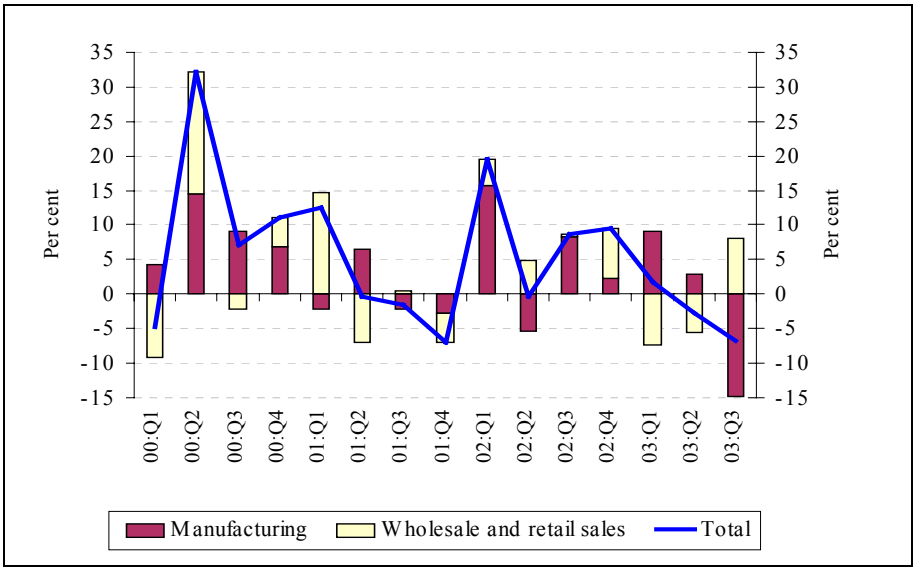


3. 1. 5 Inventory investment

The available time series are too short to make a solid assessment of developments in inventories in the context of the business cycle. In our assumption, purchased stocks (base and auxiliary materials, components, goods, etc.), in the early phase of the manufacturing cycle, rise significantly. Own-produced stocks rise with a lag of a couple of quarters, when the upward phase of the cycle is reflected in final use.

Developments in business inventories were largely consistent with this assumption up to 2003 H1, as manufacturing, in an upward phase since early 2002, increased its stocks, although this build-up was nearly equally strong in own-produced and purchased stocks. In 2003 Q3, however, manufacturing inventories experienced a dramatic decline. This may have been caused by very strong rise in output and sales of manufacturing firms, although the extent of this decline was very significant, and it can only be evaluated after the annual statistical data become available.

Chart 3.11 Whole-economy inventories
Annualised quarter-on-quarter contributions to growth



Commercial stocks, in turn, increased in the period, in contrast with our earlier expectations that commercial firms were running down their stocks in anticipation of a slowdown in consumption in 2004. With this in mind, we are of the opinion that developments in commercial stocks do not (yet) carry information on such a long horizon, and that it will coincide with, or lag a quarter behind at maximum, household consumption. Alternatively, retailers might not be expecting a strong, or, any slowdown in household demand for 2004.

At the forecast horizon, and in line with the unfolding upturn in the domestic output cycle, manufacturing inventories are expected to increase, following the sharp decline in 2003 Q3, and commercial stocks to stagnate or fall slightly.

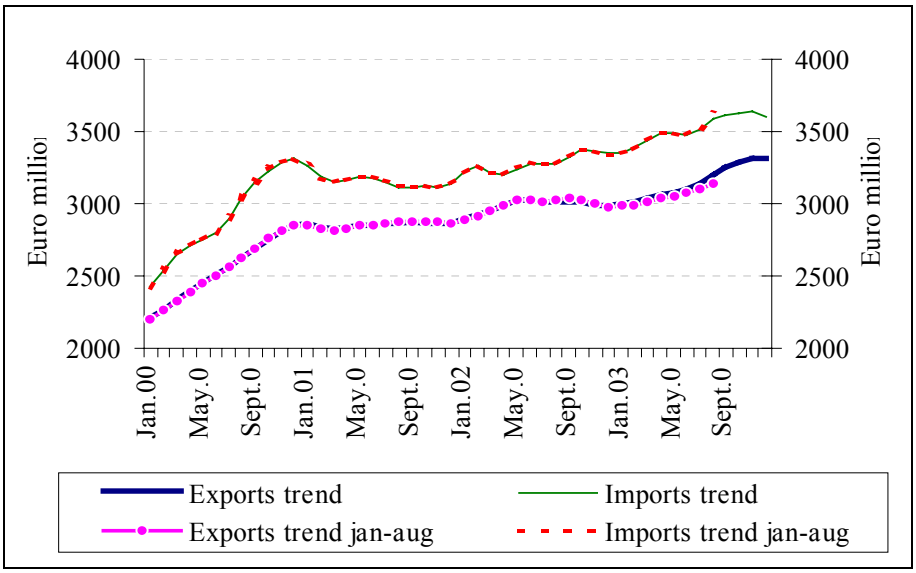
3. 1. 6 External trade

In our forecast, whole-economy exports rise steadily in 2004 and 2005, consistent with the pick-up in external demand.

In 2003, whole-economy exports and imports are estimated to have risen by 9.1 percent and 12.8 percent respectively, more strongly than previously anticipated. Although we expected the rate of export growth to pick up in the November *Report*, our current estimate is even higher, explained by information which has become available on performance towards the end of 2003. In the light of the latest data, exports grew along a higher-than-anticipated trend in 2003 H2 .

Based on preliminary data in 2003, in the last months of the year exports grew faster than imports. As Chart 3-12 shows, the December and November release of data revised up considerably the paths of both exports and imports. Strong import growth may be explained by the pick-up in exports, continued high household consumption and the upturn in the corporate investment cycle. The gap between export and import growth (net exports) is estimated to be the same as in November, leaving our November forecast of economic growth broadly unchanged.

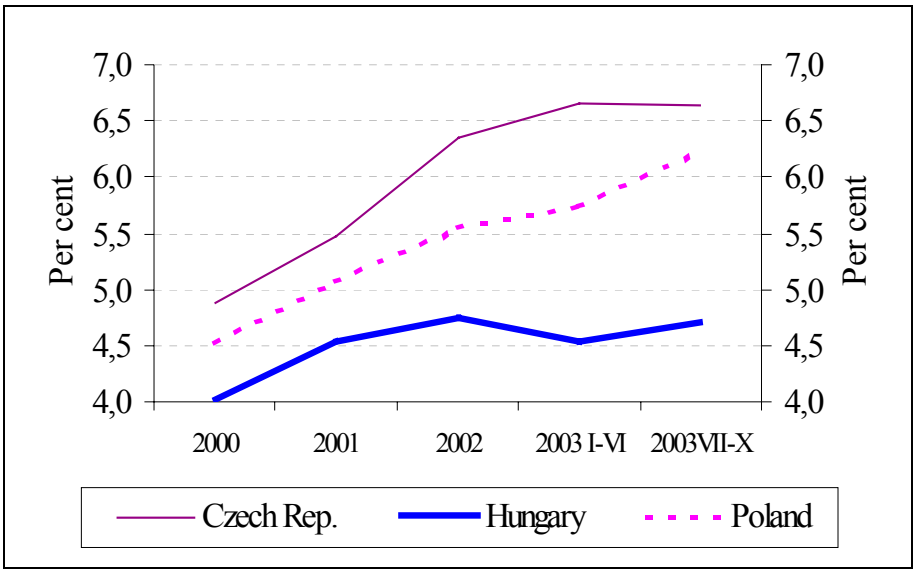
Chart 3.12 Exports and imports of goods
(at current prices, million euros)



The change in Hungary's market share in the course of the year illustrates the large revision to our estimate for 2003 exports.[21] The market share indicator, calculated on the basis of German imports, showed a decline in H1; however, Hungary's market share began to rise on the basis of data for the period July–October.

[21] We have prepared our within-year analysis of market shares for Germany, as import data for the entire EU are only available up to July.

Chart 3.13 Change in Hungary's market share in German imports*



** Hungary's market share has been calculated from Germany's imports from non-EU countries, on the basis of current price data in euros. Source: Deutsche Bundesbank.*

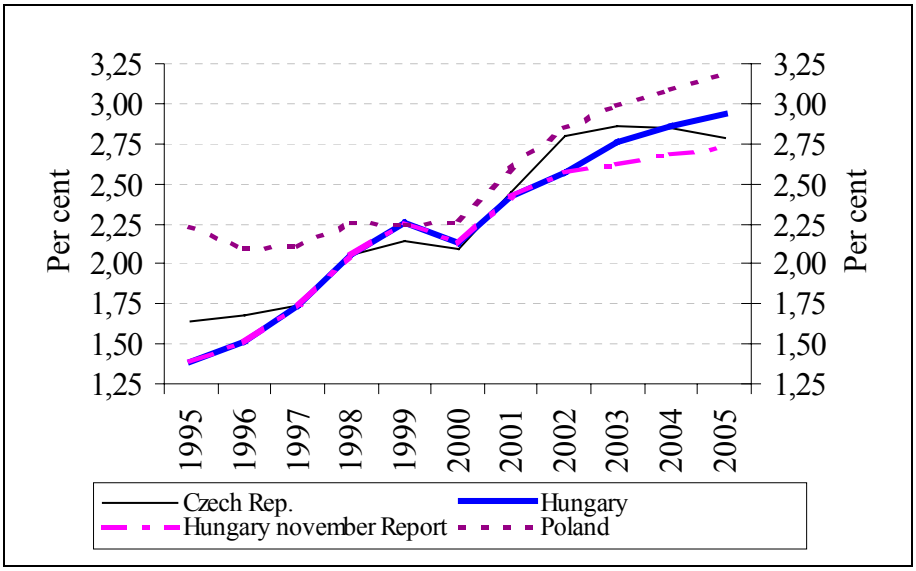
In our estimate, the volume of whole-economy exports was virtually equal to that of goods exports in 2003. Behind this, there were diverging developments within services exports. Exports of other services grew more strongly than goods exports from the second half of last year, whereas travel revenue continued to decline.

Based on the above discussion and applying a cautious approach, our forecast is for travel revenue to stagnate and for expenditure to rise slightly.

The rate of export growth is slightly above that of import growth in the current forecast for 2004, explained by the drop in import demand caused by domestic demand. Whole-economy exports and imports are forecast to rise by 9.5 percent and 8.9 percent respectively in 2004. In 2005, when the rise in domestic use is likely to be slower than the rate of GDP growth, whole-economy exports rise by 9.1 percent accompanied by an increase of 7.0 percent in imports.

We have made a forecast of Hungary's total market share, using the forecast of the European Commission prepared in October 2003. Accordingly, the previous years' trends are likely to continue this year and next year. Our forecast in the November *Report* showed a flattening of the trend. As Chart 3-13 illustrates, the gap between our earlier and current forecasts has been caused by the pick-up in 2003 H2. Based on the forecast of the European Commission, already noted, Poland will increase its market share more rapidly. The Czech Republic, in turn, is forecast to probably lose some of its share of the market.

Chart 3.14 Market share in the EU*



** Source: Forecast of the European Commission, October 2003; MNB forecast for Hungary. Market share has been defined from volume data on the basis of imports by EU Member states from non-EU countries.*

3. 1. 7 External balance

Based on the methodology currently in force (i.e. excluding reinvested earnings) and preliminary trade data, the current account deficit was 5.6 percent as a proportion of GDP in 2003. As an effect of the fiscal adjustment, the current account deficit is likely to fall to a smaller degree in 2004 and more significantly to 4 percent of GDP in 2005.

The expected decline in current account deficit is muted by the fact that, in the Bank's estimate, EU-related settlements will add some 0.2-0.3 percent of GDP to the current account deficit, as Hungary's contributions will be recorded as unrequited transfers among current items, while a part of transfers from the EU will be recorded in the capital account (see box below).

We have prepared our forecast for the balance of payments compiled in accordance with the current and the new methodology to be introduced this year.[22] The November *Report* contained projections for the balance of payments compiled on the basis of the new methodology. This took into account reinvested earnings recorded in the financial accounts. The recording of non-residents' reinvested earnings in Hungary has resulted in a 2–2.5 percentage points higher deficit and financing requirement as a proportion of GDP from 1998.[23]

---

[22] The reinvested earnings figures here are based on our expert estimates. For more details, see Section 5.2 of the November *Report*. On 5 January 2004, the MNB published the changes to the compilation of the balance of payments and its data release and revision policy. The Bank will publish the official data, going back to 1995, at the time of the release of Hungary's balance of payments on 31 March 2004.

[23] Our analysis of the external equilibrium indicator, also including reinvested earnings was published in the May 2003 issue of the *Report on Financial Stability*. For a detailed analysis, see 'A külső egyensúly új megközelítésben' (External equilibrium in a new approach) by Zsuzsa Fekete and Gábor Vadas, *MNB Background Studies* (forthcoming).

This, however, does not entail additional financing needs, as it has also raised direct investment by non-residents in Hungary and, therefore, is financed automatically.

Table 3.7 Current account deficit and financing capacity of sectors according to the current and new methodology in effect from 31 March 2004

As a percent of GDP

	2001	2002	2003	2004	2005
	Estimate			Forecast	
I. Public sector *	(-5.0)	(-8.9)	(-8.2)	(-7.1)	(-5.8)
II. Private sector (1+2)	2.2	5.2	2.4	2.6	2.9
1. Household sector	5.1	2.6	0.1	0.4	1.2
2. Corporate sector**	(-2.9)	2.6	2.3	2.2	1.7
*Financing requirement (I.+II.)****	***(-2.8)***	***(-3.7)***	***(-5.7)***	***(-4.5)***	***(-2.8)***
Current account balance	**(-3.4)**	**(-4.0)**	**(-5.6)**	**(-5.2)**	**(-3.9)**
– in EUR billions	(-2.0)	(-2.8)	(-4.2)	(-4.1)	(-3.3)
Reinvested earnings	(-2.3)	(-2.0)	(-2.6)	(-2.6)	(-2.7)
Corporate sector including reinvested earnings	(-5.2)	0.6	(-0.2)	(-0.4)	(-0.9)
*Financing capacity including reinvested earnings****	***(-5.1)***	***(-5.8)***	***(-8.3)***	***(-7.0)***	***(-5.5)***
Current account balance including reinvested earnings	**(-5.8)**	**(-6.1)**	**(-8.2)**	**(-7.8)**	**(-6.6)**
– in EUR billions	(-3.3)	(-4.2)	(-6.1)	(-6.1)	(-5.5)

** Specially constructed indicator. It does not show the general government balance.*

*** Financial and non-financial corporations combined. Government spending on motorway construction is included in public 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, complemented with expert estimates for 2004–2005.*

In 2003, the financing requirement of the broadly defined public sector fell by 0.7 percent of GDP, while the financing capacity of the private sector declined by nearly 3 percent of GDP. Causing the increase in financing requirement was the changed net saving behaviour of the household sector, characterising earlier years. In large part, this change in the saving position of households was the consequence of subsidised housing loans, in addition to high consumption. The upturn in the corporate sector investment cycle contributed to this, raising the financing requirement.

In our forecast, the public sector borrowing requirement falls by 1 percent in 2004, on the basis of this year's fiscal projection. The fall in the private sector's financing capacity is expected to be less deep than in the previous year. The household sector is likely to be in a net lending position, as a result of housing loans regulation. Firms' investment activity is expected to gather momentum in 2004; however, their profitability is estimated to improve in proportion to the pick-up in investment.

Based on the deficit reduction assumed in the Pre-Accession Economic Programme (PEP), the contractionary impact of fiscal policy on demand is assumed to continue. Household savings are expected to increase, as a consequence of low consumption and a decline in dwelling investment. Firms' capital expenditure is likely to remain high;

however, their profitability is expected to improve at a slower rate than capital expenditure.

The effect of EU-related flows on the balance of payments

EU transfers to Hungary in 2003 amounted to 0.3 percent of GDP. After Hungary's accession to the EU scheduled for May 2004, the balance of EU transfers and Hungary's contributions to the EU is estimated to amount to 0.4 percent of GDP in 2004. In 2005, Hungary will be a net beneficiary of EU transfers to an even greater degree, with such net transfers amounting to 0.7 percent of GDP.

Although EU transfers will reduce Hungary's external borrowing requirement, their settlement will not reduce the current account deficit to a similar extent. Hungary's contributions to the EU budget are recorded in the current account of the balance of payments, while transfers to Hungary are stated in both the current and the capital accounts. Transfers basically related to consumption, such as agricultural subsidies, are recorded in the current account, whereas capital investment and development-related transfers in the capital account. Since EU transfers are itemised in the balance of payments, it is difficult to predict the expected impact of such transfers on the current account accurately.

Based on current information, approximately half of the amount of EU transfers will be stated in the current account and the other half in the capital amount. Thus, nearly 0.6-0.6 percent and 0.9-0.9 percent of GDP in 2004 and 2005 respectively will be included in the appropriate sub-accounts of the balance of payments. Due to asymmetric settlement, the balance of transfers between and contributions to the EU and Hungary will deteriorate the current account balance by 0.2 percent and 0.3 percent of GDP in 2004 and 2005. Simultaneously, the capital account and hence the net external financing capacity will improve, as Hungary will be the net beneficiary of EU transfers in both 2004 and 2005. As regards agricultural subsidies, it should be borne in mind that only pre-financing will take place this year, i.e. Hungary will only be granted a certain part of agricultural subsidies only after the reference year is over.

Current account financing

In 2003, Hungary's external balance deteriorated and the structure of capital inflows, financing the current account deficit (recorded on the financial and the capital accounts), changed considerably. While in earlier years the inflow of direct investment capital played an important role in financing the current account deficit, 2003 saw an outflow of direct investment capital, excluding reinvested earnings. As a result, the current account deficit was primarily financed through an increase in debt.

Cyclical and one-off effects also played a role in the decline in net inward direct investment, in addition to the low net borrowing requirement of the corporate sector. The net borrowing requirement of the corporate sector,[24] which attracted mainly direct investment capital to finance its fixed investment, remained low in 2003. This reduced

[24] Excluding reinvested earnings, the sector was in a net saving position.

the demand for direct capital investment, though the volume of corporate fixed investment increased.

