



## QUARTERLY REPORT ON INFLATION

## **MAY 2006**

## **Quarterly Report on Inflation**

## May 2006



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

In the inflation targeting system, from August 2005 the Bank seeks to attain price stability by ensuring an inflation near the 3 per cent medium term objective. The Monetary Council, the supreme decision-making body of the Magyar Nemzeti Bank, performs a comprehensive review of the expected development of inflation every three months, in order to establish the monetary conditions that are consistent with achieving the inflation target. The Council's decision is the result of careful consideration of a wide range of factors, including an assessment of prospective economic developments, the inflation outlook, money and capital market trends and risks to stability.

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

The analyses in this Report were prepared by the Economics and Monetary Policy Directorate's staff under the general direction of Ágnes CSERMELY, Deputy Director. The project was managed by Mihály András Kovács, Deputy Head of Economic Analysis, with the help of two principal economists Zoltán M. JAKAB and Balázs VONNÁK. The Report was approved for publication by István HAMECZ, Director.

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The Report incorporates valuable input from the Monetary Council's comments and suggestions following its meetings on 8 May 2006 and 22 May 2006. However, the projections and policy considerations reflect the views of the Economics Analysis and Research staff and do not necessarily reflect those of the Monetary Council or the MNB.

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## **Overview**

Equilibrium risks render the stable inflation environment fragile

According to our main scenario, which - consistent with earlier practice - is conditional on the assumption of an unchanged short-term interest rate and exchange rate, inflation is expected to stabilise around 3 per cent and economic growth to decelerate in the longer run. At the same time, the persistently high general government and current account deficits continue to call into question the sustainability of the macroeconomic path.

The main underlying reason for the persistently high external imbalance is the high general government deficit, developments in the latter constitute a key issue in terms of the sustainability of the macroeconomic path. As by the end of the preparation of the Report we do not have official information with respect to changes in fiscal policy, we prepare our projection according to our 'usual' conditional path. In 2006, based on the Budget Act and this year's developments, a stimulating effect almost one per cent of GDP is expected, while for 2007-2008, we assume a fiscal contraction on the order of one half of a per cent, which corresponds roughly with the average value recorded in the previous two budget cycles. Considering that without any further measures, the currently adopted measures and determinations would foreshadow a 1-1.5 per cent deterioration of the deficit by 2008, the slight fiscal tightening assumed in the projection would also require the adoption of measures exceeding two per cent of GDP by 2008.

Our macroeconomic projection depends heavily on the structure of a possible fiscal adjustment. It is based on the assumption of adjustment implemented in an average structure, with government consumption and investment playing a dominant role. However, we have not specified such an adjustment in full detail in the government balance sheet.

A weaker exchange rate and higher oil Our forecast - according to out rules- is based on the average April monetary conditions and futures oil prices. This renders assumptions of an exchange rate of EUR/HUF 265, a short-term interest rate of 6 per cent, and oil prices persistently around USD 70. These assumptions point to significantly higher-than-earlier inflation projection, however their effect is partly offset by the current very low trend inflation, and the actual data on inflation have shown no signs of a turnaround as of yet.

Evaluation of inflation figures for the beginning of the year is rendered extremely difficult by the January VAT rate cut, which was estimated to have reduced consumer prices by nearly 1 per cent. In the last guarter, trend inflation may have been between 1 and 2 per cent, which shows that the character of the economic environment remained broadly disinflationary.

> The significant gap between the total consumer price index and core inflation continued to widen, due to substantial increases in prices of unprocessed food and petrol. The sustainability of the low inflation environment was ensured by the fact that there was no significant inflationary pressure from the labour market and households' consumption demand remained subdued. At the same time, the increase in European imported

prices than earlier are expected

Trend inflation in Q1 is estimated to have been between 1 and 2 per cent

#### MAGYAR NEMZETI BANK

inflationary pressure and the decline in the price-reducing effect of market competition have been moderate so far. Inflation expectations also moderated. From the aspect of long-term inflation outlook it can be considered as a further favourable sign that services sector inflation - not taking the VAT effect into account - has also started to decline steadily. In the last quarter of 2005 the rate of economic growth exceeded 4 per cent, Buoyant external and domestic economic activity which can be considered a brisk pace in historical terms. This high growth rate was supported by lively industrial economic activity in Europe and the related domestic corporate investment activity, coupled with the government's robust investment activity. At the same time, households' consumption expenditure increased modestly, while household investment practically stagnated. Stagnating labour demand, increasing Employment in the labour market continued to stagnate, while the activity rate increased on. These two phenomena together resulted in a continued labour supply and uncertain wage inflation trend due to the minimum wage hike increase in the unemployment rate, which allowed subdued wage developments until end-2005. However, the rises in minimum wages at the beginning of the year added to wage indices more than expected, but the magnitude of actual wage cost increase for the corporate sector attributable to this development and the extent of demand boosting cannot yet be determined. Over our projection horizon, the previously clearly disinflationary factors are Looking ahead, the consumer price index expected to gradually lose importance, and most factors indicate an may stabilise around 3 per cent, although increase in inflation. uncertainty is high On the one hand, European imported inflationary pressure is expected to increase, which may result in an increase in inflation of tradables, in conjunction with factors such as high oil prices, a weaker forint exchange rate and the fading effect of stronger market competition. Simultaneously, in the shorter run, mounting consumption and accelerating wage dynamics may lead to a stronger domestic inflationary pressure. However, inflationary and disinflationary trends may offset each other over the longer run. The subdued developments in labour costs will be facilitated by a combination of several factors. Modest labour demand compared to labour supply growth might prevail, mainly due to factors experienced in recent years, such as continuing capital labour substitution both at the corporate and the sectoral level. The reduction of social security contributions in early 2007 also helps support more subdued growth in labour cost. The

> aforementioned labour market factors may help moderate labour cost growth compared to productivity improvements, which assures a favourable inflation outlook for the economy. Further disinflation effects may come from

slowing consumption and general economic growth.

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Moderate upside inflationary risks around the target on the longer term, downside GDP risks compared to the baseline

> We believe that the uncertainty surrounding the main scenario of the inflation forecast can be considered balanced over the entire projection period. The uncertainty surrounding the inflation target points to a slightly higher inflation than the target. Lower inflation may be indicated by the effect of a decrease in social security contributions, and the steady decline in inflation expectations, whereas a higher-than-expected increase in oil and regulated prices may involve a higher inflationary risk.

> With regard to the uncertainty distribution around economic growth, slight downside risks are perceived over the entire projection period. Strongerthan-expected fiscal demand reduction, greater-than-expected impacts on employment of the minimum wage hike and the increase in oil and regulated prices represent the main negative risk factors. Some countereffect to this may be produced by companies, if they react to the reduction in social security contributions by higher-than-expected employment.

GDP growth fan chart



Under our assumptions, external imbalance might remain at a high level

Given our forecast assumptions of a fiscal demand contraction around onehalf pf a per cent of GDP in 2007–2008, external imbalance might prevail at a high level. With regard to the household sector, no further significant increase in propensity to save is expected, while the government's financing requirement in a broader sense deteriorates over the short term and no marked improvement is assumed later. At the same time, while volume developments in foreign trade may boost the rate of economic growth, substantial improvement in the external balance is also impeded by deteriorating terms of trade due to persistently high oil prices.

## Summary table of the main scenario

(Projections are conditional, with the main scenario reflecting the most probable scenario that applies only if all the assumptions presented in Section 4.1 materialise; unless otherwise specified, percentage changes on a year earlier)

	2004	2005	2006	2007	2008
	Actual/Estimate		Projection		
Inflation (annual average)					
Core inflation <sup>1</sup>	5.9	2.1	1.0	3.4	3.3
Consumer price index	6.7	3.6	2.1	3.3	3.2
Economic growth					
External demand (GDP-based)	2.4	2.0	2.2	2.2	2.3
Impact of fiscal demand <sup>2</sup>	-0.4	0.9	0.8*	-0.6*	-0.9*
Household consumption	3.1	2.1	3.7	3.4	3.0
Gross fixed capital formation	8.4	6.6	6.3	2.8	4.4
Domestic absorption <sup>3</sup>	2.8	0.2	3.8***	3.6***	3.6
Exports	16.4	10.6	13.3	9.6	9.4
Imports <sup>4</sup>	13.2	5.8	12.4***	9.0***	9.2
GDP <sup>3</sup>	4.6 (4.4)	4.1 (4.3)**	4.5**	4.2	3.8
Current account deficit4					
As a percentage of GDP	8.6	7.3	8.3***	8.2***	8.0***
EUR billions	7.0	6.4	7.4***	7.7***	8.0***
External financing requirement <sup>4</sup>					
As a percentage of GDP	8.3	6.5	7.1***	6.8***	6.2***
Labour market				•	
Whole-economy gross average earnings <sup>5</sup>	5.9	8.9	6.8	6.2	5.7
Whole-economy employment <sup>6</sup>	-0.4	-0.1	0.2	1.0	0.6
Private sector gross average earnings	9.3	6.9	7.9	6.8	6.1
Private sector employment <sup>6</sup>	-0.2	0.3	0.6	1.5	0.9
Private sector unit labour cost	2.3	4.7	4.3	0.2	2.6
Household real income	5.8****	4.3****	4.7	2.6	2.3

<sup>1</sup> For technical reasons, the indicator that we project may temporarily differ from the index published by the CSO; over the longer term, however, it follows a similar trend.

<sup>2</sup> Calculated from the so-called augmented (SNA) type indicator; a negative value denotes narrowing of aggregate demand.

<sup>3</sup> Our forecast is based on new quarterly dataseries of the CSO, which includes FISIM estimates. The data do not contain however the effect of CSO revision in detailed national accounts, which was published on 16th of May after closing our forecast process.

<sup>4</sup> As a result of uncertainty over the measurement of foreign trade statistics, as from 2004 actual current account deficit and external borrowing requirement may be higher than suggested by official figures or our projections based on such figures.

<sup>5</sup> Calculated on a cash-flow basis. Here we note, that in our November report, we used data of a different concept. In our publication in November, we used accrual data and the figures also contained estimated wages fore those who are not measured by the Labour Statistics, but surveyed by the LFS.

<sup>6</sup>Consistent with the CSO labour force survey.

\* Assumption of a fiscal impulse implicitly consistent with the macroeconomic path; no detailed fiscal projection can be prepared for lack of a Budget Act for 2007 and 2008.

\*\* Original data; in 2004, the leap-year effect may have caused an upward distortion in GDP growth of some 0.2 percentage points, and a downward one in the same amount in 2005. In order for trends in growth to be assessed, these effects must be applied to adjust the data shown.

\*\*\* Our projection includes the impact of the Hungarian Army's Gripen purchase, which raises the current account deficit and increases community consumption and imports.

\*\*\*\* An MNB estimate.

1. Financial markets





The balanced state of Hungarian financial markets in recent years could be characterized by two major underlying features: a) a very favourable and gradually improving global investment climate and b) high budget and current account deficits. In early March 2006, the relative balance between the two was disturbed by changes in the international environment. The fact that individual emerging markets were affected differently by these external developments, can attributed to the underlying differences in the fundamental situations of the various countries. The events were initiated by an increase of interest rates in major markets. In the United States and euro area, the newly released data on economic activity were more robust than the expectations, which, coupled with an increasing worry about inflation, resulted in stronger interest rate raise expectations. 10-year US and European yields increased by 50-60 basis points.

#### Chart 1-1

10-year yields in major markets



#### Source: Reuters.

The US Federal Reserve continued its cycle of interest rate increases, with the FOMC tightening by 25 basis points at its last four meetings. While in November 2005 market participants had expected the FOMC to raise the key policy rate to 4.75 per cent by October 2006, by April a nearly 5.25 per cent Fed interest rate target has been priced in. The Fed is now approaching the end of the tightening cycle, which has increased the sensitivity of US monetary policy and market expectations to the latest macroeconomic data.

The ECB raised its key interest rate by 25 basis points in December 2005 and in March 2006. By the end of the year a key interest rate level of 3.25–3.5 per cent is priced into market yields, which is 50–75 basis points higher than the November 2005 expectation, i.e. the market expects rate hikes in each quarter this year.

#### Chart 1-2

Expectations related to the interest rate target of the Fed



Source: Datastream (http://www.thomson.com/financial).

#### Chart 1-3

Expectations related to the ECB's key interest rate



#### Source: MNB.

The Japanese central bank announced in mid-March that it would abandon its quantitative easing policy that had been pursued for the last 5 years. Although over the short run this does not directly translate into an increase in the interest rate level, which is around zero per cent, it does suggest higher yields over the longer run. The 10-year Japanese yield increased from a level of around 1.5 per cent late last year to nearly 2 per cent, mainly as a result of this change.

In the major markets, risks point to a further increase in the interest rate level. Although tightening in the United States is approaching the end of the cycle, the increase in euro interest rates may exert pressure on US yields. If the 100–120 basis point difference between 10-year US dollar and euro yields observed in the past months remains, the increase in European yields may induce an upward pressure on US

yields as well, and an increase in the risk-free yield level may reduce demand for riskier instruments.





 $Source: \ Data stream \ (http://www.thomson.com/financial).$ 

In the last months of 2005 and early this year, the international investment environment was still very favourable, capital inflows to emerging markets continued, while premia continued to decline. However, in March the increase in yields in major markets had an unfavourable impact on emerging markets. Although emerging market premia remained at a historically low level, the earlier trend and steady decline in premia came to an end. Due to increasing fears of a decline in global liquidity, investors became more cautious compared to previous years. While investors used to focus mainly on the developments in the interest rate differential, under these new conditions they are more willing to take account of individual markets' fundamental situations and the risks to macoeconomic equilibrium as well. Drawing distinctions based on the fundamental situation is also rendered likely by the fact that individual emerging markets were not affected by the change in the international environment in the same manner. Most countries were affected only slightly and temporarily by external factors. However, in some countries more severe, lasting impacts were observed. These markets are burdened either with some kind of fundamental risk, typically a high current account deficit or political risk. Investors were concerned about the high current account deficit in Iceland and New Zealand, the latter of which cannot be classified as an emerging market, and an increase in political risks in Poland, Turkey and Mexico, while in the case of Hungary both risk factors have been present.

Regional markets typically followed the movements of international trends. In parallel with the robust international risk appetite, at the beginning of the year the Polish zloty, the Czech koruna and the Slovak koruna all appreciated to multi-year highs, and in the first two countries long-term yields also sank close to historical lows. The change in the international investment climate in early March, however, had a different impact on the individual countries. While the CEBI index in the Czech and Slovak markets declined by nearly 2.5 per cent, a fall of 5 per cent was observed in the Polish and Hungarian markets.

#### Chart 1-5





Source: Reuters.

\* The CEBI index shows the developments in the value calculated in euro of the portfolio compiled of government bonds denominated in domestic currency, with a maturity exceeding 1 year. The index contains the total effect of individual markets' exchange rate and yield movements.

From September 2005, Hungarian financial markets were concerned about the developments to fundamentals, namely the high budget and current account deficits. Hungarian and regional trends began to diverge at that point. While the CEBI index tended to increase in the other countries in the region, decline and stagnation were more typical of Hungary. Until March, however, the improving global investment climate partially offset the fundamental risks. This was the underlying reason that after the Fitch credit rating institution downgraded the rating of the Hungarian debt denominated in forint and foreign currency in early December, the exchange rate depreciated only temporarily, although the 5-year forward premium 5 years ahead increased to a historical maximum of nearly 270 basis points. Similar market reactions were seen following S&P's January and Moody's February statements which downgraded the prospect of Hungary's debt.

Following the shift in the international environment in early March, investors grew less tolerant of unfavourable domestic fundamentals. The exchange rate weakened from EUR/HUF 254 to nearly EUR/HUF 270, witch in an almost 6 per cent depreciation, although this was partly

#### Chart 1-6



#### The EUR/HUF exchange rate

#### Source: MNB.

recouped later. However, the 5-year forward premium 5 years ahead did not increase, but lessened following the easing of political uncertainty related to the parliamentary elections. Contrary to earlier experience, external shocks played a greater role in the depreciation of the exchange rate, which is attributable to the fact that, due to the improvement in the inflation outlook, the market expects that monetary policy may now be more tolerant of a somewhat weaker exchange rate than it was in the past. In terms of foreign exchange market quantities, the significant weakening of the exchange rate may also be related to the seasonally lower foreign exchange borrowings by households in the first months of the year.

#### Chart 1-7





Source: Reuters.

Another aspect that may be attributable to the favourable international investment atmosphere was that forint sales by non-residents, which strengthened in mid-September 2005, slowed down by the end of the year, and even a substantial interest in buying was shown in January 2006. In this period, foreign participants closed a part of their positions taken against the forint since September. Following the change in global conditions in March, non-residents resumed to take positions against the forint in large quantities.

#### Chart 1-8

#### Non-residents' government securities holding



Source: MNB.

While non-residents' government securities holdings tended to stagnate and then declined at the end of last year, strong growth was registered this year, with an increase amounting to nearly HUF 250 billion. The rise in non-residents' government securities holdings moved in parallel with the increase in net issuance by AKK (Government Debt Management Agency) this year, suggesting that supply factors may have had an impact on non-residents' purchases of government securities. Non-residents mostly funded their government securities purchases without undertaking an open exchange rate position.

#### Chart 1-9

Non-residents' forint purchases and net swap holdings



Source: MNB.

Market analysts surveyed by Reuters in April did not consider the weakening of the exchange rate to be a long-term development, and they expected a slight appreciation of

#### Chart 1-10



Source: Eurostat, CSO, MNB, Reuters.

\* Real exchange rate, January 1997=100 per cent. The higher value shows appreciation of the real exchange rate. The 1 year forward-looking real interest rate is the monthly average of the 1 year benchmark yields deflated by the 1 year inflation expectations of market analysts surveyed by Reuters. the exchange rate over the longer run. Analysts' interest rate expectations have stabilised around 6 per cent, despite the higher volatility of the exchange rate. Expectations related to the adoption of the euro have not changed, with analysts continuing to agree that it is likely to occur around 2013.

Monetary conditions eased in the last half year, due to the 6 per cent depreciation of the CPI-based real exchange rate. The forward-looking real interest rate continued to fluctuate between 3 and 4 per cent.

## 2. Inflation and its determining factors





## 2.1. Economic activity

Economic growth was buoyant last year. Taking account of calendar effects, the annual growth rate reached 4.3 per cent, which can be considered high even compared to the average of a longer period. The main sources of growth were net exports, improving in accordance with the favourable situation in foreign markets, and strong public and corporate investment, while of the domestic demand components the contribution of consumption to growth was less significant.

#### Chart 2-1

Size of Hungary's export market\* and GDP in its major foreign trade partner countries (annual growth rates)



\* Export market's size: weighted average growth of imports in Hungary's export markets.

## Box 2-1 About the growth in external demand

Growth prospects of the global economy have been favourable since early 2006: according to the latest information, the indicators of economic activity of the euro area, which accounts for two thirds of the foreign trade of the USA and Hungary, also suggest an upswing.

Business confidence indicators in the euro area reached historical peaks in the first four months of this year.<sup>1</sup> The picture is especially promising in Germany, which is the target country for nearly 30 per cent of Hungary's exports, where the IFO business confidence indicator reached a 15-year record following five straight months of betterthan-expected improvement.

#### Robust growth in external economic activity

All indicators of external economic activity suggest an improving performance. The increase in the demand of Hungary's trading partners which are considered to be more important in terms of Hungarian exports accelerated in 2005 H2. The improvement of business confidence indicators which facilitate the assessment of the expected performance continued in Q1 of this year as well, while the German business confidence indicator reached a historical peak, which suggests continued demand for Hungary's export sector.

#### Chart 2-2

Business confidence index in the euro area (EABCI) and in Germany (IFO)



In addition to the aforementioned, so-called 'soft' indicators of economic activity, latest actual data also show an upturn in activity. European – and within that mainly German – new orders in the manufacturing industry, which reflect Hungarian economic activity well, rose sharply at end-2005 and early 2006. This trend is also true for the new orders for semi-finished products and investment goods, which, according to our analyses, are the most important determinants of Hungary's exports.

In conformity with the favourable information, international institutions (IMF, European Central Bank) also carried out an upward revision of their growth projections compared to their forecasts from last autumn. According to both projections, as opposed to the 1.3 per cent

<sup>1</sup> In March and April of this year, the euro area business confidence indicator (EABCI) and the Belgian business confidence indicator, which is considered to be a good indicator of European economic activity, also reached high levels which were last seen in the year 2000.

#### Chart 2-3

New orders in manufacturing and German goods exports



growth last year, euro area economic growth may reach or exceed the approximately 2 per cent level of the area's potential growth in 2006.

However, both the IMF and the European Central Bank (ECB) emphasised that the source of the European upswing is the favourable international environment, and there are risks that this favourable environment might not continue to exist.<sup>2</sup> Meanwhile, domestic demand – particularly in Germany – may remain subdued. During the projection period, the upswing in domestic demand may also be hindered by the expectedly high energy prices and the VAT increases in Germany in 2007.