The net inflow of direct investment capital was further reduced by the regional expansion of domestic companies.

Thus, Hungary's high external borrowing requirement can be ascribed to the borrowing requirement of the public sector rather than to that of the corporate sector. As a rule, the public sector issues government bonds, instead of raising direct investment capital, to finance the public sector deficit. Consequently, the importance of the role that debt liabilities play in meeting the external borrowing requirement of the national economy has risen. By contrast, direct investment capital has been taking an increasingly low profile.

Likewise, purchases of government bonds and deposit making by foreign investors played a significant part in deficit financing in 2003. Due to the uncertainties surrounding fiscal policy and the forint exchange rate, foreign investors' holdings of forint-denominated assets rose less significantly in 2003 than in 2002, despite rising forint yields. Meanwhile, firms restructured their financial asset holdings by increasing the share of forint-denominated assets and simultaneously cut their FX deposits, which in turn let to an increase in their net foreign currency-denominated debt.

Table 3.8 Current account financing

EUR millions

	2002				2002	2003				2003
	2002. I.	II.	III.	IV.		2003. I.	II.	III.	IV.	
	quarter					quarter				
1. Balance of payments	**-480**	**-726**	**-285**	**-1280**	**-2771**	**-872**	**-1430**	**-957**	**-909**	**-4168**
2. Capital account	*51*	*62*	*23*	*54*	*190*	*-105*	*9*	*12*	*8*	*-76*
3. External financing requirement	**-428**	**-664**	**-262**	**-1226**	**-2580**	**-977**	**-1421**	**-946**	**-901**	**-4244**
4. Financing	**-631**	**207**	**206**	**1024**	**806**	**3558**	**-182**	**1155**	**169**	**4700**
5. Direct investment, net	*112*	*329*	*76*	*116*	*633*	*-670*	*-157*	*-486*	*-142*	*-1456*
5.1 Abroad, net	*-41*	*-48*	*-108*	*-78*	*-275*	*-448*	*-164*	*-41*	*-804*	*-1457*
5.2 In Hungary, net	*154*	*377*	*184*	*194*	*908*	*-222*	*6*	*-446*	*340*	*-321*
6. General government and MNB, net	*-308*	*-106*	*921*	*996*	*1503*	*1589*	*-287*	*1236*	*-270*	*2269*
6.1 MNB	-768	-296	-7	-578	-1649	-116	-541	-771	-421	-1849
6.2 Genral government (excl. HUF denominated bonds and treasury bills)	-132	53	-36	279	164	977	-9	1146	281	2396
6.3 HUF denominated bonds and treasury bills	592	138	964	1295	2988	728	263	861	-130	1722
7. Private sector , net	*-441*	*-462*	*-1052*	*-528*	*-2483*	*2551*	*133*	*586*	*351*	*3622*
7.1. Other monetary institutions	573	575	37	-40	1145	2642	-167	394	301	3170
7.2 Portfolio investment, net (excl. privatization)	113	-60	-123	-117	-186	212	44	147	-172	230
7.3 Other sectors, net	-1127	-976	-967	-371	-3441	-304	256	46	222	221
8. Net errors and omissions	**156**	**138**	**147**	**137**	**577**	**189**	**38**	**-123**	**86**	**191**
9. Changes in international reserves	**-1111**	**-519**	**-79**	**-256**	**-1965**	**2686**	**-1611**	**198**	**-740**	**532**

We expect favourable developments to emerge in both 2004 and 2005, resulting in a decline in the external borrowing requirement, a positive balance of savings by the institutional sectors of the economy and an improved pattern of financing. In addition to the fall in the public sector borrowing requirement and a moderate increase in net

household savings, corporate fixed investment activity is likely to pick up. This is expected to bring about a reduction in the role of debt financing and an increase in net inward direct investment.

3. 2 Output

The influences affecting domestic output developments are basically favourable. Hungarian firms receive clearly positive impulses from external demand. In addition, the weaker-than-earlier real exchange rate resulting largely from improvement in productivity provides greater growth opportunities for manufacturing output. All this, coupled with a slightly slower growth rate, is also reflected in developments in value added. The slowdown in household consumption is more strongly reflected in market services value added than the spurring effects of external demand. Consequently, it is likely to grow at a slower-than-earlier rate in 2005.

Table 3.9 Output
Average annual growth rates, percent

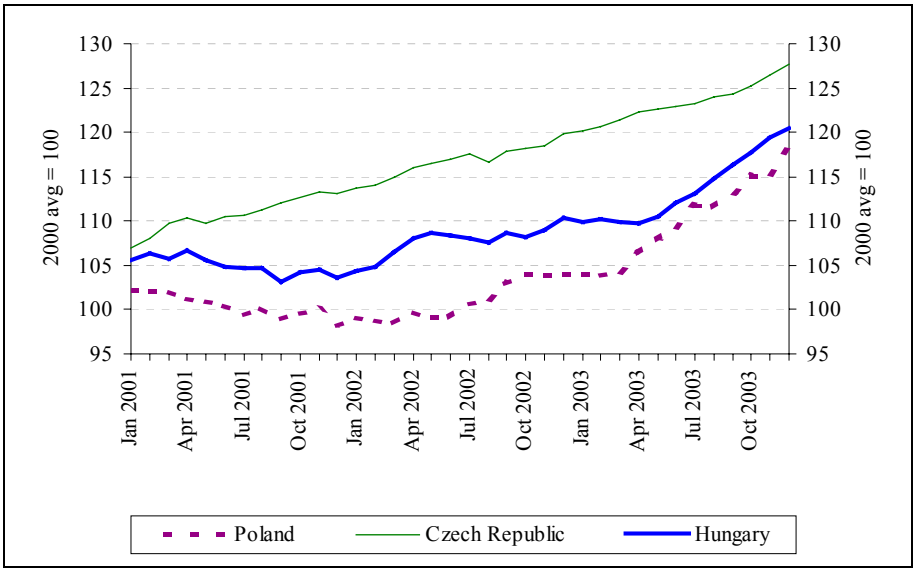
	Actual	Actual/ Estimated	Forecast	
	2002	2003	2004	2005
Gross manufacturing output	3.6	6.9	9.5	7.7
Manufacturing value added	2.6	1.9	6.5	7.1
Market services value added	4.8	4.1	3.5	3.0

The pick-up in domestic manufacturing output has been reflected in data since early 2002. And, since the revision of 2002 actual data, value added has also been rising robustly, closing a little the gap which has been observed between data for gross output and value added, caused by the much stronger increase in the former. This upturn in manufacturing is mainly linked to the fast increase in German imports in 2002, as domestic sales continue to stagnate, while exports are growing very robustly.

Despite the slowdown in German imports in 2003, the upturn has continued. Data for the third quarter show particularly strong expansion. Gross manufacturing output grew by more than an annualized 23 percent in 2003 Q3 and value added by nearly 10 percent. In the fourth quarter the dynamic expansion of manufacturing output continued with an annualized growth rate in excess of 20 percent. Although the high growth rates only characterise a couple of the sub-sectors of manufacturing, for example, machinery and equipment, the chemical industry and metal processing, as they account for a significant portion of Hungarian exports, relatively strong influences are also reflected in other areas of the real economy. Note that third-quarter output growth is consistent with the comparable increase goods trade in Q3.

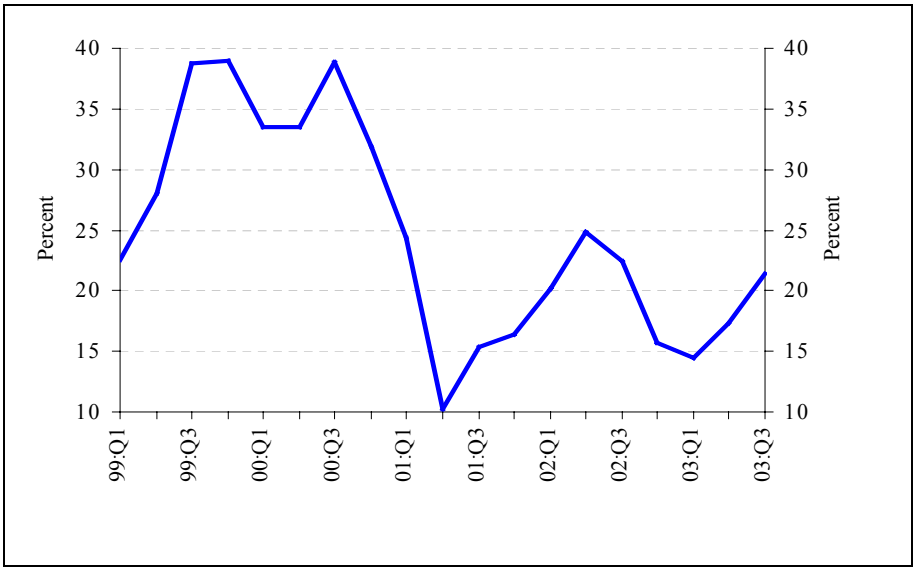
Such an intense growth of output could be the consequence of a weaker real exchange rate. However, other countries in the region exhibit similar growth in the second half of 2003 despite rather different real exchange rate developments. It is thus more likely, that dynamic production growth has to do with the external recovery.

Chart 3.15 Manufacturing output in the Czech Republic, Poland and Hungary
moving averages of seasonally adjusted series



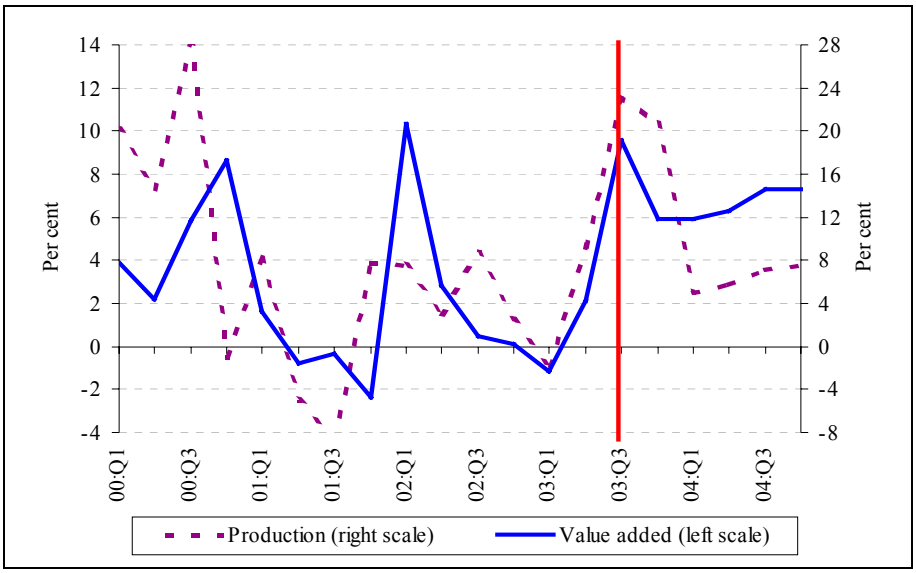
Hungarian economic research institutes, surveying corporate managers' expectations, report a strengthening of domestic business confidence in third quarter of 2003. This appears to underpin our forecast for 2004 and 2005 containing a further pick-up in manufacturing output. Vigorous external demand and the weakening exchange rate both have been playing a role in growth, their combination resulting in very high rates in the major indicators.

Chart 3.16 Domestic business confidence index from KOPINT survey*
Data weighted by the MNB



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

Chart 3.17 Manufacturing output and value added
Annualised quarter-on-quarter growth rates



Market services value added remained stable during the global economic recession, due to the strong incentive from the increase in household consumption. The expected slowdown of value added growth at the forecast horizon is explained by the fact that the effect of the massive slowdown in household consumption dominates the entire market services sector through trade services, which transportation, financial and other services, picking up slightly in line with the global economic recovery, will be unable to offset. In contrast with more than 4 percent in earlier years, the growth rate of market services value added is likely to slow to around 3 percent by 2005.

Construction is only expected to grow modestly at the forecast horizon. Although the sector corrected the sharp decline in 2003 Q1 with strong growth in Q2, its performance was again fairly modest in Q3. The number of existing contracts for building construction is likely to continue falling, linked to the land tax and the tightening of conditions of subsidised housing loans. Consequently, output growth is expected to be low in both 2004 and 2005. Output of other structures, a branch of construction which also includes infrastructure developments by the Government, is also likely to grow very modestly in 2004 and slightly more strongly in 2005.

4 Labour market and competitiveness

Data from the past year reveal that the trend of declining wage inflation experienced in 2002 reversed in the private sector in early 2003. The underlying reason for this is accelerated wage inflation in the service sector. Wages increased far less significantly in manufacturing than in the service sector.

Recent data on manufacturing sales suggest that in 2003, the sector, having overcome its trough, was able to record dynamically growing value added, which, along with falling employment, started to translate into considerably higher productivity from mid-2003. Increasing sales per capita allowed for the possibility of heftier wage raises, with declining wage inflation coming to a halt. Although wage inflation got stuck, rise in productivity was higher than in wage costs. As a result, unit labour costs, which had been increasing vigorously, started to fall. With sales prices edging up, this widened manufacturing companies' profit margin on labour.

Although economic recovery has not fed through into employment in manufacturing, the average number of the hours worked, on the rise since early 2003, points to higher labour demand in the future. Due to delayed adjustment and for reasons of structural change (substitution of labour for capital), no rapid increase in the numbers employed is expected to occur. Employment is projected to continue to decline prior to 2004 Q2 and then remains broadly flat. From early 2005, it starts to pick up. As a result, productivity continues to grow dynamically.

We project that wage inflation in manufacturing, which suffered loss of income in the past due to slow wage adjustment, remains below the rate of growth in productivity, thereby widening profit margin on labour.

Strong demand for market services allowed for a permanently dynamic rise in value added. By contrast, a similarly strong increase in the numbers employed led to a relatively moderate rise in productivity. Thus, high wage inflation only allowed for a rather moderate widening of corporate profit margin. Given the low unemployment rate, wage inflation, which is in disjunction with rising productivity, can be ascribed to limited labour supply. That is, given the current level of wages, strong labour demand encounters capacity constraints on the labour supply side, which forces employers to raise wages.

Apparently, tight labour market in the service sector continues to be unable to put a brake on wage growth. Nevertheless, wages in the market service sector are expected to generate steadily expanding labour supply, which may slow down wage inflation in the sector over the longer term. Therefore, our projection is for increasing wage inflation in 2004 and gradually declining wage inflation from 2005. Wage inflation is thus expected to exceed growth rate in productivity, stuck on a low level; unit labour costs are more likely to decline from 2005.

Overall, wages in the private sector are projected to increase by 9.3 percent and 8.0 percent in 2004 and 2005 respectively, with the growth rate in 2004 being nearly identical to the one in 2003. Together with public sector, average earnings in the whole economy are expected to grow by 8.9 percent and 7.9 percent in 2004 and 2005 respectively. Like the November *Report*, the current one also assumes that the rise in indirect taxes will not be incorporated into inflation expectations, thus the risks to the

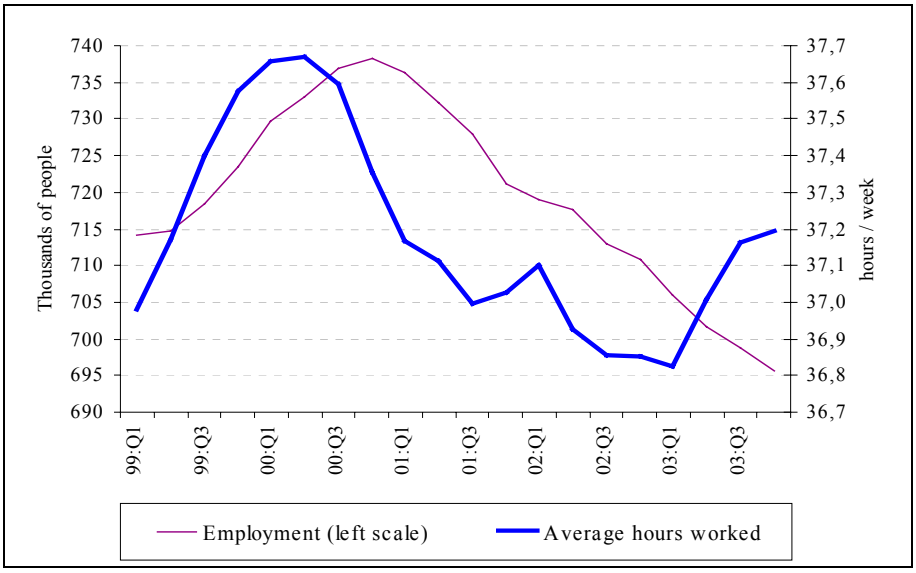
central projection for inflation appear on the upside. Uncertainty surrounding the central projection points to higher increase in wages in both 2004 and 2005.

4. 1 Labour utilisation

In line with our perception of external demand and developments in manufacturing output, indicators showing labour utilisation in economy forecast an upturn in business activity.

Businesses adjust to changes in the business cycle by changing the intensity of labour utilisation, i.e. the average number of the hours worked. This indicator, which moves in close conjunction with the business cycle, is a sensitive predictor of employment, the adjustment of which takes longer and is more protracted. The situation was no different in the summer of 2000, when business activity in manufacturing started to become subdued. Then businesses in the sector adjusted to a less favourable environment primarily by cutting investment spending and reducing the average number of the hours worked. Chart 4.1 reveals unambiguously that, as a rule, reduction in the numbers employed suffered a delay of 2 to 3 quarters of a year. Because of the costs of layoffs and imperfect adjustment, the length of delay has remained broadly unchanged to this day.

Chart 4. 1 Average weekly hours worked by manual workers and full-time employment in manufacturing*

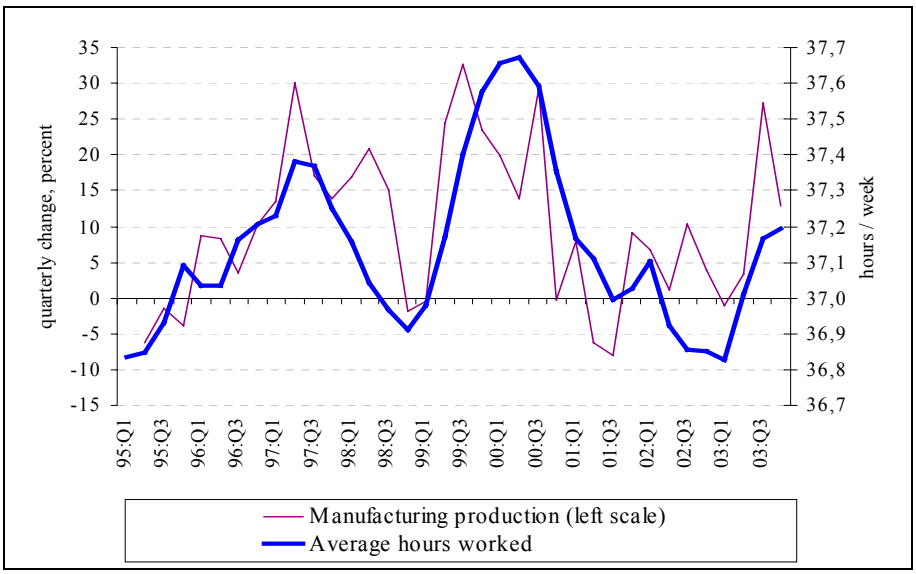


**Based on Central Statistical Office data up to November. Data for December have been estimated with statistical methods.*

Despite frequent data revision and the noisiness of the time series, it is clear that, following a dramatic 3-year fall, the average number of the hours worked by physical workers in manufacturing had hit a historic trough by early 2003, then it started to pick up. Recent data suggest that vigorous growth in manufacturing output led to a steep rise in the average number of the hours worked as early as 2003 Q1, and further

uninterrupted increase during the rest of the year.[25] Such rise in manufacturing cannot be ascribed to the exclusive effects of the increase in the average number of the hours worked in the individual sub-sectors. It is the chemical, timber and textile industries, where the average number of the hours worked has grown dynamically over the past few months. Compared to what was projected in our *Report* in November, except for food industry, where output is broadly flat, and the slightly declining manufacture of non-metallic products, other industries are experiencing rising average working hours.

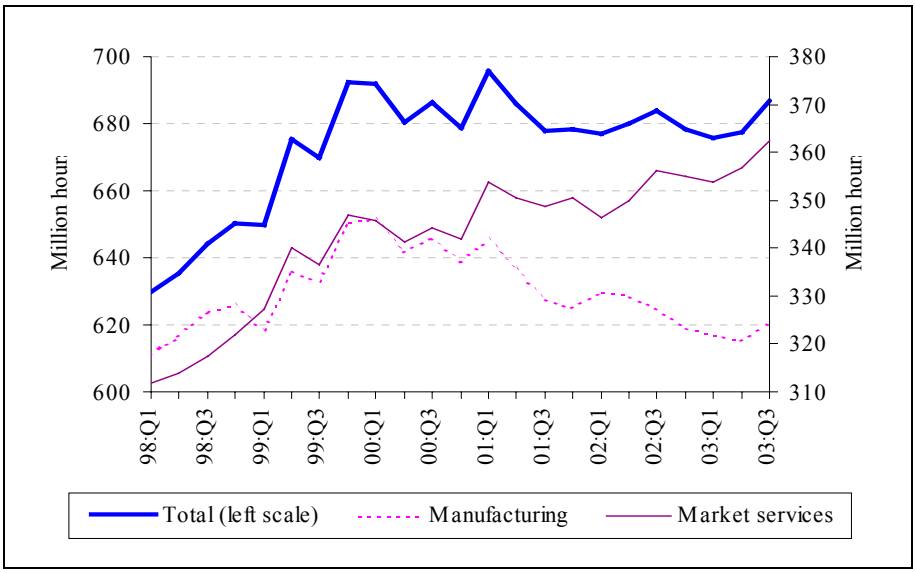
Chart 4. 2 Co-movement of manufacturing production and average hours worked



Total hours worked in the private sector as an indicator of labour force in production also reached a turning point. Data on 2003 Q3 suggest that decrease in the total number of the hours worked, an ongoing process since early 2001, came to a halt in 2003. Increase in the past quarters can be attributed to dynamically expanding employment in the service sector. Falling total number of the hours worked in manufacturing, ongoing since the final months of 2000, is a combined effect of decline in the average number of the hours worked and an increasing number of layoffs. Over the past half a year, however, due to better utilisation of existing labour force, reduction in the total hours worked in manufacturing seems to have moderated, if not come to a halt, despite a fall in the numbers employed. Yet, due to the high volatility of data series and frequent data revision, it is premature to suggest a trend reversal in the total hours worked in this sector as well.

[25] Since our previous *Report* data have been revised. At that time, Q2 2003 data gave no indication of a trend reversal.

Chart 4. 3 Total hours worked
Manufacturing and market services, million hours per month



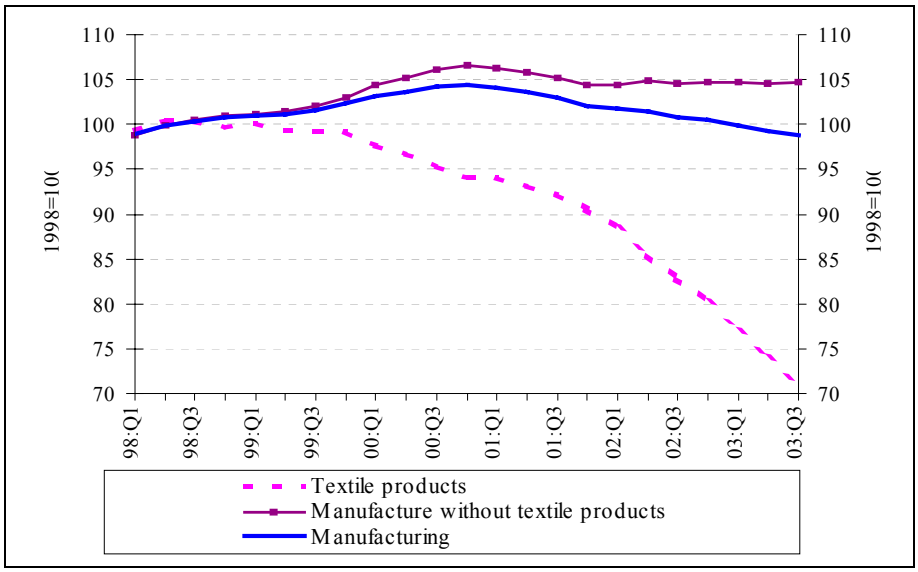
Based on CSO statistics on institutional labour market.

Recent data from 2003 Q3 show that labour demand in the private sector is still in line with the end-2000 trend. While the level of employment has remained broadly flat in the past three years, there have emerged strikingly different trends in both manufacturing and market services.

As was indicated, no signs of an upturn in the business cycle have been discernible in manufacturing employment as yet. The primary reason for this is delayed adjustment, referred to above, which means that increasing output moves in conjunction with the enhanced utilisation of existing resources, with increased labour demand suffering a delay of 2 to 3 quarters of a year. In addition to business cycle-related explanations, recent structural developments in manufacturing should also be taken into account. Chart 4.4 clearly reveals that mass layoffs in the textile industry[26] have been almost exclusively responsible for falling manufacturing employment since early 2002. Domestic businesses in labour-intensive sectors, mainly in footwear manufacturing, are less and less capable of competing with foreign manufacturers using much cheaper labour, and forced to close down their factories. A sharp decline in output and simultaneous layoffs were further boosted by the raises in the minimum wage in 2001 and 2002.

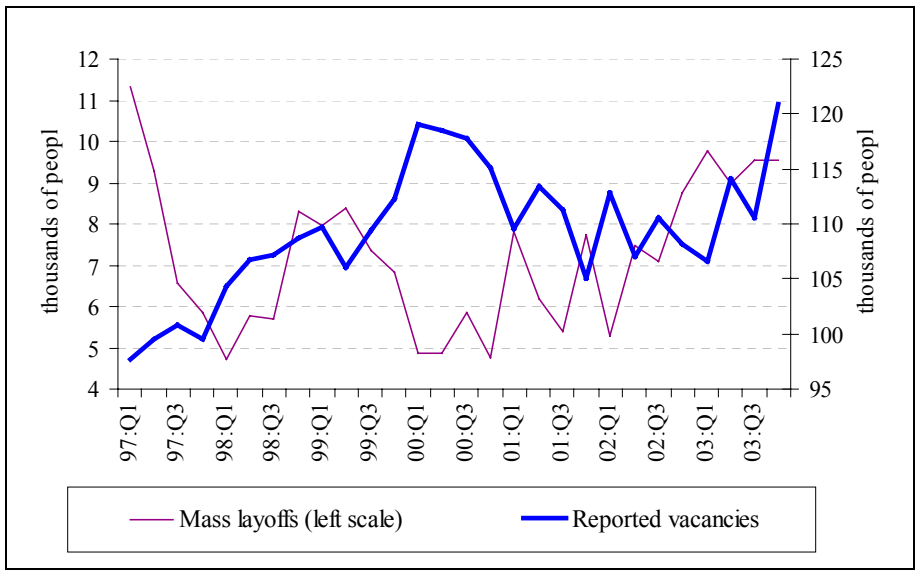
[26] In the entire section, 'textile industry' means collectively the production of textile and leather goods as well as shoes, irrespective of the fact that the latter two goods are considered as separate sectors.

Chart 4.4 Full-time employment in manufacturing



We expect economic recovery, already discernible, to affect manufacturing employment considerably in the coming period. Growth in manufacturing value added, more dynamic than projected in the November *Report*, is likely to influence employment beneficially as early as the first months of 2004. In addition to a rise in the average number of the hours worked, the most recent Employment Office data on 2003 Q4, revealing increasing willingness to hire labour force in the private sector and broadly flat announced mass layoffs, also point to increased labour demand.

Chart 4. 5 Announced mass layoffs and reported unfilled vacancies*

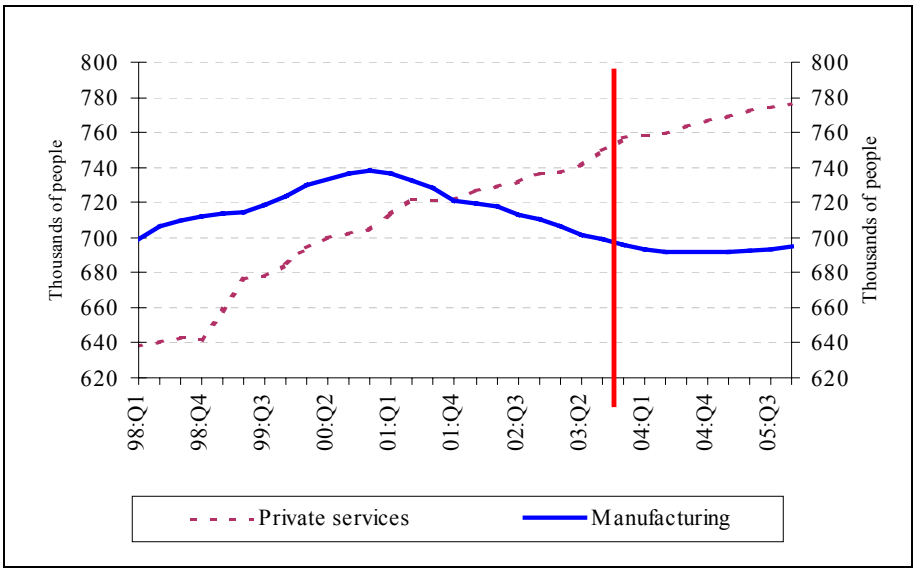


**The number of those included in the relevant quarterly report and the number of the reports in a given quarter (Source: National Employment Office)*

Despite these favourable signs, given the structural effects, no rapid increase in the numbers employed in manufacturing is expected to materialise at the forecast horizon. For the time being, there is no indication of a dramatic change in the dynamics of the layoffs in the textile industry. A labour-intensive textile industry gradually taking a low

profile points to a long-term change in manufacturing production structure, which can also be interpreted as an aggregate level substitution of labour for capital. In that way, manufacturing, which is even more capital intensive, will need less labour than earlier. Accordingly, despite a pick-up in the business cycle, aggregate manufacturing employment is projected to converge slowly and on a lower level than in 2000 Q4. Employment is projected to continue to decline prior to 2004 Q2 and then remains broadly flat. From early 2005 it starts to pick up slowly.

Chart 4. 6 Full-time employment *



** Based on CSO statistics on institutional labour market.*

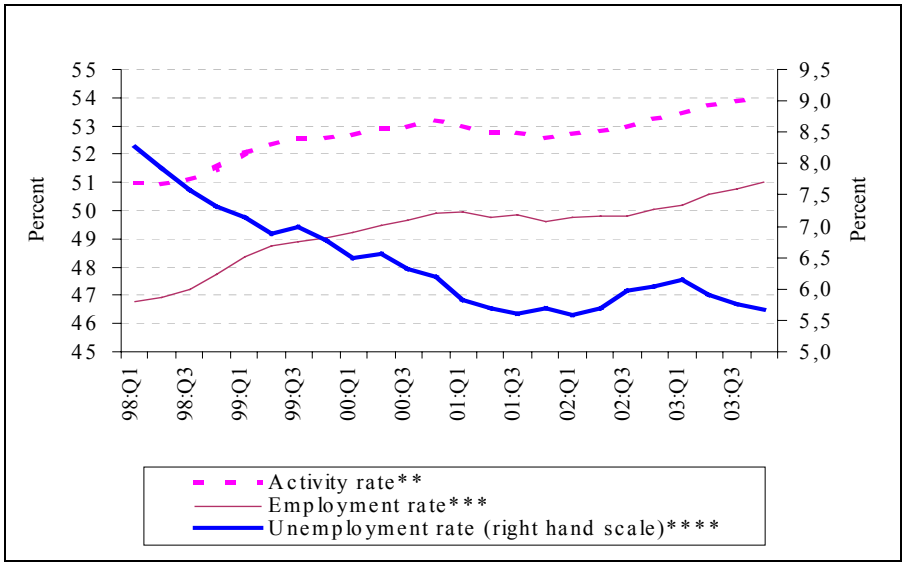
Due to buoyant consumer demand, employment in market services, which had not slumped prior to end-2003, is expected to continue to expand vigorously, despite relatively high wage costs. The negative impact of a dramatic fall in consumption in 2004 on the service sector and service sector employment is expected to be offset by future expansion of external demand. Through manufacturing-related services, increased output in the former sector will affect business activity in the service sector favourably. Based on this, no significant change is expected to occur in the dynamics of labour demand in market services in the coming two years.

4. 2 Labour market reserves and tightness

Unemployment rate, the embodiment of labour reserve, which is of primary importance to the economy in the short run, started to rise in early 2002, reaching its peak by 2003 Q1, when it started to fall. In an international comparison, by the less than half percentage points rise in the unemployment rate we can say that neither the downturn in global economy nor the real appreciation resulted in large labour market effects. However, it should be borne in mind that, given a steadily growing rate of labour market activity rate and slightly declining private employment, if it had not been for the substantial rise in public sector employment, the rate of unemployment would have been higher. From the summer of 2003, steadily increasing aggregate employment was once again determined by growing labour demand in the private sector, where the numbers employed had already been rising. As a result, the rate of unemployment declined. [27]

Based on CSO's labour force survey in 2003 Q4, the number of the unemployment rate seems to be continuing to follow a slightly declining trend. The emergence of this trend can be ascribed to an increase in employment exceeding even the growth dynamics of the economically active population, the underlying reason for which is continuously strong labour demand in market services. Due to its ever-increasing staffing demand, the sector absorbs labour laid off in the industry and general government as well as part of the economically inactive. As a result, simultaneously with slightly decreasing unemployment, the size of the economically active population is increasing, which in turn leads to a declining rate of unemployment.

Chart 4. 7 The rate of unemployment, activity and employment*



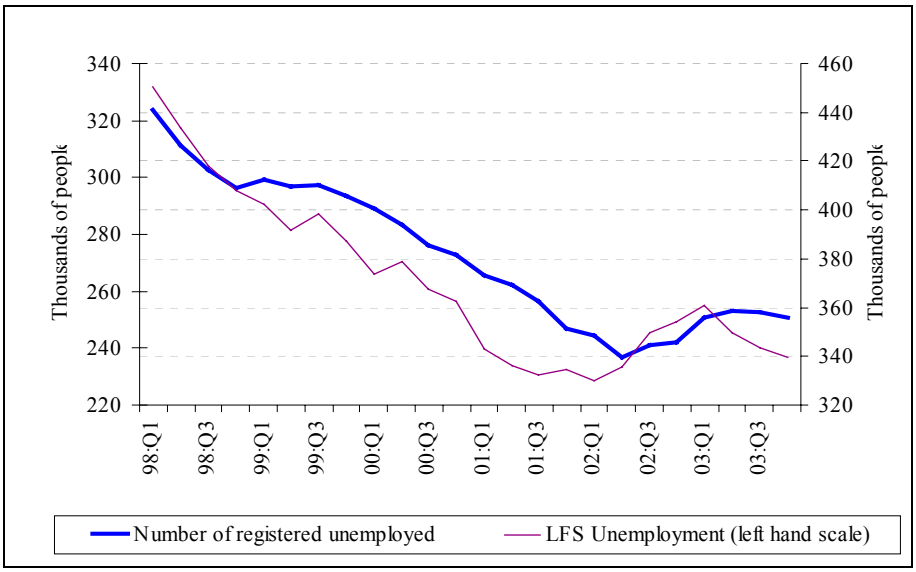
** Based on the CSO Labour Force Survey. ** Activity rate: share of the economically active within the population of working age. *** Employment rate: share of the economically active within the population of working age. **** Unemployment rate: number of the unemployed as a proportion of the economically active population.*

[27] In contrast with what it covers in the previous section, private sector employment in Section IV.2. refers to the ILO employment category based on the CSO Labour Force Survey (LFS), that is, also to part-time employees, the self-employed and those employed in smaller firms or in sectors other than manufacturing and market services.