The sustainability of the recovery is also questioned by the latest forecast of the European Commission, as its April projection for 2006 moved clearly downwards compared to the March projection. This shift is also notable, because the dynamic factor model applied in the Commission's forecasts since January this year takes into account as much and as current information on economic activity as possible. However, one must also not disregard that the Commission's current projection for 2006 is still in line with the 2006 projections of the IMF and the ECB.

#### Table 2-1

International economic activity projections

	Actual forecast (per	, annual change cent)	Change w.r.t last forecast (ppoints) 2006 2007		Publication of new forecast and previous forecast
	2006	2007			
ECB	1.7–2.5	1.5–2.5	0.2	0.1	March 2006–December 2005
IMF*	2	1.9	0.2	-0.2	March 2006–September 2005
European Commission**	1.7–2.7	n.a.	-0.1 n.a.		April 2006–March 2006
		Hungarian ex	ternal demand (GE	) P-based)	
IMF*	2.5	2.3	0.3	n.a.	March 2006–September 2005
		Hungarian e>	kternal demand (im	port-based)	·
IMF*	5.8	5.1	0.9	n.a.	March 2006–September 2005

\* IMF World Economic Outlook, April 2006.

\*\* The annual growth rate is the MNB's own estimate, as the European Commission publishes monthly growth rates.

<sup>&</sup>lt;sup>2</sup> One of the most important risk factors, which is also discussed in detail by the IMF, is a possible correction of global imbalances. On the one hand, this may hinder international economic growth, and on the other hand, through the appreciation of the euro against the dollar, it may also entail a deterioration of the foreign trade price competitiveness for the euro area. See: IMF World Economic Outlook, April 2006.

#### Industrial activity - robust production and sales

Industrial output growth in 2005 H2 was very dynamic, continuing on in 2006 Q1 as well. As before, output growth is primarily determined by developments in manufacturing. The picture of robust growth is also strengthened by the information on sales: both exports and domestic sales increased rapidly, which corresponds well with other pieces of information on buoyant economic activity in foreign markets.

However, the structure of growth seems to have changed slightly, compared to what was outlined in the previous Report. While the machinery and equipment industry's contribution to growth declined gradually around the middle of last year, in line with the improving perception of foreign markets the branches of the machinery and equipment industry once again made a stronger contribution starting from Q3.

Growth in value added conformed with output side developments. In manufacturing, the annual growth rate of value added accelerated from 5.5 per cent in Q2 to around 8 per cent by the end of the year. In the case of market services no significant change was registered in the second half of the year, and the annual growth rate was in the range of 5–5.5 per cent.

#### Chart 2-4



The information on strong corporate activity is confirmed by foreign trade goods turnover statistics as well: since the November Report dynamic growth has been observed in the value of foreign trade. The trade balance remained relatively stable, due possibly to a further deterioration in terms of trade and the fact that the volume of exports grew faster than the volume of imports. The yearly growth rate of exports volumes peaked at 17%, while imports growth was lower (12.5%) in the first two months of 2006. Meanwhile,

#### Chart 2-5





\* Based on trend annualised month-on-month indices.

the terms of trade deteriorated nearly 3% compared to January-February of the previous year. Based on the latest data, with regard to the change in the terms of trade it is clear that most of the deterioration experienced in 2005 was attributable to the increase in energy prices.

#### Chart 2-6

#### Exports and imports volume of goods



#### Chart 2-7

#### Terms of trade in goods



#### Robust public and corporate investment, weak household investment

In 2005 as a whole, the volume of gross fixed capital formation was 6.6 per cent higher than in the previous year, which is below our expectations. Based on the more detailed breakdown of investment statistics by sectors, the weaker annual figure is probably attributable to a further decline in household investment. Although the level of public investment slightly declined at end-2005 compared to Q3, activity during the year (in particular motorway construction) was so intense that for 2005 as a whole volume growth of approximately 20 per cent was recorded. Corporate investment activity was brisk in the second half of last year as well. Favourable economic activity on foreign markets was not only reflected in improving production and sales figures, but also resulted in a higher utilisation of corporate capacities. In the corporate sector, tighter capacity limits coupled with positive prospects resulted in an annual average growth exceeding 8 per cent, which was in line with our expectations.

#### Chart 2-8



Gross fixed capital formation in individual sectors\*

\* Source: MNB estimate.

#### Chart 2-9

Capacity utilisation\* in manufacturing



Over the last two years, consumption grew more slowly than disposable income. As a consequence of this subdued consumption, a gradual adjustment of the consumption growth rate was observed: it continued to decline last year, falling to a level last seen in 2001. We believe that the increase in unemployment, the resulting income uncertainty and tighter lending conditions for real estate purchases may have played a decisive role in households becoming more cautious. In addition, the more subdued consumption may also be explained by the fact that the repayment of debts, which have been growing rapidly in recent years, is an increasing burden on households.

The slowdown in consumption is clearly reflected in developments in retail sales and consumption expenditure. However, last year the increase in retail sales accelerated, while consumption dynamics remained weak. Retail sales mainly track consumption of industrial products and food, while household consumption covers the purchase of services as well. Therefore, rising retail sales may indicate a change in the structure of consumption. This shift from services to industrial products may be due to the fact that last year there was a significant decline in the prices of industrial products, while services inflation remained high. However, we reckon the effect to be temporary, and we expect a correction in relative prices and a shrink in the gap of retail sales and consumption expenditure growth rates in the future.

As a reflection of the declining consumption rate, propensity to save continued to improve, and last year the structure of household savings was in line with the trend seen in 2004. Income-proportionate financial savings increased, while 'real savings', i.e. the level of housing investment continued to fall. These developments can be ascribed to several factors. On the one hand, real estate purchases for housing have been steadily declining since end-2003, and on the other hand, the real estate market investment environment has not improved either. The underlying reason is that real prices continued to decline on the market, which is characterised by a strong oversupply, while the yield on alternative investments - e.g. capital market investments increased markedly, resulting in a further reduction of the willingness to buy housing.

#### **Economic growth**

In 2005 as a whole, economic growth was 4.1 per cent, or 4.3 per cent taking account of calendar effects, which is

Households - subdued consumption, improving savings situation

#### Chart 2-10

Households' consumption expenditure and retail trade turnover

 $(annualised \ quarter-on-quarter \ growth \ rates)$ 



#### Chart 2-11

Consumption and savings rates



slightly higher than the historical average of Hungarian economic growth.<sup>3</sup> According to the analysis of GDP components, the contribution of net exports to growth<sup>4</sup> was outstanding last year, while the growth of components of domestic demand continued to result in a declining growth effect.

The indicator of gross domestic income (GDI) shows a remarkable slower rate of growth than GDP: The difference was caused by the income loss due to a deterioration of

Chart 2-12

Building permits issued and the number of homes built (quarter-on-quarter growth rates)



#### **Chart 2-13**

Real housing prices and annual yields of alternative investment opportunities\*



\* Developments in bond market yields are captured by the changes in the MAX index, while developments in stock market yields are captured by changes in BUX. The source of housing prices is an MNB estimate. Annual growth rates of the indices are shown in the chart.

external terms of trade. This latter was almost fully a result of the increase in world energy prices, constituting an important share in imports.

Individual countries' growth figures draw a mixed picture of the economic activity of the Central-East European region.

<sup>&</sup>lt;sup>3</sup> Our forecasts were prepared on the basis of the data available up to 15 May. According to the publication of the CSO on 16 May, GDP growth amounted 4.5 per cent (4.3 per cent adjusted for calendar effects) in 2006 Q1, based on preliminary data. At the same time, a significant change was the fact that according to the revised data GDP in 2004 was adjusted from the previous figure of 4.6 per cent to 5.2 per cent.

<sup>&</sup>lt;sup>4</sup> Again, it should be noted that the remarkably high contribution of net exports to growth is rendered very uncertain by the internal inconsistencies discussed earlier in the GDP and balance of payments statistics. As these contradictions – presumably with an opposite sign – were partly compensated in the statistical discrepancy time series of the expenditure side of GDP, in the last two years net exports and changes in inventories and statistical discrepancy may closely be related; thus, it is worth analysing the two time series together. Net exports' contribution to growth last year can be considered very favourable even in this case.

Development of GDI and GDP

#### Chart 2-14



#### Chart 2-15



 $(annualised \ quarter-on-quarter \ growth \ rates)$ 



In 2005 H2, growth accelerated notably in Slovakia and Poland, while growth in the Czech Republic was in line with the dynamics typical since early 2004. Hungary's growth was among the lower rates in the region. The upswing of European economic activity, which is common from many

aspects, probably played an important role in the acceleration of growth in the region, but one also must not rule out the possibility that statistical discrepancies caused by EU accession were not treated by individual countries in the same manner.<sup>5</sup>

<sup>&</sup>lt;sup>5</sup> Last year, the contribution of net exports to growth was especially high in the Czech Republic and Hungary, while – taking into account the relatively lower GDP dynamics – it could be considered high in the case of Poland. The impact of EU accession on measuring imports data probably caused the greatest distortion in case of these countries. As the changes in inventories and statistical discrepancy time series, which can be used as control statistics, are currently not available for each country, further information is needed to assess the magnitudes more precisely. In any case, the fact by itself that no close correlation between the Czech and Hungarian net exports contributions between 1996 and 2003 was experienced, while in the last two years these indicators for both countries show a sharp improvement of similar magnitude of the net exports performance may indicate the effects of a common dominant explanatory variable.

## 2.2. Labour market

#### Still moderate labour use

Despite the increasingly buoyant economic activity, the aggregate labour use of the private sector showed only gradual, modest growth in the last two years. Based on the dynamics of the two main inputs – i.e. capital and labour – used for production it is apparent that the current rising economic cycle is completely different from the intense growth wave of the period 1997 to 1999. While between 1997 and 1999 growth in these two factors of production contributed to production growth together, the dynamic increase in the value added in recent years was driven by capital accumulation rather than labour expansion. There are, however, various sectoral effects that explain the stagnating number of employees and the slightly increasing number of hours worked in the private sector.

#### Chart 2-16

Value added, employment and investment rate in the private sector



Over the last five years there was a declining trend in manufacturing labour use, and even the upswing in industrial activity in 2003 was unable to break this trend. There are several underlying factors for the steady fall in the number of employed and hours worked in the manufacturing industry.

Due to the substantial increase in wages between 2000 and 2003, companies in the sector were confronted with an increase in unit labour cost. Companies reacted to rapidly

#### Chart 2-17



growing costs by a gradual regrouping of production inputs, i.e. by capital substitution for labour. Substitution of labour accelerated in the strongly growing section of the economic cycle, which in its own right resulted in increasing capital demand and lower employment.