There is considerable uncertainty surrounding future developments in the unemployment rate. With a shrinking population of working-age people, lasting labour demand in the private sector is very likely to exert a downside pressure on the unemployment rate in the coming two years as well. The number of registered vacancies and broadly flat mass layoffs discussed in the previous section also corroborate this.

However, Employment Office statistics on the registered unemployed warrant caution. The number of the registered unemployed tallies with that of the surveyed unemployed. Over the past year, however, the two types of statistics seem to have departed from each other in terms of their dynamics, inasmuch as the number of the registered unemployed remained high all through 2003, despite declining LFS statistics.

Chart 4. 8 Number of LFS unemployed and registered unemployed ∗



∗ Based on CSO's Labour Force Survey and Employment Office data.

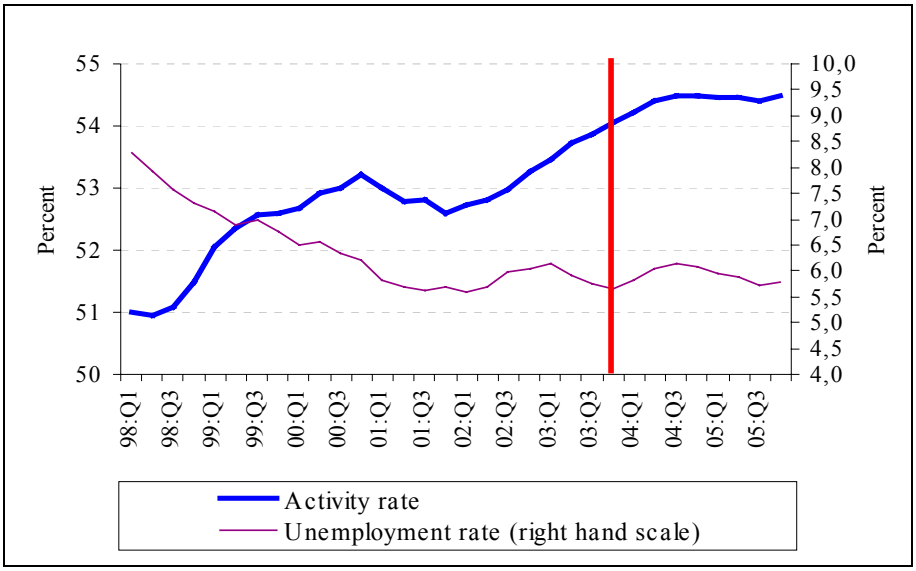
The layoffs in general government announced in the final months of last year are likely to exert upside pressure on unemployment rate this year. Failing detailed information, similarly to what was projected in our previous *Report on Inflation*, we assume that 50 percent of those laid off in the government sector will become inactive.[28] If the private sector continues to absorb the formerly economically inactive at a similar pace, an activity rate exceeding that of employment may lead to a higher rate of unemployment.

Raising the state pension age this year is also likely to affect economic activity. As under the effective law, there is no such generation that would come of pension age this year, those that would have retired this year will exit the labour market in 2005. This will affect the expected rate of activity beneficially this year, whereas the one in 2005 adversely. Demographic factors also influence future developments in the rate of activity. Accordingly, the size of the economically active age population is expected to be somewhat less small in 2005 than this year.

[28] E.g. through early retirement or laying off those who are of the state pension age.

Based on this, the activity rate is projected to rise dynamically until end-2004, then remain broadly flat. We assume that unemployment rate will reverse and reach its plateau below 6 percent in early 2005 after a moderate rise amounting to 0.4 to 0.5 percentage points in 2004. Compared to our previous projection, this suggests a shift towards a somewhat lower path. The uncertainties surrounding our forecast taken into consideration, it can be safely assumed that, except for a few minor moves, no substantial changes in the number of the unemployed as a proportion of the economically active population are expected to take place over the medium term.

Chart 4. 9 Unemployment and activity rate forecasts



4. 3 Wage inflation

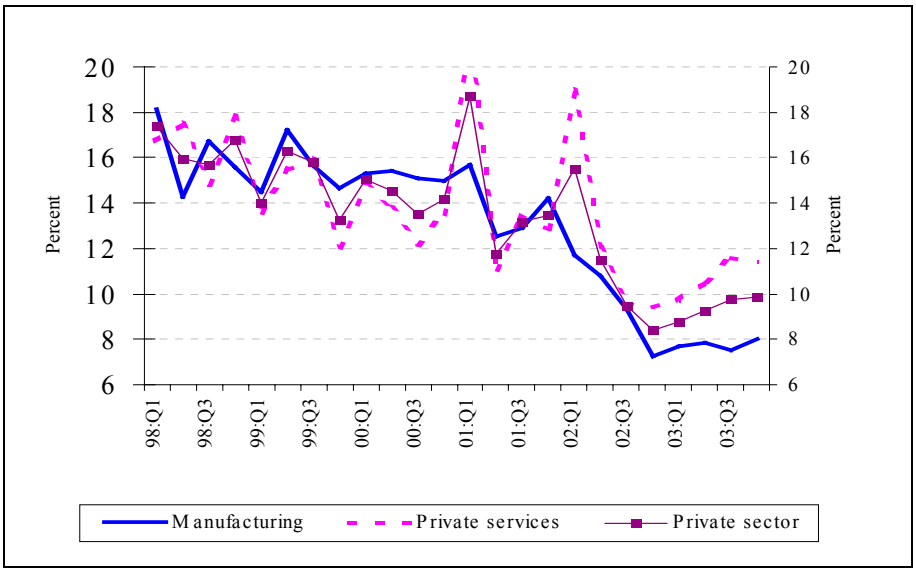
Wage data on the past one year suggest that wage inflation in the private sector, which had been declining all through 2002, reversed in 2003 Q1 and rose during 2003. The underlying reason for rising average wages in the private sector is accelerating wage inflation in the service sector. Wages in manufacturing increased far less significantly than they did in the service sector. Although slowdown in nominal wage adjustment to disinflation affects the entire private sector to a certain extent, the underlying reasons are somewhat different in the two sectors.

CSO revision of data on manufacturing value added altered our perception of developments there to a certain degree. The most recent data reveal that value added in the sector, which has been growing vigorously since early 2003, has resulted in substantial growth in productivity against a backdrop of an ongoing decline in employment. Increasing value added per capita allowed for heftier wage raises, which in turn halted declining wage inflation.

An in-depth analysis leads to the assumption that the structural developments discussed above may also have played a part in the recent dynamics of manufacturing wage inflation. Shedding low-productivity jobs in the textile industry alone may have affected productivity in manufacturing as a whole beneficially. The rise of the wage costs has resulted in substitution of labour for capital in other sectors as well. As firms could

substitute labour for capital only to a certain extent, wage inflation has exceeded growth in labour productivity.

Chart 4. 10 Wage inflation in private sector
Annualised quarter-on-quarter indices



Based on Central Statistical Office data up to November. Data for December have been estimated with statistical methods.

Strong demand for market services allowed for a permanently dynamic rise in value added. By contrast, a similarly strong increase in the numbers employed led to a relatively moderate rise in productivity. Despite permanently strong demand for service goods and high sales prices, high wage inflation was able to generate only a moderate rise in service providing companies' profit[29]. Given the low unemployment rate, wage inflation, which is in disjunction with rising productivity, can be ascribed to limited labour supply. That is, given the current level of wages, strong labour demand encounters capacity constraints on the labour supply side, which forces employers to raise wages. Several instances of considerable general government wage raises in the past also fuelled wage inflation in the service sector. General government, where headcount had kept increasing till mid-2003, thus offered an increasingly attractive alternative to labour suppliers, which further limited the availability of potential labour force in the service sector. Thus, service-providing companies had to increase wages, i.e. wage raise in the government sector fed through into the private sector.

Based on recent data, we expect wage inflation to stay high in the short term in the private sector. At the same time, similarly to the one in the November *Report,* our central longer-term projection has not taken into account the one-off effect of rises in indirect taxes, which may actually lead to rising inflation expectations and a potential increase in the rate of wage growth. We assume that companies will realise that rise in consumer prices generated by indirect taxes will not produce extra sales revenues to them, and refuse to relax their wage policy, whereby they will pass the burden of tax

[29] The inverse of real ULC was used to approximate corporate profit on labour. For reasons of simplicity, hereinafter only the term 'profit' is used in the text.

increases on to consumers. Our projection treats the inflation expectations, which may be heightened by rises in indirect taxes, as upside risk to wages.

Overall, wages in the private sector are projected to increase by 9.3 and 8 percent in 2004 and 2005 respectively, with the growth rate in 2004 being identical to the one in 2003. This means that our projection, 8.3 and 6.5 percent for 2004 and 2005 respectively, in the November *Report* must be revised up considerably for either year. The underlying reasons for a higher-than-expected projection in manufacturing are different from those in market services.

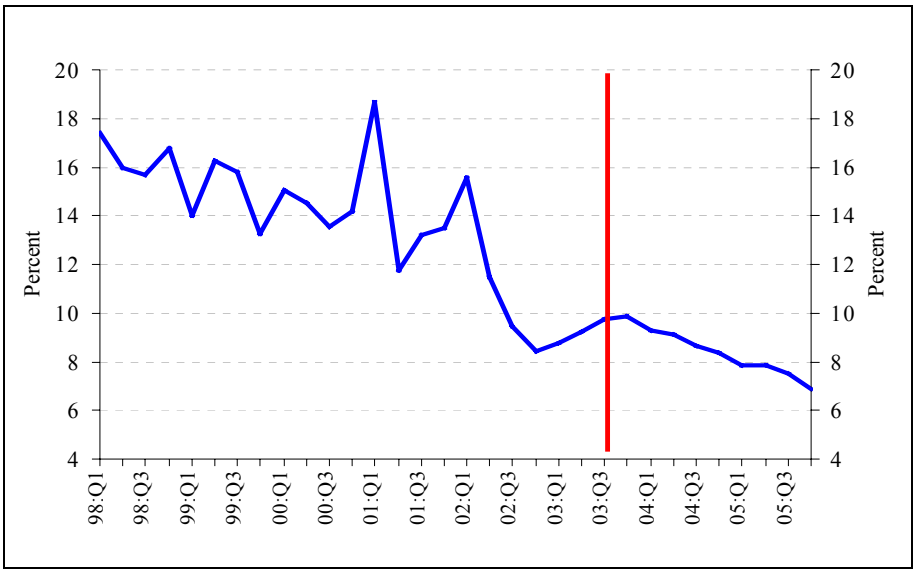
Higher-than-expected growth in manufacturing output and low labour demand will lead to substantially higher productivity in the sector than it was projected in our previous *Report*. Owing to CSO's data revision, most recent data reveal that growth in value added per unit labour in this sector, reaching its peak, exceeded the rate of wage growth as early as 2003 H2. In the light of this, although we continue to expect wage policy to adjust to increase in productivity[30], we also expect that manufacturing companies, which had suffered considerable losses in profit prior to mid-2003, will be able to resist increasing wage demand. We assume that, in the coming two years, overall, wage inflation in manufacturing will remain below productivity growth in the sector, allowing for a rise in profit on labour.

Given the higher-than-expected data on service sector wages, apparently, tight labour market continues to be unable to put a brake on wage growth. Nevertheless, wages in market services, diverging from other sectors' wages to an increasingly large degree, may lead to steadily expanding labour supply, which in turn may affect service sector wage inflation. Scheduled layoffs in the government sector are also expected to add to expanding labour supply. In terms of professional interchangeability, general government is more linked up with the service sector than manufacturing. Thus, those about to leave the government sector are likely to find jobs in the service sector. As a result, a dynamic balance between labour market demand and supply is projected to materialise in the context of lower wage inflation. The 'demonstrative' effect of substantial past raises in general government wages is also expected to wear off, which may also exert downward pressure on wage inflation in market services. Accordingly, we project that wage inflation continues to rise in early 2004, then remains broadly flat and starts to decline gradually from end-2004.

Considering the private sector as a whole, an upward revision of our previous projection is also justified by anecdotal information, which reveals that corporate wage agreements for 2004 often exceed the 7 to 8 percent level approved by the National Interest Reconciliation Council. In addition to this, due to higher-than-expected actual data and rising inflation expectations, we have incorporated part of the former upside risk in our central projection. However, uncertainty still points to higher increase in wages in both 2004 and 2005.

[30] In fact, it is the inflation of average wage costs, which also include social security contributions paid by employers and other contributions, which is expected to adjust to increase in productivity.

Chart 4. 11 Wage inflation forecast
Annualised quarter-on-quarter indices

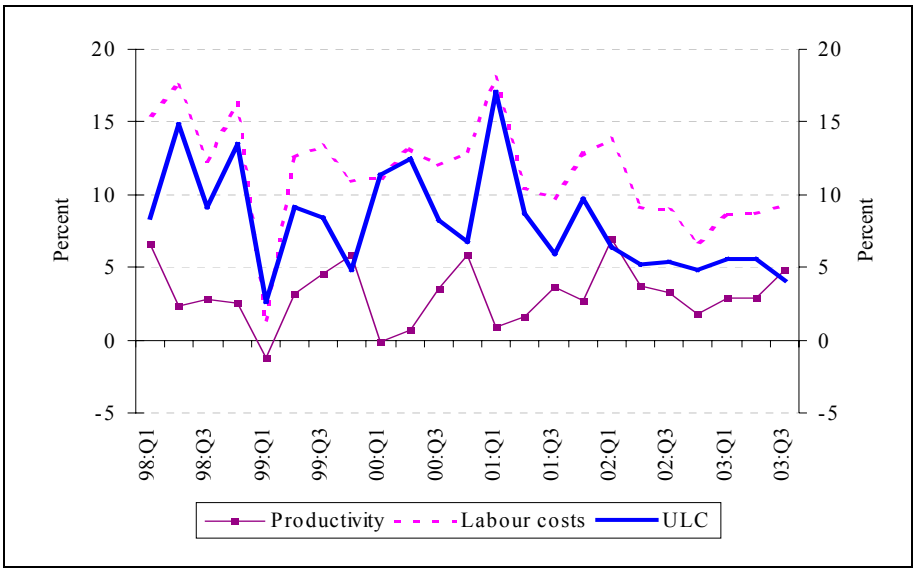


4. 4 Unit labour costs and competitiveness

In 2003 Q3, after a temporary halt, the rate of growth in unit labour costs (ULC), i.e. the average wage costs per unit productivity in the private sector, further declined. This can be attributed to improved productivity, generated mainly by manufacturing, which exceeded moderately increasing wage costs. Due to falling ULC and increasing sales prices, deterioration in corporate profitability stopped in 2003 Q3[31].

[31] This section discusses exclusively the profitability per labour factor. The reason for this is that it is still unclear how changes in other cost factors (e.g. a rise in regulated prices) will affect corporate profitability in 2004, i.e. to what extent companies will be able to incorporate their costs in sales prices. Failing any definitive data on this, we can offer no projection for developments in corporate profitability as a whole.

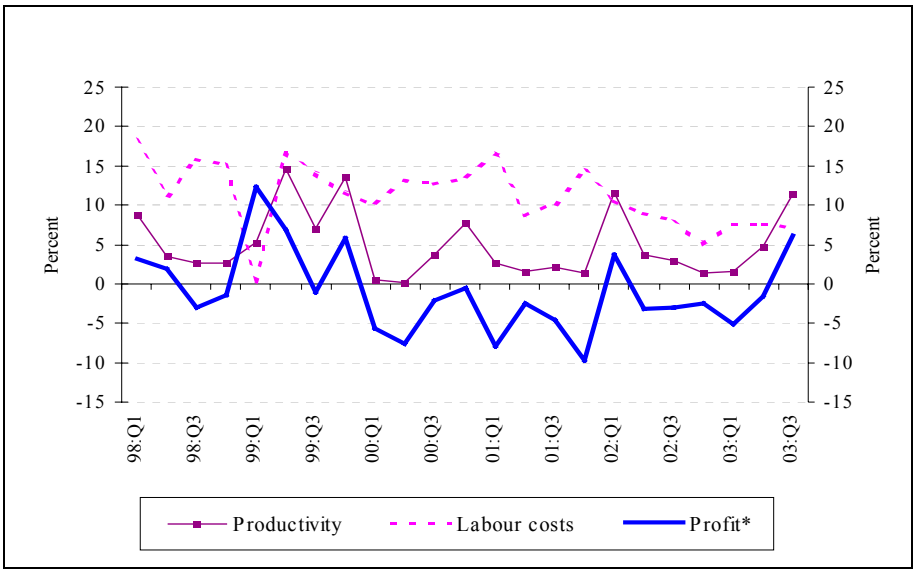
Chart 4. 12 Productivity, wages and unit labour costs in the private sector
Annualised quarter-on-quarter growth rates



As was discussed in the previous chapters, the extent and nature of the need for adjustment varied widely from one sector to the next. Despite the economic downturn since mid-2000, manufacturing, owing to the numbers employed there, has not suffered any loss in productivity. However, slower wage adjustment to falling inflation has resulted in high ULC, hence substantial profit losses.

The most recent data reveal that economic upturn in the sector started as early as the first months of 2003. Dynamically expanding output last year and fewer numbers employed led to significant improvement in productivity. This led to decline in earlier dynamically growing ULC, which, combined with rising sales prices, resulted in increasing profits. In line with the projection for production, headcount and wages, we continue to project dynamically growing productivity exceeding the inflation of real wage costs, hence gradually rising profitability.

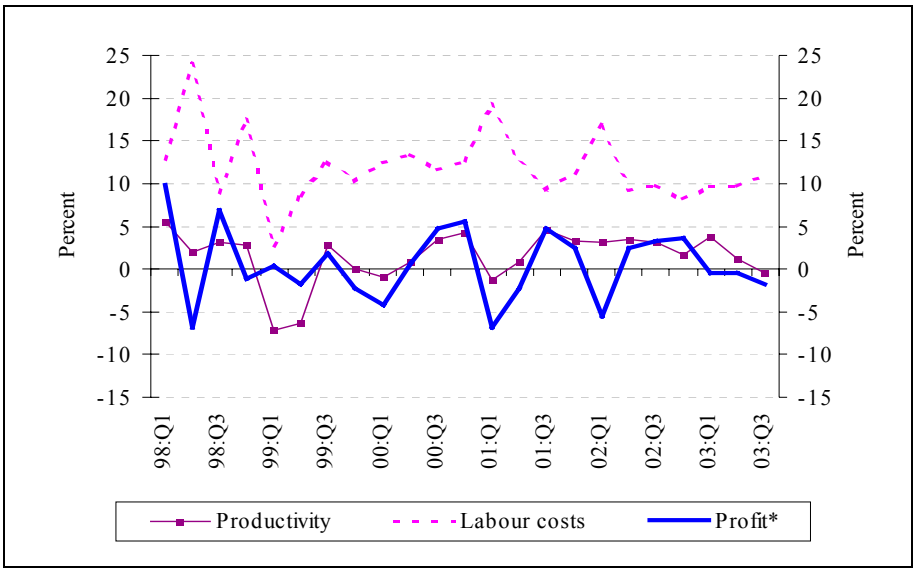
Chart 4. 13 Productivity, wages and profits in manufacturing*
Annualised quarter-on-quarter growth rates



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

The service sector has experienced a permanent pick-up in business activity recently. However, due to dynamically expanding headcount, productivity has only increased moderately. Wage adjustment to productivity, which had been lower in the service sector than in manufacturing, came to a halt in 2003, thus ULC started to pick up again. Over the short term, the growth rate of labour costs is not expected to adjust to low productivity. Wage inflation is likely to decline from 2004 H2. Accordingly, we project rising ULC in 2004 and declining ULC from early 2005.

Chart 4. 14 Productivity, wages and profits in market services*
Annualised quarter-on-quarter growth rates



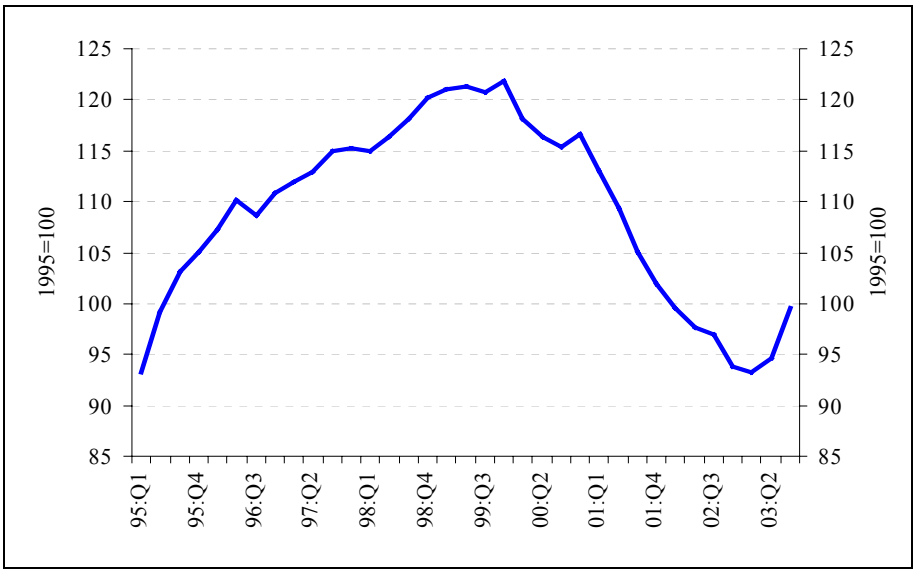
**The inverse of real ULC was used to approximate changes in profit. The category shown in the chart, in effect, denotes a term which refers to a notion narrower than profit rate. The reason for that is that it does not include cost components other than labour cost.*

In order to examine changes in the competitiveness of domestic companies, we use data on companies' market share[32] as well as the ULC-based real exchange rate. A falling trend in the indicator reversed in early 2003, and suggested increasing competitiveness all through the year. This can be ascribed to improving manufacturing productivity, decline in related ULC and the gradual weakening of the nominal exchange rate.

A fixed nominal exchange rate technically assumed, competitiveness in our projection is determined exclusively by the growth rate of domestic ULC relative to that of ULC abroad. Though OECD's most recent, December forecasts[33] suggest that ULC will increase more moderately abroad then expected, due to the vigorous growth in manufacturing, domestic companies will have to allow for a moderate increase in costs, relative to what foreign companies will experience. This implies a depreciating real exchange rate and, through it, gradual improvement in competitiveness.

[32] For an analysis of the market share as a competitiveness measure, see Section 3.1.6.
[33] OECD Economic Outlook No. 74, December 2003, http://www.oecd.org

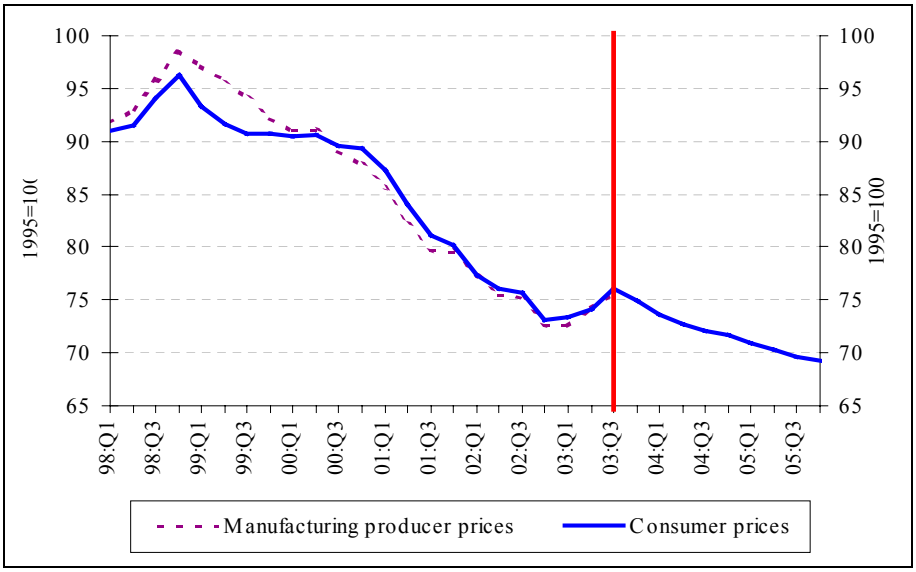
Chart 4. 15 Real exchange rate based on unit labour costs in manufacturing *



** Higher values denote real depreciation.*

Although improvement in price-based competitiveness, brought about by nominal exchange rate depreciation, is transitory, gradual real appreciation is expected to materialise over the longer term, since inflation in Hungary is higher than abroad.

Chart 4. 16 Price-based real effective exchange rate indicators



** Higher values denote real depreciation.*

5 Special Topics

5. 1 An analysis of the performance of inflation forecasts for December 2003

Below we provide an assessment of the forecasting performance of the MNB and others in terms of inflation forecasts for end-2003 according to two different considerations. On the one hand, the MNB's consumer price index (CPI) projection error is compared to the performances of *market analysts* and *research institutes* based on the Reuters poll. On the other, the forecasting errors made by the MNB are divided into two groups: those made while setting up *exogenous assumptions* and those made during the establishment of *real economic variables,* endogenous to our system. In order to evaluate the latter, the core inflation forecasting error of the MNB is analysed separately. [34]

The MNB's forecasting errors in comparison to other institutions

Taking February 2002 as a starting date of the period under review, it can be established that all the *economic analysts projected* the December 2003 inflation *with a relatively great error approximating one percentage point. Errors were made in one and the same direction throughout the entire forecast horizon:* every analyst underrated inflation on every time span. Moreover, no group of analysts expected a significant jump in the prices of *unprocessed food products*.

On the whole, at the level of the baseline scenario, the MNB performed slightly worse than market participants, but if risks are also considered, using the expected value forecasts of the MNB fan charts, *every institution made errors of roughly the same size.*

However, a study of the chart reveals that characteristically the MNB projections required greater revisions than market projections, and the Bank smoothed out these revisions by the application of fan charts. As far as we know, there are several factors to explain major revisions to the MNB baseline projections.

On the one hand, as the MNB projections are conditional, inputs are generated from the exogenous variables into the Bank's projection model and not necessarily the best projections are given for them. In the case of a number of rules (e.g. HUF/EUR exchange rate, oil prices) this method yields more fluctuating exogenous variables than the closest estimates.

On the other hand, in comparison to the relatively simpler projection models applied by market analysts, MNB projections rely less on past dynamics projected for the future.

---

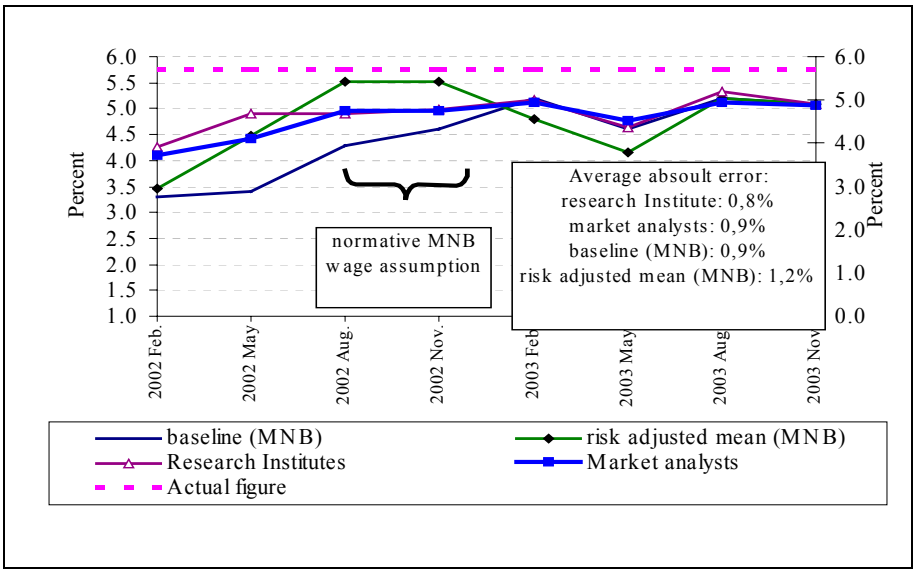
[34] We have published a similar analysis in the Hungarian daily *Világgazdaság* (16 February 2004) including forecast errors for end-2002 as well.

[35] However, it is important to note that such a comparison between the projections of the MNB and other institutions is not completely fair, as the MNB makes conditional, while the others make unconditional projections. This means that the MNB projections rely on a deliberately different, in this respect smaller, set of information. Despite this fact the comparison is considered useful for an analysis of the conclusions.

Thus in periods when the actual inflation remains unchanged, such projections are significantly more uncertain.

A further defining factor might have been that the projection methods earlier used by the Bank were far too sensitive to the changes of exogenous conditions, because they could not capture the relationships between real economic developments and price movements in their full integrity.

Chart 5.1 Errors in projections for December 2003



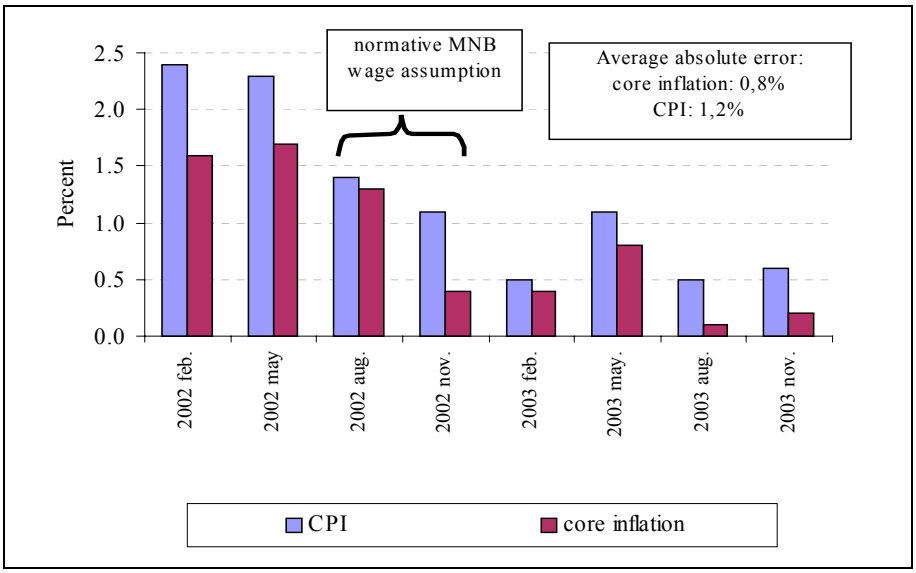
**Facts versus projection.*

Major factors to define the forecasting errors made by the MNB

The following factors deserve mentioning in connection with a breakdown of the forecasting errors made by the MNB. *In general, smaller errors were made in projecting core inflation* than in forecasting the headline CPI. On the whole, throughout a 12- or 18-month forecast horizon, half of the errors made in projecting the headline CPI were due to errors committed while forecasting the core inflation, while in a shorter period this proportion indicated a slight decline.

The rest of the errors originate in the projections of *regulated prices and unprocessed food products.* In an absolute sense, the Bank made a relatively small mistake in forecasting regulated prices. However, as the latter account for nearly 20 percent of the total CPI, such an error had an overwhelming impact on the total forecasting error. In the case of unprocessed food products, the Bank made a relatively more significant error even in the second half of the year, and thus despite the minor weight of this item (around 6 percent), the error had a perceptible impact upon the total forecasting error. The error made in forecasting regulated priced was fundamentally due to the fact that certain government measures that were earlier unknown or not made public were not included.

Chart 5.2 Errors in the December 2003 projections by the MNB: headline CPI and core inflation*



**Facts versus projection.*

Table 5.1 Major defining factors of the errors made by the MNB in forecasting the December 2003 CPI*

Contribution to the total error, percent

Reports	Feb. 2002	May 2002	Aug. 2002	Nov. 2002	Feb. 2003	May 2003	Aug. 2003	Nov. 2003
Core inflation	1.1	1.1	0.9	0.3	0.3	0.5	-0.1	0.1
Unprocessed food products	0.2	0.1	-0.1	0.1	0.1	-0.1	0.2	0.2
Regulated prices	0.8	0.8	0.3	0.3	0.1	0.3	0.1	0.1
Transport equipment + market energy	0.1	0.1	0.0	0.0	-0.2	0.3	0.1	0.0
Total CPI	**2.4**	**2.3**	**1.4**	**1.1**	**0.5**	**1.1**	**0.5**	**0.6**

**Facts versus projection.*

As a significant part of the errors made in forecasting the total CPI is due to core inflation forecasting errors, it is worth detecting the changes of exogenous assumptions within our projection model as well as the forecasting errors appearing in endogenous mechanisms which give rise to the error made in forecasting core inflation.

It is important to note, however, that the projection method used by the Bank so far resulted from the harmonisation of a number of models, and therefore no complete and non-contradictory breakdown of the inflation forecasting errors can be made retrospectively. For this reason we could break down the December 2003 forecasting error only by approximation, in the following way. We made attempts at the quantification of only two items of key significance: the forint exchange rate and impact of wages paid in the business sector. We investigated how far the difference between facts and the projections published in the diverse *Reports* influenced the error made in forecasting core inflation. The impacts of the two factors were evaluated separately, because we wanted to see how much changes in the particular factor *ceteris paribus*

contributed to the core inflation projection error. The results of the scrutiny are summed up in the following table. We treated the difference between the impact of the above factors and the core inflation error as an uninterpreted factor. Thus, this factor contains all the factors that may not be linked with any other, like for instance expectations, regulation, unprocessed food products, oil prices and the EUR/USD exchange rate, naturally, along with the effect of coefficient uncertainty in the model.

The following table gives an excellent illustration of the fact that the core inflation projection error resulted from changes in the exchange rate assumptions and the error made in wage forecasts. In a period of one–one and a half years, this alone generated a rise of approximately 0.5–0.8 percentage points. The Bank's wage projection was also regularly updated upwards, adding 0.8–1.5 percentage points to the error. In comparison to the above, the impacts of other factors was insignificant and did not indicate any systematic effect, disregarding three quarters. Nevertheless, in the three forecasts gave between August 2002 and February 2003, the uninterpreted part was extremely significant, exceeding even the original error. This could happen because in that period we applied the Monetary Council's assumption for wages, whereas we did not automatically carry exchange rate and wage effects through the projection model, as that would have required us to assume such a slowdown in prices against the actual reality, which was unsubstantiated by other information available for us (inflationary expectations and exogenous conditions). The outcomes clearly indicate that our projection model cannot be given an accurate description with a few partial flexibility factors, although it is true that the major part of the total forecasting error should be sought in the development of the exchange rate and wages.