In several sectors, the expansion of employment may also be hindered by the labour supply in certain trades, which has remained stuck at a low level. Despite steadily growing unemployment, according to information from the press and analyses based on inquiring at companies, in several areas increasing demand encounters a shortage of skilled labour, while in other areas – mainly in white-collar jobs which require higher qualifications – there is an oversupply of labour.<sup>6</sup> The resulting structural labour shortage is an obstacle to a more significant expansion of the number of employed.

The process of structural rearrangement within manufacturing is also related to labour becoming more expensive. As pointed out in several of our earlier Reports, firms in the textile industry were the main losers from the rapid rise in labour costs seen in past years. Highly labour intense companies could hardly compete with competitors producing abroad and employing much cheaper labour, and thus they had no choice but to reduce production or even close down their factories. Production in the manufacturing industry is moving towards more capital intense sectors which require less labour, which can also be interpreted as

<sup>&</sup>lt;sup>6</sup> The labour market survey of 2005 of the National Employment Office indicates existing structural tightness. Although the ratio of companies complaining of a shortage of skilled labour somewhat declined compared to the previous survey, its level is still notably high.

aggregate capital substitution for labour. Figures for recent months do not indicate any turnaround; thus the textile industry remains the primary determinant of the decline in the number of employed in manufacturing.

As opposed to manufacturing, an intense expansion of labour use in market services since early 1999 has been observed. In the beginning, the increase in the number of employed was facilitated by the sustained strength of household consumption, and then later by expanding external economic activity through manufacturing orders. Although the rises in minimum wages in 2001 and 2002, coupled with pay-rises and expanding employment in the public sector, broke the upward trend in the number of employed in the services sector, labour use in the sector rose evenly again in the last 2–2.5 years.

## Questions in developments on the labour supply side?

The increase in the number of unemployed, which started in early 2004, continued last year. However, the survey conducted in 2006 Q1 seems to indicate that the increase in the unemployment rate has stopped. The time series of the number of registered unemployed of the National Employment Office also suggests a break in the trend. Underlying factors behind the unemployment rate, which became stuck at 7.4 per cent, are employment, which has been practically stagnating for a long time, and activity, which had previously been growing, but came to a standstill early this year.

As indicated in our earlier Reports, we have long been expecting the increase in the unemployment rate to stop. However, we projected the trend reversal to occur at a later date, i.e. end-2006 or early 2007. Moreover, the latest data

#### Chart 2-18

Number of unemployed



point does not clearly reflect a full-fledged turnaround in the trends that have prevailed so far. It may easily turn out that the current stagnation is only temporary, and following from the end-point uncertainty of the seasonal adjustment, with the inclusion of later data points, the Q1 unemployment data may be subject to an upward revision. Uncertainty is exacerbated by the fact that on the labour demand side there have not been any signs of a turnaround yet, i.e. developments are rather driven by a possible change in the willingness to work.

So far, we were unable identify a satisfactory explanation to the willingness to work which started to increase last year, despite the restrained labour demand. In the longer run, on the basis of the increase in the age of the inactive stratum which was driven out of the labour market in the early 1990s we expect gradual, slow growth in activity, but the change in the demographic composition does not explain short-term fluctuations in activity.

The gradual raising of the retirement age as mandated by law may seemingly explain the increase in activity in 2005 and the stop this year. Based on the regulations, the number of people applying for old-age pension should theoretically decline, and thus activity should increase in even years. However, this phenomenon is not supported by the time series of the number of applicants for old-age pension, presumably due to the high ratio of early retirement.

Based on detailed analyses, the increase in labour market activity last year is mainly attributable to the fact that among those who were previously inactive, the willingness to seek employment increased, which resulted in a certain number of the inactive being reclassified as active. The phenomenon coincides with the assumption that a part of

#### Chart 2-19





the inactive population is as closely attached to the labour market as people with official unemployed status, and this group can even be considered as part of the labour reserves of the national economy.

#### Another wage shock: rise in minimum wages

Wage side pressure on companies had been decreasing since early 2004. In addition to wage adjustment to declining inflation, as a result of the rationalisation of production and the raising of capital intensity, corporate productivity started to improve quickly: in 2004, the increase in real labour costs exceeded the increase in productivity, while

#### Chart 2-20

**Private sector wage inflation\*** (seasonally adjusted, annualised quarter-on-quarter growth rates)



\* Due to adjustment for bonus payments, the time series is determined by the dynamics of regular payments. In 2004 and 2005, the adjustment for bonuses was undertaken according to our own estimate on bonus payments. The 2006 Q1 data are actual until February, while the March data point was estimated using statistical methods.

## Box 2-2 How significant is the 2006 minimum wage shock?

In relation to the substantial rises in minimum wages in 2001 and 2002 it came up that the actual wage inflation resulting from the rise in minimum wages was smaller than the value in official labour statistics. This distortion followed from the fact that in a significant part of the economy the earlier actual wage payments exceeded the new minimum wage, while the contributions to be paid on these wages were based on the official minimum wage. Therefore, the statistics based on interviewing comthe growth rates of the two indicators were almost the same last year.

The 9.6 per cent rise in minimum wages required by law will play a decisive role in the wage inflation developments in the private sector this year.<sup>7</sup> The wage inflation path, which had shown a balanced picture last year, broke in Q1 this year as a result of the rise in minimum wages. Based on the January–February 2006 data we can establish that the primary effect of the labour market intervention on the increase in the annual average wage income was underestimated by around 0.7 percentage points in compiling our previous Report. However, for the time being, it is difficult to separate the wage inflation caused by the rise in minimum wages and its feed-through effect from trend developments.

#### Chart 2-21

Nominal unit labour cost, productivity and wages in the private sector

(annual growth rates)



panies show a spectacular increase in officially paid wages from January of the given year, overestimating the actual labour income growth. In the case of these companies only the contributions increasing as a result of the higher officially paid wages involve additional labour cost, the magnitude of which lags behind the cost increase shown in labour statistics. On the consumption side, the effect of the rise in minimum wages is also lower, because for employees registered at the minimum wage but earning more, the rise in minimum wages does not mean higher income. No exact information on the magnitude of this type of tax evasion is available, thus it is also difficult to estimate the size of distortion.

<sup>&</sup>lt;sup>7</sup> The government decree passed last December following the agreement in the National Interest Reconciliation Council (OÉT) envisaged the introduction of three stages of differentiated minimum wages based on qualifications and professional experience. Only a recommendation was adopted for those who finished higher education, while an agreement was reached on the introduction of a wage reaching, following gradual increases, at least 125 per cent of the minimum wage by 2008 in case of employees with secondary education and at least two years of professional experience. The possible effects of differentiating the minimum wage have not been analysed and have not been taken into account in our projection.

The distortion is presumably more serious among market services companies than in manufacturing. It is also mainly the services sector, and within that the branch comprising companies dealing with financial activities, which is responsible for the outstanding wage inflation of 2006 Q1. Still assuming that a high percentage of the sector's significant wage inflation in Q1 is merely a statistical phenomenon, the impact of the rise in minimum wages on the aggregate wage inflation is also proportionately lower than what is indicated in the labour time series.

Earlier studies confirm that although the magnitude of the first rise in minimum wages in 2001 was greater than that of the rise in 2002, the first labour market intervention was less effective.<sup>8</sup> This anticipation of ours is confirmed by the chronological and cross-sectional (intercountry) comparison of the ratio of minimum wages to average earnings (so-called Kaitz indices).9 Chart 2-22 reveals that following the rise in 2001 the index increased from 30.5 per cent, which is very low in international comparison (the lowest among the current 25 Member States of the European Union), to 41 per cent, which is close to the European average. The rise in 2002 already added to a much higher Kaitz index, thus it can be assumed that the actual number of those concerned was also higher. Based on the chart we can come to an approximate conclusion regarding the aggregate effects of the rise in minimum wages in 2006 compared to the rise in 2001 and 2002. After the current rise the Kaitz index is still expected to be lower than the value for 2001, i.e. the actual wage shock will probably be lower than in 2001. However, as in the starting year of 2005 the ratio of the minimum wage to the average wage may be much higher than in 2000 and lower than in 2001, the effectiveness of the impact of the rise (i.e. the ratio of actual increase to the wage increase published by the CSO) will probably be between that of 2001 and 2002.

As was the case with the impact of rises in the minimum wages in earlier years, there is a lack of consensus among Hungarian economists regarding the expected effects of the rise in 2006. On the one hand, it

#### Chart 2-22

Kaitz indices?\*



\* The quotient of the prevailing minimum wage and the wholeeconomy average earning in Q1 of the given year. As an alternative indicator, the ratio of the minimum wage in the given year to the average earning of the previous year and of the last quarter of the previous year was also calculated. Developments in time of the index are similar in the latter cases as well.

can be assumed that due to the higher minimum wage level of 2005 and the recommendations concerning those with higher education, this year's rise may trigger more significant labour market developments compared to the previous two labour market interventions. On the other hand, this year's rise was carried out in a looser labour market environment compared to previous years and amongst better growth prospects, and these factors may mitigate the negative impact of the intervention. It can also be assumed that the gradual abolition of the health contribution paid by employers and the reduction of the social security contribution envisaged for 2007 may somewhat offset this year's wage cost increase of firms.<sup>10</sup>

<sup>\*\*</sup> The 2006 Q1 earnings data are actual up to February, while the March data point was estimated using statistical methods.

<sup>&</sup>lt;sup>8</sup> See e.g. G. Kertesi–J. Köllő (2004): The employment consequences of the 2001 rise in the minimum wage (A 2001. évi minimálbér-emelés foglalkoztatási következményei), Economic Review (Közgazdasági Szemle), Volume LI, April 2004, pp. 293-324.

<sup>&</sup>lt;sup>9</sup> Of course, the index does not take account of wage dispersion – and in particular the actual wage dispersion – and its possible change, thus we can estimate the number of those concerned only in an indicative manner.

<sup>&</sup>lt;sup>10</sup> See details of Hungarian and international experiences in rises in minimum wages and the expected effects of this year's rise: Dóra Benedek et al.: Increases in the minimum wage in Hungary, 2001-2006 (*Minimálbér-emelések Magyarországon 2001–2006*), Working Papers published by the Ministry of Finance (*PM Kutatási Füzetek*), No. 16.

## **2.3. Inflation developments**

Since the previous Report, the consumer price index (CPI) has continued to decline: it stood at 3.3 per cent in 2005 Q4 and 2.5 per cent in 2006 Q1, and thus the inflation target of 4 +/-1 per cent for the end of last year was met. Disinflation was reflected in the fall in core inflation as well: annual indices of core inflation amounted to 1.3 and 0.6 per cent in these two quarters, respectively.<sup>11</sup>

The primary underlying reason for the disinflation observed early this year was the reduction of the highest VAT rate from 25 per cent to 20 per cent, which covered almost all industrial products and nearly half of market services. As we can only estimate the extent of the appearance of the VAT rate cut in consumer prices, at the beginning of the year the assessment of trend inflation developments – which do not contain the one-off VAT

#### Chart 2-23

**CPI and core inflation** (year-on-year indices)



effect and show lasting inflation trends – became more uncertain than usual.