Table 5.2 Major defining factors of the December 2003 core inflation projection error

Errors as a percentage

Reports	Feb. 2002	May 2002	Aug. 2002	Nov. 2002	Feb. 2003	May 2003	Aug. 2003
Exchange rate	0.7	0.8	0.5	0.7	0.6	0.6	-0.1
Wages	1.4	0.8	1.9	1.5	0.7	0.3	0.0
Other	-0.5	0.1	-1.0	-1.8	-0.9	-0.1	0.0
Core inflation error	1.6	1.7	1.3	0.4	0.4	0.8	-0.1

Table 5.3 Average annual forint exchange rate assumptions ∗

forint/euro

	Feb. 2002	May 2002	Aug. 2002	Nov. 2002	Feb. 2003	May 2003	Aug. 2003	Actual
2002	244.0	242.7	245.1	244.0	242.9			
2003	244.0	242.3	246.6	243.6	245.0	245.1	255.6	253.5

∗ Yearly averages, calculated using actuals for the period up to the Report and assumed exchange rates for the rest of the year

Table 5.4 Changes in the private sector annual wage inflation forecasts ∗
(Yearly averages on a year earlier)

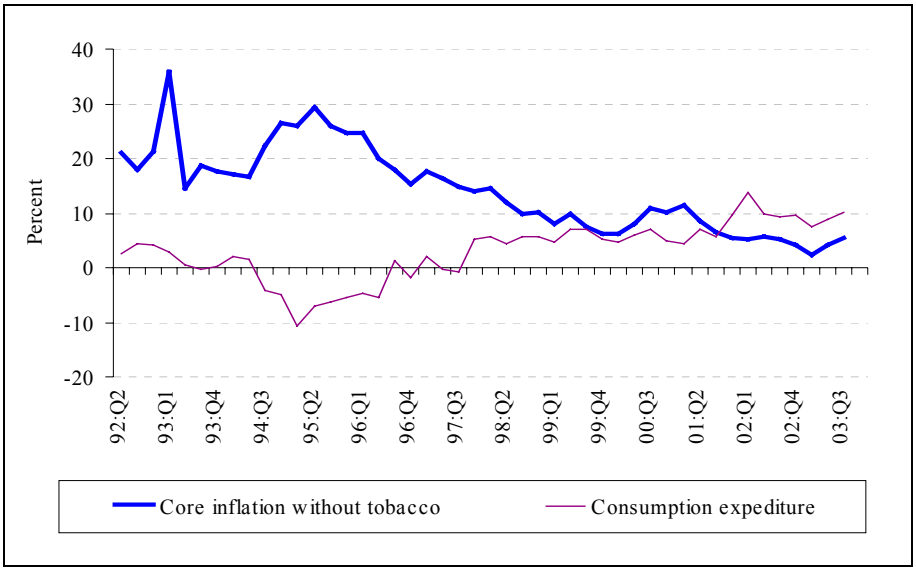
	Feb. 2002	May 2002	Aug. 2002	Nov. 2002	Feb. 2003	May 2003	Aug. 2003	Actual
2002	9.2	11.4	13.2	13.4	12.8	12.6		
2003	6.4	7.6	5.0	5.9	7.8	8.8	9.3	9.3

∗ In the August and November 2002 Reports we applied normative wage assumptions.

5. 2 Disinflationary effects of a slowdown in consumption

A factor to generate uncertainty in CPI projections is the impact of the expected slowdown of household consumption expenditures on inflation. Uncertainty has its source in two elements: one of them is the adjustment of households to the slowing rise in incomes (in other words, the pace of slowdown in consumer demand), and the other is the aggregate impact of these factors on the CPI.

Chart 5.3 Annualised quarterly growth rate of core inflation and consumption



It is difficult to find connection between consumption and inflation between 1992 and 2003, because the economic structure underwent continuous reshaping and the economic regulation was frequently changed.

At the beginning of the 1990's, both inflation and consumption expenditures were influenced by economic developments subject to change as a result of a change of the political systems, and so classical economic relations did not yet prevail. By the beginning of 1995, the annual rate of inflation had risen to around 30 percent, the current account deficit had grown, and as a result of the stabilisation package introduced in March 1995, household consumption and disposable income decreased considerably. In the second half of the 1990's, the rate of inflation declined, household income, and consequently consumption, increased. This is how a special situation evolved: a trend of declining inflation was accompanied by growing consumption.

This process came to an end in 1999. By that time a positive correlation, expected on economic grounds, had developed between consumption and inflation. The years 2001-2002 witnessed further changes in the Hungarian economy. As a result, the correlation is once again less obvious. The reason for this is that in 2001 another trend of disinflation started as a result of two factors. On the one hand, by the beginning of 2001, the effects of oil and food prices, which underwent provisional increase in the previous two years, were removed from the core inflation. On the other, monetary policy makers adopted an inflation targeting regime, in the wake of an exchange rate band broadening, the forint appreciated, and this promoted disinflation through the ripple of the exchange rate.

Simultaneously, as of late 2001, a newly adopted domestic demand boosting policy gave an impetus to rise in consumption expenditures, but the appreciated exchange rate could offset its inflation generating impacts. Thus the all-time high increase in consumption seen in 2002 was not fully traceable in the inflation rate, although the trend of disinflation was broken. From mid-2002 once again there was a correlation between consumption and inflation just as it could be expected. If the economic structure undergoes no major change, one can assume that throughout the forecast horizon declining consumption expenditures will be instrumental in disinflation.

As a first step in analysing the disinflationary effects of consumption expenditures, let us examine the relationship between household income and consumption. In 2002-2003 the ratio of consumption expenditures to incomes rose significantly. The reason for an increase in the consumption / income ratio may be explained by the fact that in addition to positive expectations, households' propensity to consume is on the increase. By now households have become probably aware of the fact that they cannot expect a similar rise in their income during 2004-2005, and consequently, a change will or may be expected in the propensity to consume, which evolved in the previous years.

Based on the above, a factor of uncertainty in projecting consumption expenditures is whether consumption will adjust to the contraction of incomes at the customary pace as applied in the different models, and return to its historic course or it will remain at a higher level than in the past.

The next question to arise is the effect of change in consumption expenditures on inflation, in other words, how steep disinflation will result from the slowdown of consumption. Slowing consumer spending reduces inflation through a drop in demand pressure (the output differential will be more on the negative side). The other effect shows up on the supply side. A more moderate domestic demand presses down labour demand, and the less tense labour market reduces wage inflation.

Based on the above, we examined the possible impacts of a one percent drop in consumption growth in 2004 and 2005. This was to reveal the uncertainty factor inherent in the relationship between consumption and income in terms of inflation projections, as well as the impact of consumer spending on inflation. According to our calculations, a one percent drop in consumption growth would reduce core inflation by 0.1 percentage points in 2004 and 0.2 percentage points in 2005.

5. 3 The macro-economic effects of changes in housing loan subsidies

The extremely fast development of housing loans since the spring of 2002 had two direct effects relevant from a macro-economic aspect. One of them was that interest subsidy imposed an increasing burden on the budget. The other included the fact that the household financing capacity practically dropped to zero in 2003. This resulted from a boom in household fixed investments in real properties and a powerful expansion of consumption, which exceeded the growth of real incomes. According to our calculations, households spent approximately 15-30 percent of the loans granted for the purchase of used homes for financing consumption, with this further accelerating its increase.

In order to quantify the macro-economic impacts of the changes introduced in the housing loan system in December 2003, two factors must be considered. First, it must be established how the new subsidy regime affects the volume of loan extensions and its distribution between newly built and used homes. By our reckoning, HUF 310-380 billion less housing loans will be granted in 2004 on 2003.

The ratio of loans granted for new to used homes is also expected to change. Under the former conditions the ratio of loans extended for new to used homes settled at 1:2 in 2003. As the new regime imposes more stringent regulations on used homes, we assume an increase in the share of loans granted for new homes, approaching 50 percent within housing loans. A clear definition of these two factors is of consequence because they form the basis of calculating the expected drop in borrowing for the acquisition of used homes, which in turn can directly reduce the volume of consumer spending.

Another assumption directly concerns the time dimensions of adjusting housing fixed investments.

Building new homes obviously takes longer time. For this reason the constructions launched in 2003 will continue in 2004, that is to say, the overwhelming majority of 2004 home buildings were undertaken pursuant to building permits issued in 2003.

Based on the above, in order to capture the direct fixed investment reducing impact of the subsidy regime, the value of housing fixed investments is reduced by the value of drop in borrowing for financing new homes, with a delay of three quarters of a year[36].

In addition to these, a further important outcome of this measure should be reckoned with. If the measure facilitates the recovery of capital market confidence, it may generate a 1 percent drop of long-term interest rates, subject to the indirect influence of the monetary policy.

Although the MNB assumes that the *primary* budget improving effect will be felt already in 2004 (improvement by 0.1 percent of GDP), the main advantages offered in this measure are *long-term benefits affecting sustainability.* This is because short-term effects may be contradictory, while in the long term both the *budget* and the *current account* can be made *more sustainable,* as the measures reduce deficit in both. A reduction of long-term yields may boost corporate fixed investments and generate faster growth.

[36] By our reckoning, the changes introduced in building permits will have their impact the most obviously felt in the number of delivered and accepted homes with a delay of three quarters of a year.

As a result of tightening, the current account will improve only slightly in 2004, because of a time difference between borrowing and the completion of the relevant fixed investment, but more perceptibly in 2005, by 0.1-0.3 percent of GDP. The budget improving effect will be felt only with a delay. In 2004 and 2005 the deficit will only be kept on level. According to the Bank's calculations, the budget may undergo significant improvement in 2006-2007, when the deficit is projected to decrease by 0.3-0.4 percent of GDP in the average of two years. Simultaneously, the deficit recorded in the balance of payments will be less by 0.45-0.75 percent of GDP than it would have been without tightening.

With regard to macro-economic effects, in 2004 GDP may reduce by 0.1-0.25 percentage points in comparison to a situation without austerity measures. This way the projection of consumer inflation is pressed down by at most 0.1 percentage points on an annual average, and 0.1-0.2 percentage points in 2005.

In keeping with GDP decline, the disposable household income will also drop. This will entail a significant reduction of household fixed investments, exceeding even the original shock, already in 2004. A factor to somewhat counterbalance this trend includes the drop of long-term interests, which will boost corporate fixed investments and thus slow GDP decline, slightly pushing up housing fixed investments.

Upon quantifying the effects of the measure on *longer-term growth,* it was taken into consideration that through the *improvement of authenticity* it may *improve capital market situation* and *press down long-term interests.* A reduction of long-term interests as a result of an increase in corporate fixed investments may drive up GDP in the long run. The growth generating effect will become clearly prevailing in 2006-2007. *Economic growth may increase by even 0.2 percentage points in 2006-2007.*

Table 5.5 Major results

Current account balance (as a percentage of GDP)	
2004	0 – 0,3
2005	0,2 – 0,3
Averege impact on 2006-2007	**0,45 – 0,75**
Impact on the growth of household fixed investments (difference in percentage points)	
2004	(-1,0) – (-1,7)
2005	(-3,0) – (-5,5)
Averege impact on 2006-2007	**0,1 – 0,2**
Impact on the growth of consumer spending (difference in percentage points)	
2004	(-0,2) – (-0,4)
2005	(0.0) – (-0,3)
Averege impact on 2006-2007	**0,0**
GDP growth (difference in percentage points)	
2004	(-0,25) – (-0,1)
2005	(-0,1) – 0
Averege impact on 2006-2007	**0,1 – 0,2**
Fiscal balance (as a percentage of GDP)	
2004	negligible
2005	negligible
Averege impact on 2006-2007	**0,3 – 0,4**
Rise in consumer prices (percent)	
2004	negligible
2005	(-0,1) – (-0,2)
Averege impact on 2006-2007	negligible

* *Difference in percentage points in comparison to a situation without tightening.*

5. 4 What do we learn from the 1999 indirect tax increase in Slovakia?

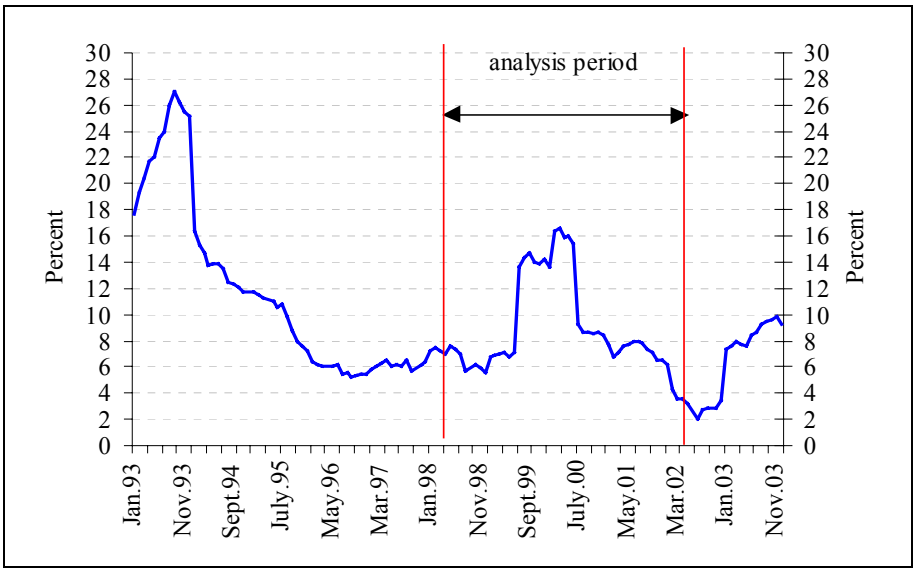
According to one of the Bank's baseline assumptions contained in our projection as published in the November 2003 and this issue of the *Report*, the indirect tax changes of this year (increase of VAT, excise duties, etc.) will not show up in inflationary expectations. Nevertheless, we must treat this statement with extreme caution and uncertainty since the inflationary expectations of the market participants have been slow to adapt even at times of successful disinflation. In order to take the edge off our uncertainty or to make corrections to our potentially incorrect assumptions in due course, we have made serious efforts to compare our claim in international experience.

We wanted to focus our analysis on a country where the economic development, openness and the exogenous processes (the prices of oil and unprocessed food products) generate similar inflationary conditions to that of the Hungarian economy. Our choice went for Slovakia where two significant tax modifications had been implemented in the past few years (July 1999 and January 2003). Full analysis, however, could only be made for 1999.

After the break-away with the former Czechoslovakia in 1993, consumer prices had – with the exception of a short transition period – continued to remain consistent with low

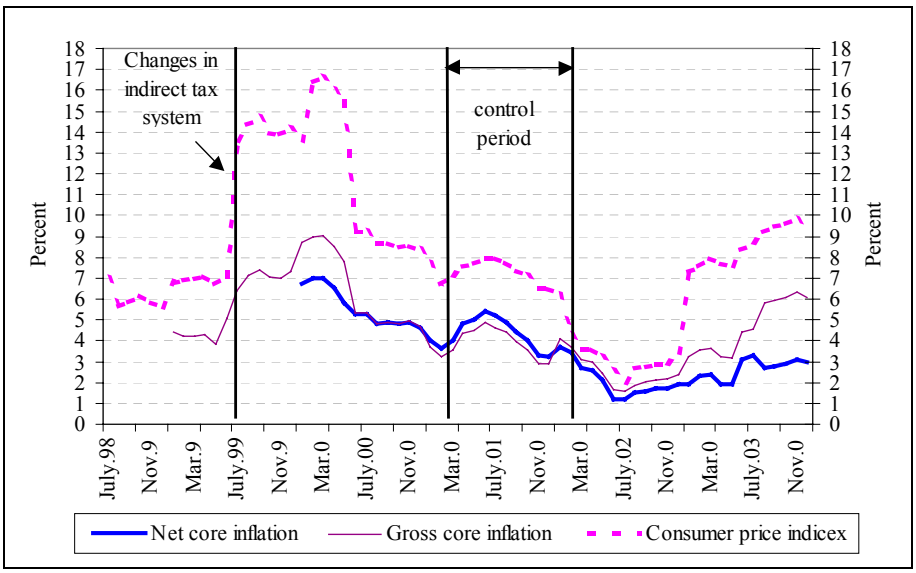
inflationary traditions. Except for a six-month period, the annual price changes for the 1996-1999 period had securely remained within the 5-7 percent band.

Chart 5.4 Annual inflation in Slovakia



The subdued inflationary environment had by the end of the 1990's suffered from severe imbalances. In order to mitigate the problems, the Slovakian government had decided to introduce anti-deficit measures. Within this framework, the lowest VAT rate was increased from 6 percent to 10 percent, excise on diesel oil, petrol, and tobacco products also rose and a 7 percent import surcharge was introduced.

Chart 5.5 Consumer price changes in Slovakia



As a result of government measures, in July 1999 the annual CPI soared to 13.6 percent from a figure of 7.1 percent in the previous month. Provided that these one-off price level-increasing measures had not affected the expectations of the economic participants in the long-run, we may safely presume that with the removal of the pre-tax-change

period from the base, the dynamism of annual price change remains identical with that of the pre-tax-change period; given, of course, that other exogenous variables remain unchanged. In our survey we considered the fact that in January-February 2000 there were further excise duty increases and official price rises, therefore we used the period between July 1998–June 1999 and the post-shock period of March 2001–February 2002 for our purposes.

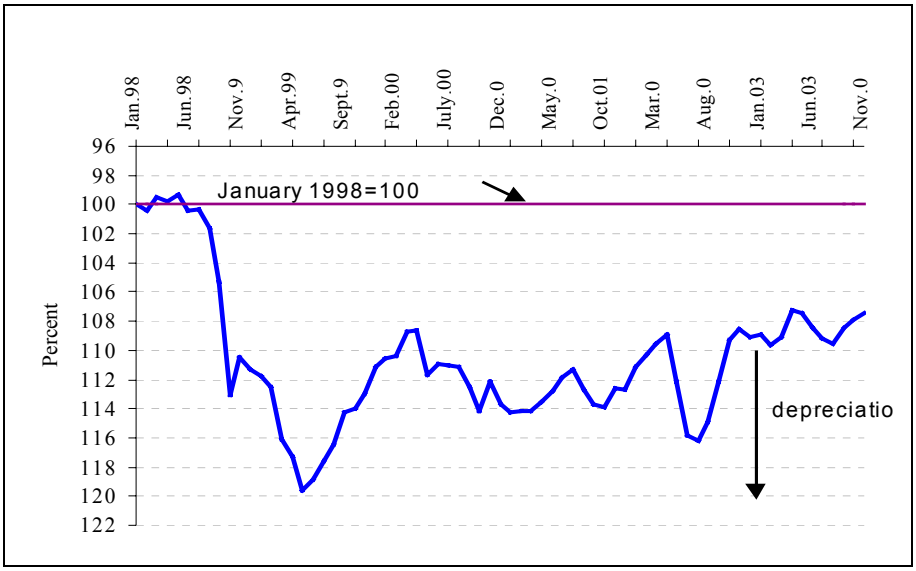
We have found that the average annual inflation in the year before tax rise was approximately 0.5 percentage point lower than in the one-year period coming directly after the impacts of the tax changes were omitted from the base. In consideration of the size of the inflationary shock and the dynamism of inflation at the end of 2001 – 12-month inflation in the middle of 2002 was more than 5 percentage points lower than what was registered in June 1999 – this discrepancy does not lead us to conclude that inflationary expectations had changed permanently.

The development of main monetary and exogenous factors affecting inflation

In order to be able to draw conclusions that may safely be used to predict Hungarian inflationary trends, we must first map out the main endogenous and exogenous factors affecting Slovakian inflation. Similarly to Hungary, Slovakia is a small, open country; therefore the exogenous factors that are described below are likely to have similar impacts on the development of consumer prices:

Exchange rate: following the changes in taxes, the exchange rate of the koruna kept strengthening continuously for 12 months, which may have helped cushion the impacts of accelerating inflation – which came about as a result of administrative measures – on expectations. After the weakening of the koruna in the second half of 2000, the rate of exchange remained stable at around 10-14 percent (higher than in January 1998) for a period of approximately a year and a half. In our reference periods, the impact of the rate of exchange on inflation together with roll-over impacts. is presumably positive (helped accelerate inflation) for 1998-99, presumably neutral for 1999-2001, and also neutral in 2001-2002.

Chart 5.6 The Slovakian koruna / euro exchange rate



Oil price: After July 1998, oil prices nearly quadrupled by September 2000, i.e. in the period of tax changes, petrol prices did only increase consumer prices as a result of the administrative regulations, but also because of rising oil prices. Although the time intervals under survey are perfectly consistent with the oil price rises, inflationary trends in these periods may have also emerged as a result of the feed-through impacts. Based on this, we supposed the following impacts were a result of the oil price changes calculated in korunas: neutral in 1998-99 but slightly positive at the end of the term, strongly positive between 1999 and 2001, then positive again in 2001-02 because of the feed-through impacts.

Food prices: due to their inherent characteristics, we found no long-term trends in the development of food prices, therefore the impact of this subject area on expectations is presumably neutral in both periods.

The impact of exogenous factors on inflation and inflationary expectations is summed up in the table below. Based on the findings in the table, the cumulative impact of exogenous factors prior to tax rises may have caused consumer price levels to rise nearly by the same extent as they did in the control period.

Table 5.6 Likely impacts of exogenous factors

	Impacts of exogenous factors		
Period	**Exchange rate**	**Oil price**	**Food price**
July 1998 – June 1999	Positive	neutral/positive	neutral
July 1999 – February 2001	Neutral	strongly positive	neutral
March 2001 – February 2002	Neutral	positive	neutral

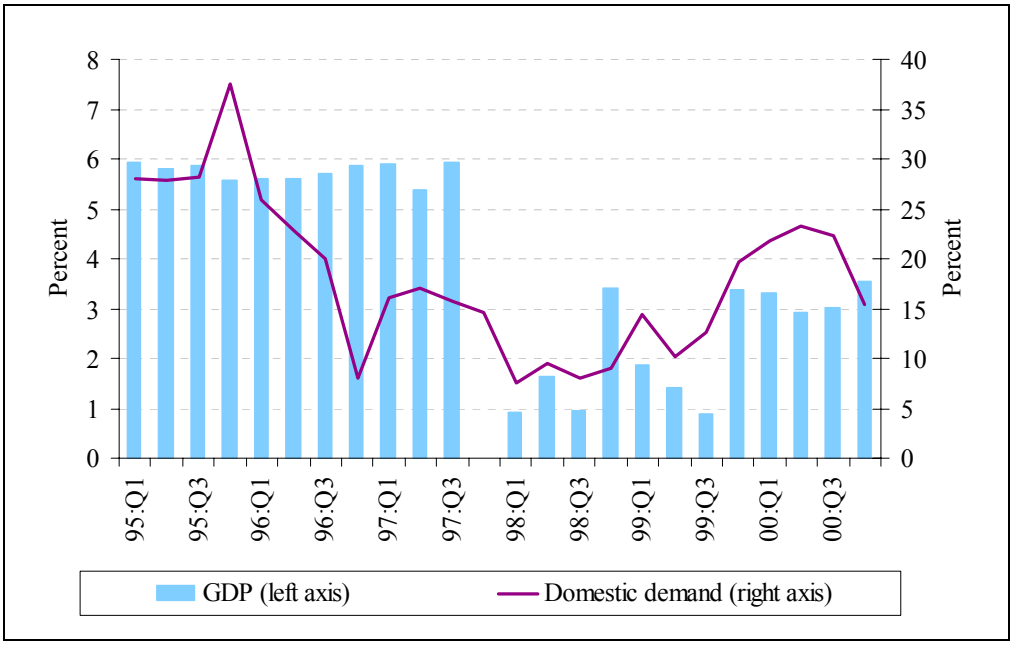
** Positive effect: caused inflation to accelerate.*

Real economic developments

The fact that we failed to identify substantial differences between the inflation levels of our two reference periods even when exogenous processes were taken into consideration cannot not yet mean that our strategic assumption ought to be unconditionally accepted as correct.

First we must examine the nature of real economic processes that are coupled with the said inflationary processes. Government consumption and national fixed investments were particularly fast to adapt. Since the tumble of domestic use had not been coupled with equally increasing foreign demand, the previous 4-6 percent GDP growth rate slowed to below 2 percent.

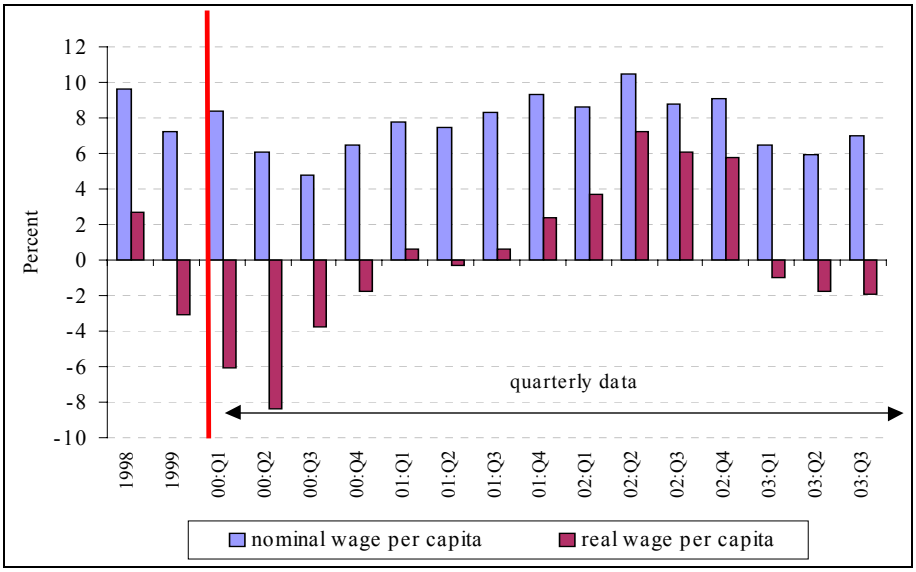
Chart 5.7 GDP and domestic demand
Annual growth rates, seasonally adjusted data



The spectacular drop in real wages had significantly contributed to the remission of domestic use and also to the improvement of economic balance data. Despite doubling inflation, nominal wages had increased at a rate lower than the average of previous years (1994-98), which had also caused real wage levels to fall (by 3.1 percent and nearly 5 percent in 1999 and 2000, respectively). At the same time, we must not forget that the strong reaction and adaptation of wages may have also been caused by various country-specific factors and temporary measures. In the mid-1990's Slovakia had one of the highest unemployment rates at 12-14 percent. Between 1998 and 2000, this rate had risen to 18-20 percent, i.e. the existing labour force reserves may have held wages back (typically in the business sector). The wage agreements concluded by the government pursuing rigorous wage policies in the spirit of austerity directly and indirectly helped contain nominal wages. Presumably the Slovak economy's history of low inflation also played a pivotal role. In the past decades the former Czechoslovakia and today's Slovakia was and has been considered a state with the lowest inflation in the region. A past of consistently low inflation is likely to have contributed greatly to the unchanging inflationary expectations, as illustrated in our analysis, despite the suddenly soaring

consumer prices. Our claim is only reinforced by the recent wage processes, which are strongly tied to the rising inflation that was mostly generated by government measures introduced in 2003.

Chart 5.8 Nominal and real wages in Slovakia
(Percentage changes on a year earlier)



Before conclusions that may also have relevance to Hungary are drawn, we must add that after February 2002, inflation started to plummet again and had fallen to 2 percent by July 2002. The development of exogenous variables (falling oil prices, the appreciating koruna), the feed-through impact of said real economic factors, as well as the stable inflationary expectations that remained consistent with a traditionally low inflation may also have had a role in the successful disinflation.

Relevant experiences for Hungary

Using the Slovakian experiences, we have formulated the following observations concerning the processes expected to take place in Hungary:

Because the tax increases effective as of January 2004 exert a significantly weaker effect on the consumer prices of Hungary than the impact Slovakia experienced in 1999, the single administrative measure to influence prices is not likely to sway the expectations of the market participants by very much.

As illustrated by the example of Slovakia, the contingent changes of inflationary expectations will be reflected most in the wage processes. The 2004 situation in Hungary is different from the analysed Slovakian example in a number of respects, and for this reason we cannot expect that wages will evolve in a similar fashion. In Hungary the rate of unemployment is much lower than what it was in Slovakia, and also, we see no tangible signs in the waging policies of the government sphere that could be indicative of falling wage inflation. Due to the above-mentioned factors and the slowly adapting wage developments, despite successful disinflation, we expect a slight increase of real wages for the year ahead.

Hungary had suffered from significantly higher inflation in the past two decades than Slovakia (or the former Czechoslovakia); therefore changes in the inflationary expectations would probably have a long-term, permanent impact on the country's disinflationary processes, just the same way it happened in the case of our northern neighbour.

The experiences of the analysed Slovakian example also illustrate that unchanging inflationary expectations may only be avoided on the condition that real economic processes adapt to the changing environment. In Hungary, it is still uncertain whether the key economic participants (companies, the state, the population) will be able to make decisions adapted to the temporarily changed inflationary environment. Based on the findings of our case study, we maintain our strategic assumption with regard to expectations, yet, based on the substantially different experiences we have of Hungary (slowly adapting wages, smaller degree of curbing government demand), our projection treats it among the upward inflationary risks (see Section 2. 4).

5. 5 Indicators of general government deficit

In this sub-section, the analysis of the fiscal demand impact, presented in Section 3.1.2, is complemented with a detailed discussion of the various indicators of general government deficit. Throughout the analysis, we present several categories of government deficit, in accordance with international practice, as each of them characterises the financial position of general government employing strict assumptions and in a given context. Combining these, however, makes it possible to provide more detailed analyses.[37]

Table 5.7 Fiscal indicators

As a percent of GDP

	Preliminary data for 2003	**Forecast for 2004**	**Assumption for 2005***
1) GFS deficit	**-5.8**	**-6.5**	**-4.7**
2) Corrections on ESA basis	0.0	+1.2	+0.4
3) ESA deficit (1+2)	**-5.8**	**-5.3**	**-4.3**
4) Adjustment for termporary items	-1.0	-0.7	-0.4
5) Total quasi-fiscal expenditure	-1.5	-0.7	-1.0
6) Augmented (SNA) deficit (3+4+5)	**-8.2**	**-6.8**	**-5.7**
Memorandum items:			
Fiscal demand impact	*-0.3*	*-1.7*	*-1.0*
Nominal GDP (HUF billions)	*18750*	*20550*	*22100*

** Normative projection, based on the assumption that, according to the Government's Medium-Term Economic Programme, the ESA deficit falls by 1 percentage point relative to the deficit expected for 2004. ** Change in the augmented (SNA) primary balance.*

The Hungarian Parliament approves the Budget Act drafted in accordance with the GFS methodology, on the cash basis of accounting introduced by the International Monetary

[37] For more details, see *Manual on Hungarian economic statistics*, pp. 75–77.

Fund in 1986. In a number of European countries, including Hungary, government budgets are drafted and implemented on the basis of this accounting methodology. (In our analysis, we use the expressions GFS, GFS86 and cash balance as synonyms.)

The ESA (more accurately, ESA95) fiscal indicator is a deficit category used by EUROSTAT. Analysing the ESA deficit is extremely important, as the meeting of the Maastricht criterion on fiscal deficit, required for joining Economic and Monetary Union, will be evaluated on the basis of the outcome for this indicator.

The augmented SNA deficit is an indicator, developed by the MNB for analytical purposes in 1998, which shows the impact of general government on domestic demand and the saving-investment balance, irrespective of the time of the actual recording of the various transactions in the official deficit. There exist certain extraordinary government transfers (bank consolidation, assumption of the railway company MÁV's debt, etc.) which are recorded in the GFS and ESA-based deficit indicators invariably; and the time of recording is generally different from the time of their economic effect (i.e. the demand effect). The fiscal demand impact, derived as a change in the annual change in the SNA deficit of the primary general government balance, shows the extent to which general government influences aggregate demand (detailed in more detail in Section III.1.2).

Balance of general government in 2003

The 2003 GFS deficit turned out to be higher than the budgeted deficit by 1.3 percent of GDP. The effects on 2003 of government measures, adopted from 2002 Q4, such as the increase in public sector wages and the exemption of the minimum wage from the personal income tax, were determinations which the Government could only be able to offset partially by taking additional measures in the course of the year, for example, by reducing investment spending. After eliminating the temporary effects, the increase in tax revenue of general government lagged behind the growth rate of the tax bases. The ESA deficit, expected for 2003, was determined by the development in the GFS balance – in our assumption, the ESA deficit will not differ significantly from the GFS deficit of general government. The augmented SNA deficit was above 8 percent in 2003, mainly on account of considerable quasi-fiscal expenditures.

The composition of tax revenues turned out to be more unfavourable than previously thought, as tax revenues did not increase as expected; moreover, revenues expected on the basis of an increase in the tax bases did not increase, although this was offset temporarily by the effect of a change to the system of VAT refunds. The official estimate for VAT revenue (net revenue of the government budget) appears to have been met in 2003. However, gross VAT revenue fell short of the estimate in the course of 2003 fiscal year. But this shortfall was masked by the slowdown in VAT refunds throughout the major part of the year relative to earlier periods, due to the increase in time required by refunding. This meant that the lasting lag of gross revenue behind the plan was offset by additional net revenue arising from measures taken with temporary effect. According to our calculations, the slowdown in VAT refunds improved the revenue position of the government budget by some 0.9 percent of GDP in 2003. This is also reflected in the much lower GFS and ESA deficits for 2003 than the augmented (SNA) deficit. The lag in tax revenue behind expectations is likely to influence the 2004 balance through the planning of the budget estimates for 2004.

With the (cash-based) GFS deficit for 2003 being available, we have prepared an estimate for the expected 2003 deficit, calculated on the basis of the ESA accounting methodology. In calculating the accrual-based general government deficit according to the ESA standard, we have taken into account the latest published 'accounting bridge'.

At the time of preparing our analysis, accounting for VAT revenue on an accrual basis was a factor of uncertainty in deriving the 2003 ESA deficit. According to the ESA methodology, the first month's revenue of the fiscal year following the reference year and the first two months' refunds can be accounted for the previous year. This opportunity, and accounting in accordance with this method, may reduce the deficit for the base year (in our case, 2003) by up to 0.3–0.4 percentage points of GDP.[38]

Forecast for 2004

The actual outcome for the 2003 general government balance marks an unfavourable starting point in terms of the feasibility of the 2004 deficit target. The lower-than-expected outturn for tax revenue, after adjusting for and eliminating the temporary effects, has a lasting effect in 2004; and the cutback in spending on fixed investment, as seen in the previous year, may only have a temporary effect, as last year's investment rate (investment spending fell in nominal terms) cannot be sustained over the longer term.

In preparing our central projection, we assessed the feasibility of the major revenue estimates by types of tax, taking into account the meeting of the tax items in 2003 as well as the effects arising from the MNB's projection of the macroeconomic developments. In addition, the projection is based on the assumption that the measures to reduce expenditure, announced by the Government in January, would be implemented in full and that the announced expenditure saving was considered effective.[39] We have finalised our projection on the basis of the measures announced up to 9 February 2004 and the various macroeconomic forecasts.

Our forecast of the cash-based GFS deficit suggests a massive deterioration in balance; some of these effects have already been taken into account in planning the estimates. As a result of Hungary's accession to the EU, a one-off shortfall in certain cash-based tax revenues is expected. This does not entail an effective shortfall. What happens is that declarations of import VAT might suffer a delay of 1-2 months, which will be reflected as a revenue shortfall in the cash-based accounts in the year of transition. (The accrual-based ESA accounts adjust for this effect, as revenue will not actually fall short of the plan.) In addition, co-financing, required for accessing funding from the EU, will increase fixed investment and, consequently, the deficit; these expenditure items will be a constituent part of the GFS balance (for example, infrastructure developments).

---

[38] The actual data on VAT refunds in February were not available at the time completing the numerical forecast. Consequently, the extent to which this accounting approach may alter the bridge between the GFS and ESA balances from 2003 to 2004 could not be estimated accurately. (Theoretically, this may raise the 2003 ESA deficit, improving the 2004 ESA balance temporarily.)

[39] We have taken into account the HUF 120 billion saving on expenditures, announced by the designated Minister of Finance in early January, as a HUF 120 billion saving in the GFS balance.

Table 5.8 shows the difference between our forecast of the GFS deficit and the official estimate, in a breakdown by the major components. The majority of differences are caused by the differing forecasts of tax revenue: despite our forecast of higher inflation and higher household consumption (see row 2 of Table 5.8), we expect total tax revenue to be HUF 376.5 billion lower this year relative to the official estimate. Taking account of the minor differences in the MNB's forecast of and the official estimates for expenditures of the central government and the local government sub-sectors, we expect the cash-based deficit to be 2 percent higher as a proportion of GDP, despite the package of deficit reduction measures announced in January (see row 5 of Table 5.8).