## Box 2-3 To what extent is the VAT rate cut reflected in consumer prices?

Our analyses suggest that the critical part of the primary effect of the VAT rate cut took place in the first two months of the year. Earlier we had estimated the total primary price level reducing effect of the October 2005 and January 2006 VAT rate cuts as 1.4 percentage points.<sup>12, 13</sup> However, as evidenced by available data, the price level reducing effect may be around 1.0 percentage point only, i.e. approximately 0.4 percentage points lower than previously estimated.<sup>14</sup>

Our product group level analyses suggest that in our earlier calculations the effect of the VAT rate cut was mainly overestimated with regard to industrial products. However, the underlying reason is not yet clear. We may have misjudged the existing product market factors of the price effects of the VAT changes, i.e. the price elasticity of demand and supply and price transparency. In this case, the lower than estimated decline in prices at the beginning of the year does not necessarily influence the longer-term inflation outlook. However, it is also possible that the previous upward trend in product market competition slowed more than expected, which, in turn, may also affect future developments in inflation.

<sup>12</sup> We had estimated the technical effect as 1.9 percentage points, which was later confirmed by CSO figures.

<sup>&</sup>lt;sup>11</sup> The consumer price index in April 2006 stood at 2.3 percent, while core inflation was 0.7 percent. The April figures reinforce our assessment about the recent inflationary trends.

<sup>&</sup>lt;sup>13</sup> In our estimates for the aggregate effect of the VAT rate cut we did not take into account the VAT rate cut of alcoholic drinks, tobacco products and motor vehicles, as in case of these products the VAT rate cut was offset by the increase in the excise tax and registration tax, respectively. It is worth mentioning that the price of wine increased as of January, despite the fact that in case of this product the VAT rate cut was not offset by raising the excise tax, moreover, the latter was abolished completely.

<sup>&</sup>lt;sup>14</sup> It is difficult to assess the effect of the VAT rate cut on the price level not only looking ahead, but also looking back. The problem is that regarding the price time series of a given group of products, trend inflation process cannot clearly be separated from the effect of the VAT rate cut. One of the possibilities is to estimate the trend inflation process using some kind of a model (e.g. ARIMA), and identify the effect of the VAT rate cut as the difference between the price change obtained from the model and the actual developments in prices. Another possibility is to create a reference time series of the products not affected by the VAT rate cut which showed similar price dynamics to that of the product group examined. In this case, one can assume that the difference between the price developments of the ranges of products affected by the VAT rate cut and not affected by the VAT rate cut was caused by the VAT rate cut. In this case, this method could be applied for market services. Finally, useful information can be gained from the distribution of monthly price changes of individual products. Based on the distributions it can be seen whether the effect of the VAT rate cut affected individual product groups evenly (single-mode or multi-mode distribution), and how many months it takes for the VAT rate cut to have an effect, i.e. whether at a given point in time the distribution of price changes which was usual before the VAT change has been more or less restored.

#### Table 2-2

Estimated effect of the VAT rate cut in individual items of the consumer price index

	Weight (%)	Previous estimate for		Evaluation of the previous estimate
		pass through	effect of VAT rate cut	
Processed food	11.8	90	-0.5	Acceptable
Industrial products	28.2	80	-2.7	Overestimated, the true effect may be between -1 and -1.5 percent
Market services	19.0	33	-0.7	Acceptable
Vehicle fuels	4.7	100	-4.0	Acceptable
Regulated prices	20.3	94	-1.5	Overestimated, the true effect may around -1.2 percent
Consumer price index	100.0	74	-1.4	Overestimated, the true effect may around -1.0 percent
Core inflation	67.7	66	-1.4	Overestimated, the true effect may around -0.8 percent

## Still low trend inflation, with changing internal structure

We believe that trend inflation, as during the whole last year, stood at a very low level in Q1 as well, and did not show signs of a turn in the direction of inflation. March and April trend inflation developments – which already were most probably not influenced by the VAT rate cut in January – continue to indicate trend inflation of around 2 per cent. Even lower trend inflation is likely on the basis of the core inflation excluding the effect of the changes in indirect taxes; the constant tax rate core inflation stood at a level of around one per cent in Q1.<sup>15</sup>

At the same time, a shift in the internal structure of core inflation can clearly be observed, which was also described in detail in the February update of the Report. The inflation differential of tradable products and market services, which was very high for a long time even in international comparison and did not show any signs of decline in Q4 either, took a quick turn early this year. Deflation in tradable products (excluding the effect of the VAT rate cut) decreased, while there was a substantial decline in services inflation.

#### Chart 2-24

#### Indicators of trend inflation\*

(annualised quarter-on-quarter growth rates)



\* In case of the time series of core inflation the latest data point is the average of the price changes in March and April. We believe that data from March already reflect trend inflation developments quite well, because the VAT rate cut only had a slight effect by then. Core inflation excluding the tax effect is the MNB's own estimate, based on our estimate for the effect of the VAT rate cut in January 2006 on core inflation.

## Low tradables inflation, with some signs of acceleration

Disregarding the inflation reducing effect of the VAT rate cut, inflation of tradable products remained low. On the

<sup>&</sup>lt;sup>15</sup> Core inflation not containing the indirect tax change is an MNB estimate, which also adjusts core inflation taking account of the price reducing effect of the latest VAT rate cut estimated by the MNB. Therefore, there is a difference in conception between this indicator and the constant tax rate index published by the CSO, which is adjusted by the technical effect of the tax rate change. As, contrary to the aforementioned indicator, the constant tax rate index does not take into account that sellers of consumer goods do not completely reflect the VAT rate changes in their prices; in case of the VAT rate cut the constant tax rate index overestimates trend inflation.

other hand, in the latest months, there appear to be some signs of an abatement or a turn in the deflationary trend seen last year.

The possible end of deflation in tradables is also supported by the fact that, approaching the end of last year, industrial product inflation of the euro area also began to accelerate, which, in general, may have reflected a weakening of the earlier global disinflationary pressure. In parallel with this, it was likely that sooner or later the price reducing effect of the growing competition in the domestic product market perceptible after the EU accession would decline; retailers cannot go on increasing the ratio of cheaper imported products in their supply, and mark-ups of domestic producers and distributors may have shrunk to a relatively low level.

#### Chart 2-25

Industrial goods inflation and its main determinants\* (annualised quarter-on-quarter growth rates, the exchange rate in level)



\* For the 'domestic industrial goods inflation' time series the latest data point is the average of price changes in March and April. We believe that data from March already reflect trend inflation developments quite well, because the VAT rate cut only had a slight effect by then.

It is important, however, to emphasise that the significant depreciation of the forint vis-à-vis the euro in the last months is not yet reflected in the latest developments of tradables inflation. The inflationary effect of exchange rate depreciation is expected to materialize only later, on the top of current inflation developments.

#### Services inflation started to decline

At the same time, disinflation of market services clearly took place: the annual price increase fell from the earlier 6–7 per cent below 5 per cent by March-April. The decline in inflation is not only the result of the VAT rate cut, as the

inflation of services not affected by the VAT rate cut, which constitute more than half of all services, also declined. This resulted in a decline in the upside inflation risk, which we had seen earlier in services inflation stabilising at a high level, despite the low inflation environment.

#### Chart 2-26

#### Market services inflation\*

 $(annualised\ quarter-on-quarter\ growth\ rates)$ 



\* For the 'market services inflation' time series the latest data point is the average of price changes in March and April. We believe that data from March already reflect trend inflation developments quite well, because the VAT rate cut only had a slight effect by then.

The long-awaited start of the expected adjustment of services inflation to the low inflation environment was probably facilitated by several factors. On the one hand, the gradual decline in labour costs of the sector during 2005 may have contributed to disinflation. On the other hand, from the demand side, disinflationary pressure may have followed from the fact that the earlier strong shift in relative prices of services and tradables probably drove consumption demand from services to tradable products in 2005 H2.<sup>16</sup> Lastly, the sudden fall in inflation at the beginning of the year is in conformity with the observation also valid for the euro area, that in a low inflation environment services' price adjustments take place typically once a year, at the beginning of the year.

#### Declining trend in inflation expectations

According to the surveys conducted by Medián and GKI as well, economic agents' inflation expectations also seem to be adjusting to the low inflation environment. As a result of the VAT rate cut in January, there was a notable decline in both Q1 perceptions and expectations of households and business companies, which may also have reflected respondents' optimism regarding the VAT rate cut. Although this decline was partly corrected according to Medián's survey for Q2 (prepared in April), perceptions

<sup>16</sup> See further details on our hypothesis with regard to the shift in consumption towards tradables in the February 2006 update of the Report.

and expectations for a longer period of time continue to show a clearly declining trend.

#### Chart 2-27

#### Households' inflation perception and expectation

– Medián survey\*

(for the last and next 12 months)



\* Based on the household survey conducted by Medián, commissioned by the MNB.

#### Inflation increasing effects outside core inflation

In the last two quarters, prices of products outside core inflation continued to grow faster than inflation, which has also been reflected in the nearly 2 percentage point gap between the consumer price index and core inflation for a year. This phenomenon is partly global in nature, and is also attributable to the increase in the relative world market price of raw materials compared to processed goods.

#### Chart 2-28

Households' inflation perception and expectation

- GKI survey\* (for the last and next 12 months)



\* Balance indicator, i.e. a move in the positive (negative) direction shows the increase (decline) in inflation perception or expectation. Sources: GKI survey, DG Ecofin data base.

During the last two quarters, within the range of products outside core inflation, mainly the price increases of vehicle fuels, which are directly affected by high oil prices, and of unprocessed foods were notable. Inflation in vehicle fuels was around 9 per cent, and the further increase in world market oil prices in recent months and the depreciation of the forint/euro exchange rate portend continuation of the inflationary effect of this product group. The price increase of unprocessed foods was especially remarkable early this year. This is basically attributable to the price shock of vegetables, which is discussed in more detail in the box below.

## Box 2-4 On the price increase of unprocessed foods in early 2006

During the last year the consumer price of unprocessed foods in Hungary increased by nearly 20 per cent, which is far beyond the average 3 per cent increase in the previous four years. This dynamic increase in prices is primarily attributable to vegetables. The greater part of producer prices of these products – although there are notable differences from product to product – doubled or tripled compared to the prices one year earlier.<sup>17, 18</sup> However, it is also true that the current prices are especially high compared to last year, while the difference compared to 2003 or 2004 is not so remarkable. In parallel with producer prices, consumer prices also grew dynamically in the past period: the annual index already exceeded 70 per cent in March.

<sup>&</sup>lt;sup>17</sup> See details in the 15th week vegetable and fruit market report of the Agricultural Economics Research Institute.

<sup>&</sup>lt;sup>18</sup> It is worth mentioning that there are notable differences between various statistics of vegetable price developments. In contrast to the 70 per cent change in the consumer price index of the CSO, the CSO's producer price index shows a 20-30 per cent change, while the aggregate producer price index of the Agricultural Economics Research Institute shows a 40 per cent annual change. At the same time, product level statements of the Agricultural Economics Research Institute indicate that producer prices doubled or tripled within the span of one year. The huge difference between aggregate producer price indices and product level price indices follows from the fact that the aggregate indices also take account of a high weight of vegetables of mainly industrial use.

#### Chart 2-29



Investigating the underlying reasons, first it can be established that the price increase of vegetables in the past one year in Hungary was country specific.<sup>19</sup> One may wonder why the prices in Hungary are not forced by imports to decline. The ratio of imported vegetables has been around 10 per cent for years, and it did not change in 2005 either. Most probably, the most important obstacle to an increase in imports is that even the current high prices in Hungary do not exceed the prices in the euro area and in neighbouring countries.

The increase in the prices of vegetables produced in Hungary last year is most probably attributable to a decline in supply: crop area in 2005 was down 15 per cent on the previous year. At the same time, it is slightly surprising that the effect of supply on consumer prices is so significant. An underlying reason might be that the turnover in winter

#### Chart 2-30

Consumer prices of vegetables in the euro area and in selected Central and Eastern European countries

(seasonally adjusted, level)



months is much lower than in the rest of the year, which may allow for higher volatility of prices.

Starting from April, vegetables grown outdoors in Hungary gradually appear in supply, i.e. prices will tend to reflect 'this year's' demand and supply conditions. However, at this point in time it cannot be judged whether supply this year will exceed that of last year (for example as a result of motivation by higher prices of the past period), i.e. it is a question whether there will be a price adjustment, and if so, of what magnitude.

<sup>&</sup>lt;sup>19</sup> It is interesting that – similarly to the complete range of unprocessed food products – the volatility of vegetable prices is much higher in Hungary than in the euro area or in the neighbouring countries, and that EU accession has not resulted in any change in this. Statistical methodological differences might also play a role in this phenomenon.

3. Inflation outlook





In our projection, the growth rate of the consumer price index accelerates from 2 per cent in 2006 to around 3 per cent in 2007 and 2008. In parallel with this, the core inflation indicator may also increase from the present very low level of 1 per cent to about 3 per cent. We expect this to materialise through a gradual acceleration of inflation of products in foreign trade, while in the services sector the rate of increase in prices may sink from the current level to around 4–5 per cent.

#### **Box 3-1** Assumptions

In line with our earlier practice, our forecast is conditional, i.e. based on the assumption of fixed paths for certain variables. In accordance with our rules, exchange rate data were fixed at the average of the last full month for the entire projection period. Accordingly, the calculations are based on a EUR/HUF exchange rate of 265.3 and a EUR/USD rate of 1.227. In addition, the forward path was taken into account for the price of the Brent oil, which is hovering around USD 70 per barrel, following a slight increase. We also assumed a 6 per cent central bank base rate and 6.8 per cent five-year bond yield.

Our forecast for 2006 is based on the measures planned in the tax law and measures specified so far, which resulted in a total fiscal easing of around 0.8 per cent of GDP. An approximately one half percentage point improvement of the primary balance is assumed for 2007 and 2008. As measures already in place and budgetary determinations would project a 1-1.5 percentage point worsening of the deficit up until 2008 (without further steps), the moderate fiscal contraction assumed in the forecast would require measures exceeding two per cent of GDP to be taken by 2008.

Finally, the two fan charts provide information on the uncertainty of our projection stemming from the difference between the aforementioned variables and internal mechanisms of the economy (except for the interest rate as a monetary policy instrument and the exchange rate). The Report is based on information available by 15 May, at the close of the business day.

Trend inflation stood between 1 and 2 per cent in 2006 Q1, but by the second part of the year core inflation is expected to increase as a result of numerous external and internal developments. In the later phase of our projection period these effects will gradually decline, and trend inflation may settle at around 3 per cent in 2008.

In the short term, most factors suggest an increase in inflation. Imported inflationary pressure is expected to gradually

## Box 3-2 Uncertainties surrounding the inflationary effects of changes in the exchange rate

The impact of changes in the exchange rate on the domestic consumer price index is characterised by the magnitude of exchange rate passthrough. Changes in the exchange rate affect inflation through several channels and over different time horizons. Although the extent and developments over time of the exchange rate pass-through are of key importance in terms of meeting the inflation target, quantification of the contributions of the individual effects, which change over time as well, entails significant uncertainties. Following an outline of individual channels, difficulties arising in the analysis of the current situation in Hungary are presented below. strengthen due to the weaker HUF, the effect of market competition coming to an end, an increase in European industrial goods inflation and rising oil prices. In addition, a great part of domestic developments will also have an inflationary effect: the rise in minimum wages this year and buoyant economic activity point to an increase in prices. At the same time, decelerating inflation in market services and declining inflation expectations may partly contribute to offsetting the above factors.

It is mainly the direct inflation effect stemming from the changes in domestic prices of imported consumer goods which first prevails in the event of forint weakening. Over a medium term horizon (one or two years), price changes of imported goods as cost elements used in production and also the price changes of goods competing with imported products, but produced in Hungary affect inflation. This latter effect develops as a result of the demand regrouping between imported and domestic products and the resulting changes in profit of domestic producers.<sup>20</sup> Over the longer run (three to four years), effects appearing through changes in wages and labour market developments in general and due to the modification of expectations, which also facilitate wage adjustment, may prevail.<sup>21</sup>

<sup>&</sup>lt;sup>20</sup> For example, in the case of depreciation, imported goods become, *ceteris paribus*, relatively more expensive compared to the goods produced by Hungarian producers competing with these products. Consequently, demand for goods made in Hungary increases, and, as a response, Hungarian producers raise their prices, which results in an increase in their profits. An effect contrary to the above is that the real value of incomes declines as a result of the increase in the price level, which, through the decline in aggregate demand, tempers the price increase stemming from the depreciation.

<sup>&</sup>lt;sup>21</sup> The effects of exchange rate changes on real-economy and nominal variables are discussed in detail in the MNB's BS 2005/6 Background Study.

On the one hand, the direct and indirect effects of the exchange rate appreciation following the widening of the band, and on the other hand, the exchange rate level stabilising steadily on the strong side of the band may have played a significant role in the disinflation observable in Hungary since 2001. It is especially difficult to assess the second-round disinflation effect of exchange rate appreciation, which works through the adjustment of wages and expectations, and the development over time of these effects, since – in addition to the exchange rate – they may have been significantly influenced in the past period by a number of factors (changes in the personal income tax and contributions, modifications of minimum wages, a substantial pay rise for civil servants in 2002, etc.).<sup>22</sup>

There are several uncertainties in assessing the effects of the current exchange rate change (deprecation). On the one hand, monetary policy may have become more credible, which may have reduced the passthrough of temporary exchange rate movements. Inflation targeting proved essentially successful, as inflation was brought down close to price stability, which probably adds to the credibility of the inflation target. Accordingly, any external, temporary shock, including the exchange rate shock, may *ceteris paribus* have a lesser impact on inflation.

On the other hand, the increased exchange rate volatility experienced in the last six months can by itself modify – probably reduce – the magnitude of the pass-through. The underlying reason for this is that due to the higher volatility of the exchange rate, economic agents are less able to assess whether an exchange rate change is lasting or temporary, and companies – in order to avoid costs related to changing their prices<sup>23</sup> – strive to avoid frequent price changes. Consequently, fewer participants and to a lesser extent will react to a given change in the exchange rate. This factor, similarly to the former credibility factor, may only modify the pass-through stemming from a temporary change of the exchange rate, but not the effects a permanent change has on inflation. The size of the pass-through for both a temporary and a permanent change in the exchange rate may be modified by the stronger competition following the EU accession and due to the stable exchange rate. This has however an ambiguous effect: it may have reduced firms' market power, thus they are less able to 'swallow' the cost modifying effects of exchange rate fluctuations, which are especially influential through imported raw materials and semi-finished products. One opposing, that is pass-through reducing, development might be if the fierce competition urges the corporations to follow a more aggressive market-procuring or market-defending strategy. In this case they would try even harder to avoid changing their prices and to retain their customers by means other than price reduction – typically marketing instruments.

Finally, the increasing foreign exchange loan holdings of economic participants – mainly from the demand side – may also modify inflationary effects following from exchange rate changes: a weaker forint exchange rate entails a higher debt burden in forints, and thus may lead to lower demand through a decline in wealth and income. Although economic participants' foreign exchange debts are growing rapidly, the current level is still relatively low.<sup>24</sup> Accordingly, the effect stemming from the revaluation of the foreign exchange debt may first of all appear at the level of individual economic agents who have a net foreign exchange debt, hence the decline in aggregate demand, as compared to other inflanatory effects of the exchange rate, is probably very low at the moment.

Overall, it can be established that the impact of the exchange rate on inflation is determined by several factors, which may also change as time progresses, and consequently, exchange rate pass-through may also change eventually. However, based on the currently available information, there is not sufficient evidence to make us modify our earlier assumption of the magnitude of the exchange rate passthrough.

Over the longer run, inflationary and disinflationary factors are expected to become more balanced, which may result in inflation of around 3 per cent. With the slowdown in economic activity, demand side pressure will weaken. On the cost side, we expect that as the primary effect of the rise in minimum wages tapers off, developments in unit labour costs will be subdued. On the one hand, the reduction in the social security contribution planned for 2007 allows for very moderate developments in labour cost, and at the same time, unit labour costs in the relatively loose labour market may change in line with price stability in the longer run as well. In addition, the effect of high oil prices is also more likely to exert inflationary pressure in 2006 and in the first half of 2007, while in the longer term these effects will also become weaker.

In addition to the above, the slowdown in price dynamics of items outside core inflation (unprocessed food, fuel

<sup>&</sup>lt;sup>22</sup> For a detailed analysis of wages and the labour market in general, as the main factors involved in long-term adjustment, see M. Zoltán Jakab and Mihály András Kovács 'Factors in exchange rate pass-through: simulations using the NIGEM model' (MNB Working Papers 2003/5).

<sup>&</sup>lt;sup>23</sup> Menu costs, information costs, possible costs stemming from loss of market.