Table 5.8 Difference between the MNB's forecasts and the estimates approved in the Budget Act for 2004, on a cash (GFS) basis*

HUF billions

		Government budget						7 Local authorities	*Total general government* 8 = 5+6+7	
		1	2	3	4	**5 = 1+2+3+4**	**6**		**8a**	**8b**
		VAT	Corporate tax	PIT	Social security contribution	**Revenue**	**Expenditure**		**HUF billions**	**As a % of GDP**
i)	*Effect of the 2003 base*	-120.4	-28.1	-34.4	-32.4	-215.3	-6.4	0.0	-221.7	**-1.1**
ii)	*Difference between macroeconomic projections*	+60.1	0.0	-2.7	-4.4	+53.0	-10.4	0.0	+42.6	**+0.2**
Iii)	*Improvement in tax collection and enforcement*	-40.0	-27.2	-4.0	-9.5	-80.7	-6.0	0.0	-86.7	**-0.4**
iv)	*Other***	-50.8	-7.0	-42.7	-1.9	-102.5	-168.8	-19.7	-291.0	**-1.4**
v)	*Effect of new measures*	n.a.	n.a.	n.a.	n.a.	n.a.	+155.0	0.0	+155.0	**+0.8**
Total		**-151.1**	**-62.3**	**-83.8**	**-48.3**	**-345.5**	**-32.5**	**-19.7**	**-401.8**	**-2.0**

** The negative sign denotes the effect on balance, i.e. smaller revenue and higher expenditure.*
*** Includes, for example, forecasts of the outcomes for various tax reliefs and the expected difference of the interest balance from the plan.*

Looking at the details, our central projection contains a number of considerable shortfalls on the revenue side of the government budget which the Government is unlikely to be able to counterbalance by savings on the expenditure side.

The major **tax revenue items** for 2004 appear to be overestimated by HUF 215 billion, as the actual tax burden in 2003 fell short of the assumption on which the Government Budget was based (see row 1 of Table 5.8). Here, 2003 gross VAT receipts, recorded on a cash basis of accounting, fell short of the rate which would have been justified by the increase in consumption. In our calculations, gross VAT receipts fell below their long-term trend in 2002. This process gained momentum in 2003.[40] In the current forecast, however, this trend breaks off in 2004, and the rate of gross VAT receipts develops around the long-term trend, although it does not return to trend. Due to this, our forecast contains a HUF 120 billion lower VAT revenue relative to the official estimate. Actual

[40] This may be explained by the fact that, with the introduction of the simplified entrepreneurial tax, a part of revenues was re-channelled.

receipts of corporate tax are expected to be short of the plan, resulting from the 2003 base effect. In addition, an even greater shortfall in receipts is expected, due to the reduction in tax rates. Furthermore, revenues of personal income tax and social security contributions are also forecast to be nearly HUF 70 billion lower than the estimates, caused by the low 2003 base.

A more than HUF 50 billion gap results from the MNB's and the Government's different forecasts of the macroeconomic developments in 2004 (see row 2 in Table 5.8), although with a different sign. Explanation for this gap is the Bank's forecast of additional revenue, given the expected high inflation and higher consumption along the macroeconomic projection underlying the Bank's projection of the fiscal projection. (Due to the same macroeconomic variables, this effect is partly offset by a higher indexation of certain expenditure items.[41])

We do not expect the Government to raise additional revenue from an improvement in the efficiency of tax collection (see row 3 of Table 5.8), as the details of such measures are unknown and, according to international experience, this may only be the result of a longer-term process. For this reason, our forecast does not include additional tax revenue of nearly HUF 90 billion and savings on pharmaceutical expenses arising from an improvement of control.

Within other items (see row 4 of Table 5.8) on the revenue side, a higher-than-expected increase in revenues of VAT and the simplified enterpreneurial tax (called EVA), and the time lag caused by the changeover to self-assessment in the area of import VAT are all expected to reduce total VAT on a cash basis. We anticipate personal income tax receipts to be lower than the approved official estimate, caused mainly by the tax relief linked to the Sulinet scheme, the tax relief on savings for house purchase and a tax on company cars, in addition to the effect of a shift in the base.

On the **expenditure side**, we expect pension outlays to be higher (see row 2 of column 6 in Table 5.8), given our higher forecast of inflation, as discussed earlier, relative to the one underlying the Budget (moreover, pension inflation may turn out to be higher than average consumer price inflation). It should also be noted that pharmaceutical subsidies appear to be underestimated. The reasons for this are that (i) the actual amount of subsidies in 2003 was higher than expected (see row 1 of column 6 in Table 5.8) and (ii) some of the deficit reduction measures have not yet been implemented. In addition, the expected effects of certain measures cannot be quantified, as details of the official measures are unknown (e.g. savings arising from improvement in the efficiency of control). In the social security sub-system, total expenditure is expected to be overrun by HUF 52 billion, HUF 36 billion of which is included in the category 'Other' (items such as a part pf pharmaceutical subsidies, sick pay and survivor's pensions).

In terms of the 'Other' differences between the official estimates for and our expectations of expenditure, the estimate for open-ended expenditure on housing subsidies is expected to be overrun by around HUF 55 billion, reflecting the very

[41] It should be noted that the Bank forecasts gross earnings to grow at a somewhat lower rate in 2004 relative to the estimate in the approved Budget. As a consequence, we expect a slight shortfall in revenue of indirect taxes (see row 2 of column 5 in Table 5.8).

robust, higher-than-expected pick-up in outstanding borrowings in 2003 H2. (The tightening of the housing subsidy system at end-2003 is likely to have deeper effects mostly from 2005, see Section 5.3.) Also within the category 'Other', interest expenses on a cash basis are expected to differ considerably relative to the estimate. This view is based on the January yield curve. On the basis of the financing programme of the Government Debt Management Agency, made available at end-January, and using the data in the MNB's estimate for the zero coupon yield curve, the 2004 cash-based interest balance is expected to be some HUF 80–85 billion higher than the amount envisaged in the Budget Act.

The deficit of the local government sub-sector is anticipated to be higher by the equivalent of 0.1 percent of GDP relative to the estimate. According to our forecast, current expenses and investment spending are higher than the estimates, which is only partially offset by expected additional revenue (see column 7 of Table 5.8).

In Table 5.8, the effect of additional expenditure reduction measures, announced by the Government up to end-January, are included in the row 'Effect of new measures'. This is based on the assumption that the announced deficit reduction programme is implemented in full, and so it results in savings (i.e. on a net basis).

In contrast with the increase in the cash-based deficit in 2004, the deficit indicator on an **ESA** basis shows a slight improvement in balance. The effect of adjustments according to the ESA accounting methodology may improve the ESA balance above the average in 2004, as a large difference is expected between tax receipts on cash and accrual bases. It should be noted that, due to the high degree of methodological uncertainty, we have not prepared a comprehensive estimate of the ESA-based adjustments in 2004. We have accepted the estimate implied by the difference between the ÁKK's financing plan, published in January, and the meeting of the 2004 ESA deficit target, announced by the Ministry of Finance.[42]

In order to obtain the **augmented (SNA) deficit**, another indicator of the fiscal policy, we have to eliminate from the above deficit indicators the temporary items and complement with quasi-fiscal expenditures outside the general government sector, defined by the above indicators. Adjustment for temporary items have an important role in the case of VAT refunds. In addition, we do not take account of expenditure items that no longer have an impact on demand, for example, partial payments on investment implemented with financing by private capital (PPP schemes) and debts taken over by the Government. The losses of state-owned companies (for example, MÁV and BKV), expected for 2004, and expenditures related to other quasi-fiscal activities, for example, those of ÁPV Rt taken in the broad sense, have been recognised among expenditures related to quasi-fiscal activities. These include investment spending by the Government

[42] The bridge between the GFS and ESA deficits also includes the accrual-based adjustment of the interest balance. In the Bank's calculations, the adjustment of the interest balance will also contribute to the reduction in the ESA deficit. One reason for this is that, on a cash basis of accounting, the coupon effect is recorded in the year of issue in full, in contrast with the accrual approach, in which the coupon effect is distributed over the entire term. Underlying the importance of using adjustments in an accrual approach, the some HUF 90 billion overrun in interest expenses on a cash basis was not reflected in the accrual-based accounts.

which is not charged to the budget estimates but financed using private capital, as well as our estimate for this sort of investment spending. The lower quasi-fiscal expenditure relative to last year is caused by the decline in spending involving private capital financing.

The augmented SNA indicator, representing the total demand impact of general government, shows a significant reduction in deficit and signals a strong contraction of fiscal demand (see Section III.1.2).

Uncertainty of 2004 forecast

Our forecast of the GFS balance carries a high degree of uncertainty in respect of expected VAT receipts and the deficit of the local government sub-sector (see Table 5.9). The distribution of risks to our forecast of the GFS balance determines our projection of the ESA balance. Under the scenario of an extremely favourable GFS balance, the ESA deficit target of 4.6 percent of GDP, set by the Government, may be met. There are uncertainties because the adaptation of the ESA 95 methodology has not been finalised yet, in other words ESA deficit can be different from our forecast because of methodological reasons. The distribution of risks to the fiscal demand impact in our forecast is symmetrical. We do not take into account further austerity measures by the Government to improve the balance, in addition to those announced to the end of January.

Table 5.9 Uncertainties surrounding the forecast of the GFS and ESA deficits for 2004
As a percent of GDP

Central projection of GFS deficit: –6.5%			
VAT shortfall of base period reverses	0.4	Higher-than-expected shortfall of VAT (EU accession)	-0,4
Effect of macroeconomic developments (tax revenue, pension indexation)	0.2	Effect of macroeconomic developments (tax revenue, pension indexation)	-0.1
Delay in implementation of investment projects	0.1	Overruns in certain open expenditure items (e.g. due to base or smaller effect of measures)	-0.1
		Higher offsetting effect of fiscal developments (local government, institutions)	-0.3
Overruns in interest expenses is smaller than would result form current conditions	0.3	Overruns in interest expenses is smaller than would result form current conditions	-0.3
GFS deficit under extreme scenario	**-5.5**	**GFS deficit under extreme scenario**	**-7.7**
GFS – ESA bridge +1.2			
Accrual-based correction of smaller overrun in interest expenses	-0.1	Accrual-based correction of VAT shortfall and interest overrun due to EU accession	0.5
ESA deficit under extreme scenario	**-4.4**	**ESA deficit under extreme scenario**	**-6.0**

If the trend of the rate of gross VAT revenue, seen in the past two years, reverses, and VAT revenue returns to trend during the course of the year, then additional net VAT revenue in the amount of up to HUF 80 billion may be realised relative to the central

projection. As a result of Hungary's accession to the European Union, the risk of a temporary shortfall in VAT revenue, related to domestic consumption, may amount to as much as 0.4 percent of GDP. A similar shortfall, though to a different degree and at a different time horizon, was observable in the case of countries that joined the EU earlier.

The risks to the expected outcome for the interest balance are symmetrical. Under an extreme scenario, cash-based interest expenses may turn out to deviate from the expected level announced at end-January by HUF 60 billion. The risks to the accrual-based interest balance outcome, estimated to be around HUF 20 billion, are also symmetrically distributed. Uncertainty surrounding our forecast of the interest balance stems from the fact that, although a large portion of the government debt is fixed rate debt, a potential shift in the yield curve may influence the the interest balance of general government in 2004.

Higher-than-expected inflation may boost expected tax revenue through the increase in the tax bases. Due to the indexation of pensions, higher inflation automatically entails additional expenditure. In our view, additional net revenue equivalent to 0.1 percent of GDP represents a plausible risk factor.

Of open-ended expenditure estimates, the risks to the outcomes for pharmaceutical subsidies, sick pay and housing subsidies are on the upside, due to the base effect. These risks are estimated to be equivalent to 0.1 percent of GDP.

The announced curtailment of the budget chapters and estimates for the budgetary units may force a number of institutions to satisfy part of their funding shortages using carry-overs from previous years.

The normative grants, ensured by the central government, do not include the 6 percent wage increase offer for local government authorities in full. Consequently, if a number of local authorities do not create cover for additional wages by implementing savings, then they will only be able to finance the resulting gap by raising additional borrowing. In our estimate, the risk arising from the shortage of funding for the budgetary institutions may be as high as 0.3 percent of GDP.

Forecast for 2005

As the 2005 Government Budget has not yet been approved, we have prepared a risk or rule-based forecast and a conditional or normative forecast for the year under review. The latter, presented first in the analysis, constitutes the baseline scenario of this *Report* while the former serves as a risk scenario.

Table 5.10 Forecasts of various fiscal indicators for 2005

As a percent of GDP

	1	2	3	4 = 3 – 2
Deficit indicators	Central projection for 2004	Rule-based forecast for 2005	Baseline projection for 2005 (normative projection)	Risk
GFS deficit	-6.5	-7.5	-4.7	+2.8
ESA deficit	-5.3	-7.1	-4.3	+2.8
Augmented SNA deficit	-6.8	-8.1	-5.7	+2.4

Our baseline projection is built on the assumption that in 2005 the general government balance may improve by 1 percent of GDP, as stated in the Government's medium-term economic plan.[43] However, in the case of the normative projection, we must also prepare estimates for the items not included the ESA deficit, on the basis of available information (particularly for quasi-fiscal items, such as the indebtedness of MÁV and BKV, etc.).

As our central projection is basically a normative one, we have not prepared estimates for its details. It should be noted, however, that we do not expect revenue to increase. We assume that the Government will adjust by reducing current expenses (mainly through cutting back on wages and real expenditure) and by curtailing investment spending. We assume that a part of the reduction in investment spending in the GFS balance may be offset through increasing quasi-fiscal expenditure (for example, through financing certain investment programmes, involving, in part or in whole, private capital), thereby reducing the cash-based deficit. The planned reduction in the ESA deficit may be achieved through a reduction in the cash-based deficit.

Along this normative projection, we have prepared a detailed analysis of the accrual-based adjustment of the interest balance to estimate the bridge between the accounts recorded on a GFS and an ESA basis. We have assumed that, in the area of accrual-based taxes, one-off improvements, similar to those in 2004, will not occur. Consequently, we have relied on the historical average value throughout the forecast. In addition, we have calculated with the averages of the 2003 and 2004 estimates to forecast the deficit of ÁPV Rt and the GFS–ESA bridge.

Along the normative projection, the underlying reason for adjusting the temporary items between the indicators on the ESA and augmented SNA bases has been the same as that discussed in detail in presenting the forecast for 2004. The losses of state-owned companies (for example, MÁV and BKV), expected in 2005, quasi-fiscal losses, not recorded in the GFS balance, and fixed investment by the Government which are not charged against the estimates, but implemented with the involvement of private capital, as well as the estimate for such investment spending, have been treated as quasi-fiscal expenditures.

[43] According to the medium term plan, 'Hungary's Medium-Term Pre-Accession Economic Programme', approved in 2003, the ESA balance of general government improves by 1% of GDP in 2005 relative to the previous year. The Government submitted this plan the European Commission in 2003, as its official programme.

Uncertainty of the 2005 fiscal forecast – an alternative scenario

The objective of preparing an alternative, rule-based forecast, in addition to the normative projection, is to provide a risk-based forecast on the basis of the existing determinations which shows the possible outturn for the general governmnet balance, if fiscal policy did not take austerity measures. We treat the projection deriving from our rule-based forecast as a projection carrying the highest risks relative to the normative (conditional) fiscal projection, which presents the 'worst' scenario for the fiscal projection, associated with extremely high levels of deficit (see column 2 of Table 5.10).

Our rule-based forecast is based on constant principles, consistent with international standards (for example, the rules used by OECD).[44]

Taken together, the indicators of general governmnet balance, prepared on the basis of our rule-based forecast, suggest an increase in deficit in 2005. This is explained by (i) the deteriorating balance of transfers related to the EU within the Government Budget relative to 2003 will have to be treated as a determination and (ii) the combined effect of measures affecting revenue and expenditure is likely to increase the deficit next year.

On the **revenue** side, we expect tax revenue to be determined by the tax bases next year, reflecting the enacted tax rates, currently known, and the macroeconomic forecast. The details of changes which are already known are an exception. For example, we have taken account of the official announcement of a reduction in lump sum health contributions in 2005 as well as the full-year effect of accession to EU which is likely to cause a shortfall customs revenue. Due to these, tax revenues of the general government sector are likely to fall by half a percentage point as a proportion of GDP relative to this year.

On the **expenditure** side, we have taken into account the full effect of fiscal automatisms (for example, the indexation of pensions). Except these, we have only taken account of the effects of officially announced, adequately detailed and/or enacted government measures. On the expenditure side, we our forecast reflects the enacted increase in the 13th month pension by an additional week in 2005 relative to this year. A separate law also provides for the increase in survivor's pensions from November 2004, the full-year effect of which have also been taken into account. The full-year effect on 2005 of the increase in the home-building subsidy in 2004 is also built in the 2005 fiscal forecast. The postponement of 13th month salaries in the public sector to January 2005 has been treated as a legal determination. Hungary's contribution liabilities will increase due to the EU accession, which has also been taken account of.

As concerns investment outlays, our rule-based forecast reflects the assumption that any spending on fixed investment will add to the official government deficit (i.e. no quasi-

[44] For more details on the principles underlying the rule-based path reflecting determinations, see Section V.2 of the August 2003 *Report* and the OECD's document (www.oecd.org).

fiscal expenditure will occur which could represent a relief).[45] In the forecast, the determination for investment outlay equals to the increase on co-financing with the EU.

[45] Details of buy-out of the M5 motorway by the Government were not available at the time of finalising our forecast.

Boxes and Special issues in the Quarterly Report on Inflation

June 2000

September 2000

December 2000

March 2001

August 2001

November 2001

February 2002

August 2002

November 2002

February 2003

May 2003

August 2003

November 2003

February 2004

4. What do we learn from the 1999 indirect tax increase in Slovakia?
5. Indicators of general government deficit