<sup>&</sup>lt;sup>24</sup> See Charts 2-13 in the April 2006 issue of the MNB's Report on Financial Stability.

prices) also has a reducing effect on the consumer price index over the longer run.

#### Chart 3-1



#### Robust growth in all sectors over the short run and slowdown over the longer run is expected

In our view of the real economy, robust external demand growth is coupled with accelerating investment and consumption over the short run. As opposed to this, starting from 2007, most items of aggregate demand will continue to grow, but at a slower pace. Our expectations regarding both external and domestic economic activities support this view. Over the longer run, from the external demand side, high oil prices and the adjustment of equilibrium problems in the world economy may arrest growth, which may provide a basis for some slowdown in corporate investment and industrial activity.

#### Chart 3-2



The foreign and the domestic economic activity

With the decline of the effect of the VAT rate cut and fiscal easing, the expansion of households' real income may slow

down, also resulting in a lower consumption growth. At the same time, household investment is expected to stagnate over the entire projection period. A slowdown in investment dynamics over the longer run is also supported by the expected deceleration of augmented government investment. Net exports may have a steadily positive contribution to GDP growth, although the depreciation of the real exchange rate will cause a relatively subdued growth surplus due to the high import content of the economy. However, due to a deterioration in the terms of trade, favourable processes in volume will not be directly reflected in value terms in the developments of the external equilibrium.

#### Chart 3-3





Overall, in 2006, the gross domestic product will grow faster than potential output, at a pace of around 4.5 per cent. Further on, GDP growth - and all its components gradually slows down, stabilising at a rate of 4 per cent. By

#### Chart 3-4

and contributions to it



Annual growth rate of gross domestic product

contrast, given the worsening of the terms of trade over the short run, gross domestic income will increase substantially slower than GDP in this year, at a pace of around 2.5 per cent. Starting next year however, it gradually accelerates to a growth rate of 3.5 per cent, nearly on par with GDP growth.

#### Rise in minimum wages is expected to temporarily add to wage inflation

In the labour market, substitution of labour with capital is expected to continue both at the corporate level and due to the gradual decline in sectors which employ relatively more labour. The increase in minimum wages may facilitate this process, although we believe that the slowdown in wages will probably break only temporarily. On the one hand, the rise in minimum wages does not completely translate into a real rise in wages. On the other hand, in the loose labour market at an aggregate level the feed-through effects of the wage shock are much less likely to be felt compared to the rises in 2001 and 2002. Thirdly, the reduction of the social security contributions planned for 2007 may be a significant labour cost reducing factor, which also counters the feedthrough effects of the rise in minimum wages. Overall, wages in the private sector may increase by around 8 per cent in 2006, and by 6-7 per cent over the longer run.

#### Accelerating inflation in the short run, more balanced core inflation in the long run

Following the earlier, favourable disinflationary effects, external factors determining inflation will trigger an acceleration of trend inflation. The inflation reducing effect of the increasing competition after EU accession has weakened

#### Chart 3-5

Euro area industrial goods price indices (annual changes)

Per cent Per cent 1.6 6 1.4 5 1.2 4 3 1.0 2 0 -3 0.0 -4 Consumer price of Producer price of industrial industrial goods goods (right-hand scale)

in the past period, while the euro area consumer price index of industrial products has started to rise after a long period of stagnation. In addition to accelerating imported inflation, the HUF exchange rate, which is now more than 5 per cent weaker than it was previously, may also cause higher inflation, especially in the area of industrial goods.

Inflationary pressure is also increased by the historically high price of oil, although it is very difficult to assess its impact. In addition to its tangible effect in vehicle fuel and energy prices, other countries also report an only subdued pass-through.<sup>25</sup> The appearance of the oil price increase in consumer prices may be hindered by strong competition, or even if the high prices are justified by the increased demand for oil. In our projection our calculations are based on a modest price increase in line with the forward path and on its primary effects mainly. Therefore, oil prices, which are currently hovering at historical highs, will add to inflation only at the beginning of the projection period, while over the longer run oil prices will mainly influence regulated energy prices. Accordingly, as far as regulated prices are concerned, energy prices are expected to gradually adjust to high oil prices, while developments in most of the remaining items are assumed to be neutral, i.e. they are presumed to follow core inflation.

This year, in addition to the aforementioned factors, robust external and domestic economic activity will also entail an increase in inflation, although over the longer run a slowdown in economic activity is expected to be coupled with a decline in demand side inflationary pressure.

Over the longer run, expenditure side inflationary pressure may also weaken, as most expenditure side factors, such as labour costs, exchange rate and the effect of oil prices, are expected to peak in a year, provided that our assumptions in the main scenario hold true.

As a result of the processes outlined above, the significant inflation differential between the prices of the services sector and of industrial products observed in the past period is expected to decline over the forecast period. On the one hand, the underlying reason is that all factors point to an increase in prices of industrial goods, while on the other hand, more marked disinflation in market services is expected, in which lower inflation expectations and declining labour costs due to expected measures may also play a role.

At the beginning of our projection period, the impact of earlier disinflationary effects and the proliferation of inflation-

<sup>25</sup> See e.g. the IMF's spring 2006 publication titled World Economic Outlook and the March 2006 Monthly Bulletin of the ECB.



ary factors on price indices is masked by the VAT rate cut in 2006; thus core inflation in 2006 is expected to slightly exceed 1 per cent, while later it is expected to be around 3 per cent.

## Consumer price index to exceed core inflation in the beginning

Due to the double-digit unprocessed food inflation observed at the beginning of the year and increasing petrol prices resulting from the oil price rise, the consumer price index is expected to significantly exceed core inflation and reach around two per cent in 2006. Over the longer run, however, with the decline in food prices and the weakening of the effect of the oil price rise, the growth rate of the consumer price index will be essentially identical with that of core inflation.

#### Chart 3-6

Annual growth rate of the consumer price index and individual sectors' contribution



#### Balanced uncertainty surrounding the consumer price index, growth is burdened with a slightly downside risk

We believe that uncertainties surrounding the main scenario of our inflation projection are broadly balanced over the entire forecast horizon. This is also reflected by the fan chart, which indicates a somewhat higher probability of inflation exceeding the target in 2007, while in 2008 the uncertainty surrounding the inflation target is nearly symmetrical. With regard to the uncertainty dispersion around economic growth, slight downside risks are perceived over the entire projection horizon.

The balanced risk assessment around our inflation forecast is the result of upside and downside risks, which more or less offset one another. The most important risk factor suggesting lower inflation is the reduction of the social security contribution. We believe that one cannot rule out the possibility that an improvement in profitability due to the reduction of the social security contribution will entail higher employment, lower wage inflation and lower inflation compared to the main scenario.

A stronger-than-assumed demand tightening effect of the budget also represents a risk pointing to lower inflation. One can also not rule out that favourable developments in market services prices mirror a slowdown in inflation expectations, which may also lead to lower inflation.

#### Chart 3-7



(percentage changes on a year earlier)



\* The fan chart represents the uncertainty around the central projection. Overall, the coloured area represents a 90 per cent probability. The central, darkest area containing the central projection for the consumer price index illustrated by the white dotted line (as the mode of distribution) refers to 30 per cent of the probability. The year-end points and the continuous, horizontal line from 2007 show the value of the announced inflation targets.

#### Chart 3-8

#### **GDP** projection fan chart\*

(percentage changes on a year earlier)



\* The fan chart represents the uncertainty around the central projection. Overall, the coloured area represents a 90 per cent probability. The central, darkest area containing the central projection for GDP illustrated by the white dotted line (as the mode of distribution) refers to 30 per cent of the probability. However, the above factors are offset by uncertainty factors pointing to higher inflation, such as a higher level of regulated prices and world market oil prices compared to the assumptions in the main scenario.

The possibility that fiscal policy may restrain aggregate demand more than assumed is the main downside factor in the dispersion of uncertainty around our economic activity projection. In addition to this, a faster increase in regulated prices compared to the main scenario may also represent a downside risk, as this would result in lower household real income and consumption demand. The rise in minimum wages in 2006 may also entail more subdued growth, if this leads to lower employment due to an increase in labour costs. Downside risk is also perceived in the growth effect of world market prices of oil. We believe that several factors – e.g. an adjustment of global imbalances and restrained European domestic demand – may mean less favourable developments in external economic activity than outlined above. As opposed to the above factors, the reduction of the social security contribution, through an upswing in employment, may have a favourable impact on growth prospects.

# 4. Background information and equilibrium





## 4.1. Background information on the projections

In this Report, compared to the November one, our inflation forecasts for both 2006 and 2007 have been increased. As an annual average, the increase is 1.0 percentage point for 2006 and 0.5 percentage point for 2007.<sup>26</sup>

The higher projection is a result of divergent developments, based on their effect on inflation, and a result of temporary and lasting processes.

Our assumptions of a weaker forint exchange rate and higher oil prices result in higher inflation over the entire projection period. Moreover, based on the figures for the first two months of this year, it seems that the impact on wages of the rise in minimum wages was greater than we previously expected, which may entail higher inflation due to higher labour costs and faster outflow of income.

Over the shorter run (in 2006), our inflation forecast was increased to a greater extent than over the longer run, as several factors are likely to add to the consumer price index only temporarily. For example, the VAT rate cut was reflected in consumer prices to a lesser extent than originally expected.<sup>27, 28</sup> In addition, in respect of seasonal products, agricultural producer prices increased significantly over the last six months, which was also reflected in the prices of unprocessed food.<sup>29</sup> It is worth mentioning that – as opposed to the developments in 2004 and 2005 – the

prices of alcoholic beverages increased remarkably, despite the unchanged or declining indirect tax burden on these products. For the time being, we consider it as a one-off adjustment to restore profitability, i.e. over the longer run we basically expect the same rate of price increase as previously assumed.

In contrast to the above, the dynamic disinflation in market services in Q1 may contribute to lower inflation. This, coupled with the decline in wage inflation and households' inflation expectations, may indicate that adjustment to the low inflation environment is gradually spreading to the entire economy. In addition to the above, potentially lower inflation is also indicated by the fact that our forecast for productivity growth exceeds our earlier projection, which is mainly attributable to the favourable prospects for economic activity and to employment, which is still expected to remain unchanged, despite the favourable prospects for economic activity.<sup>30</sup>

Overall, our picture of inflation expected for the coming two years has not changed from the aspect that both trend inflation and the consumer price index will increase from the present level of around 2 per cent to approximately 3 per cent by 2007. However, the inflation path is expected to be higher over the entire projection horizon, and particularly at the beginning of the period.

#### Table 4-1

	November 2006		Cur	rent	Change	
	2006	2007	2006	2007	2006	2007
Central bank base rate (per cent)**	6.00	6.00	6.00	6.00	0.0***	0.0***
EUR/HUF exchange rate	251.7	251.7	262.6	265.3	4.3	5.4
EUR/USD exchange rate (US cents)	120.2	120.2	122.1	122.7	1.6	2.1
Brent oil price (USD/barrel)	59.5	58.0	68.9	71.4	15.8	23.1
Brent oil price (HUF/barrel)	12,181.7	11,880.0	14,827.2	15,434.7	21.7	29.9

Changes in major assumptions relative to the November Report\*

\* Annual averages, based on the average exchange rate of April 2006 and on the forward oil price path.

\*\* Year-end figures.

\*\*\* Difference in percentage points.

<sup>&</sup>lt;sup>26</sup> Our Report is based on information and data received up to 15 May 2006.

<sup>&</sup>lt;sup>27</sup> If the underlying reason is that market competition is less keen than previously thought, then it can be interpreted as an indication of higher inflation even over the longer run.

<sup>28</sup> See details in Box 2-3

<sup>&</sup>lt;sup>29</sup> See details in Box 2-5.

<sup>&</sup>lt;sup>30</sup> Furthermore, high agricultural producer prices will actually cause negative unprocessed food indices in 2007 H1 (due to the base effect).

#### Major factors affecting the inflation projection

	Higher inflation is caused by	Lower inflation is caused by
Temporary effect	The VAT rate cut appeared in the consumer prices to	Actually high agricultural producer prices, by forming
	a lesser extent than previously estimated	a high base, will cause negative unprocessed
	High agricultural producer prices among seasonal	food indices in 2007 H1
	product	
	Rapid price increase of alcoholic beverages in the	
	last quarter	
Lasting process	More depreciated forint exchange rate assumption	Disinflation of market services started
	Higher forward oil price path	Declining inflation expectations
	The impact on wages of the rise in minimum wages	Faster productivity growth than expected earlier
	is greater than estimated earlier	

Our projection for economic growth in 2006 remained unchanged, while it was reduced by 0.1 percentage point for 2007. The main underlying reason is the reduction of our projection for investment and household consumption.

## The impact of an alternative exchange rate and interest rate path

Continuing with past practice, we analysed the extent to which our projection would have varied, if average exchange rate and interest rate forecasts in the Reuters survey, rather than our own constant exchange rate and interest rate assumptions, had been used as a basis. Market analysts expect the central bank base rate to rise from 6% to around 6.5% over the period to end-2006 and to decline gradually from that level to 5.75% over the period to end-2007. In addition, they forecast the exchange rate of the forint vis-à-vis the euro to appreciate to levels around 257 by the end of 2007.

#### Chart 4-1

Official interest rate path based on the April Reuters poll and the assumption of constant interest rates



If we had used these expectations as a central assumption, our inflation projection would have been lower by 0.05 percentage points for 2006 and by 0.3 percentage points for 2007. Our forecast of economic growth for 2006 would not have been changed materially, and it would have been lower by 0.1 percentage point for 2007.

## A comparison of our projections with those of other institutions

The MNB's inflation projection is identical with the average expectation of analysts and research institutes. However, the projection for economic growth in both years is on the upper edge of market expectations. With regard to equilibrium indicators, the MNB's projection for the current account and general government deficits in 2006 is not different from market expectations, although its current account deficit projection for 2007 is higher.

#### Chart 4-2

Exchange rate path based on the April Reuters poll and the assumption of constant exchange rates\*



### Changes in the central projections relative to November (percentage changes on a year earlier, unless otherwise indicated)

	2005	20	06	200	)7	20	08	
	Actual /	ctual / Forecast						
	Estimate	Nov.	Current	Nov.	Current	Nov.	Current	
Inflation (annual average)	!	<u> </u>					<u>.</u>	
Core inflation <sup>1</sup>	2.1	0.8	1.0	2.8	3.4	n. a.	3.3	
Consumer price index (CPI)	3.6	1.1	2.1	2.8	3.3	n. a.	3.2	
Economic growth								
External demand (GDP-based)	2.0	1.9	2.2	2.0	2.2	n. a.	2.3	
Fiscal demand effect <sup>2</sup>	0.9	1.0	0.8	(-0.5)-0.0*	-0.6*	n. a.	-0.6*	
Household consumption <sup>3</sup>	2.1	3.7	3.7	3.2	3.4	n. a.	3.0	
Memo: Household consumption expenditure <sup>3</sup>	2.4	4.3	4.0	3.7	3.4	n. a.	2.9	
Gross fixed capital formation	6.6	5.4	6.3	2.9	2.8	n. a.	4.4	
Domestic absorption <sup>3</sup>	0.2	6.1***	3.8***	3.1***	3.6***	n. a.	3.6	
Exports	10.6	9.2	13.3	9.2	9.6	n. a.	9.4	
Imports <sup>4</sup>	5.8	11.1***	12.4***	8.2***	9.0***	n. a.	9.2	
GDP <sup>3</sup>	4.1 (4.3)**	4.5	4.5	4.3	4.2	n. a.	3.8	
Current account deficit <sup>4</sup>								
As a percentage of GDP	7.3	9.1***	8.3***	8.5***	8.2***	n. a.	8.0	
EUR billions	6.4	8.3***	7.4***	8.3***	7.7***	n. a.	8.0	
External financing requirement <sup>4</sup>	•	•	•		-	•		
As a percentage of GDP	6.5	8.4***	7.1***	7.7***	6.8***	n. a.	6.2	
Labour market		•	•			•		
National economy gross earnings⁵	8.9	6.5	6.8	6.0	6.2	n. a.	5.7	
National economy employment <sup>6</sup>	-0.1	0.5	0.2	0.7	1.0	n. a.	0.6	
Private sector gross average earnings	6.9	7.3	7.9	6.5	6.8	n. a.	6.1	
Private sector employment <sup>6</sup>	0.3	0.9	0.6	1.1	1.5	n. a.	0.9	
Private sector unit labour cost	4.7	3.1	4.3	1.2	0.2	n. a.	2.6	
Household real income	4.3****	5.0	4.7	2.7	2.6	n. a.	2.3	

<sup>1</sup> For technical reasons, our projected indicator may be different over the short term from the index published by the CSO. Over the longer term, however, both follow identical trends.

<sup>2</sup> Calculated from the so-called augmented (SNA) type indicator; a negative value means a narrowing of aggregate demand.

<sup>3</sup> With full knowledge of quarterly data up to 2000, our current projection was prepared in line with the new FISIM methodology. The data do not contain however the effect of CSO revision in detailed national accounts, which was published on 16th of May after closing our forecast process.

<sup>4</sup> From 2004 on, the uncertainty in trade statistics may imply higher actual values for the current account deficit/external financing requirement than the official

data and our projections based on the latter.

<sup>5</sup> Calculated on a cash-flow basis. Here we note, that in our November report, we used data of a different concept. In our publication in November, we used accrual data and the figures also contained estimated wages fore those who are not measured by the Labour Statistics, but surveyed by the LFS. Here we report figures for November consistent with our current practice.

<sup>6</sup> Consistent with the CSO labour force survey.

\* Assumption for the fiscal impulse inherently consistent with the macroeconomic path; due to the lack of a draft bill on the 2007 and 2008 budgets, we cannot provide a detailed fiscal projection.

\*\* Adjusted for leap-year effect.

\*\*\* Our projection allows for the adverse impact of the procurement of Gripen fighter aircraft on the current account and its contribution to an increase in community consumption and imports.

\*\*\*\* MNB estimate.

#### The MNB's main scenario versus other projection

	2006	2007
Consumer price index (average annual increase, percentage)		
MNB	2.1	3.3
Consensus Economics (March 2006) <sup>1</sup>	1.6-1.9-2.3	1.9–2.9–3.8
OECD (December 2005)	2.0	2.7
European Commission (autumn 2005)	2.0	3.0
IMF (April 2006)	2.0	2.7
Reuters survey (April 2006) <sup>1</sup>	2.0-2.2-2.6	2.5-3.4-4.6
World Bank (November 2005)	2.2	n.a
GDP (annual growth, percentage)		
MNB	4.5	4.2
Consensus Economics (March 2006)1	4.0-4.3-4.6	3.0-3.9-4.5
OECD (December 2005)	4.2	4.0
European Commission (autumn 2005)	3.9	3.9
IMF (April 2006)	4.4	4.2
Reuters survey (April 2006) <sup>1</sup>	3.5-4.3-4.5	2.8-3.9-4.4
World Bank (November 2005)	3.8	n.a
Current account deficit (in EUR billions)		
MNB	7.4*	7.7*
Consensus Economics (March 2006) <sup>12</sup>	6.3–7.5–8.7	5.5-7.3-8.9
Reuters survey (April 2006) <sup>1</sup>	5.9-7.2-8.1	6.4-7.3-8.0
Current account deficit (as a percentage of GDP)		
MNB	8.3*	8.2*
OECD (December 2005)	8.5	7.9
European Commission (autumn 2005)	8.4	7.7
IMF (April 2006)	8.2	7.5
World Bank (November 2005)	8.2	n.a
General government deficit (according to ESA95, as a percentage of GDP)		
MNB	7.8-8.9**	n.a
Consensus Economics (March 2006) <sup>1</sup>	5.7-7.2-10.2	4.3-6.0-8.0
European Commission (autumn 2005)4	6.7	6.9
Reuters survey (April 2006) <sup>1</sup>	7.0-8.0-9.0	5.4-6.4-7.5
World Bank (November 2005)	5.7	n.a
Projections on the size of Hungary's export market	1	1
MNB	5.7	4.6
OECD (December 2005) <sup>3</sup>	6.3	7.3
European Commission (autumn 2005) <sup>3</sup>	6.0	5.9
IMF (April 2006) <sup>3</sup>	5.8	5.1
Projections on the GDP growth rate of Hungary's trading partners	1	1
MNB	2.2	2.2
OECD (December 2005) <sup>3</sup>	2.1	2.4
European Commission (autumn 2005) <sup>3</sup>	2.1	2.4
IMF (April 2006) <sup>3</sup>	2.5	2.3

MNB projections are so-called 'conditional'projections. Therefore, they cannot always be directly compared to other projections.

<sup>1</sup> In addition to the averages of polled analysts' responses (the values in the middle), the smallest and largest values are also indicated for the Reuters and Consensus Economics surveys in order to illustrate dispersion.

<sup>2</sup> The survey specifies current account projections in US dollars, therefore they are converted at the EUR/USD exchange rate assumed in the current Report.

<sup>3</sup> Values calculated by the MNB; the projections of the named institutions regarding individual countries are considered with the weights used for calculating the MNB's own external demand indicators. This way, the forecast may differ from the numbers published by the aforesaid institutions.

<sup>4</sup> For the sake of comparability the projection of the European Commission was corrected taking into account payments to the private pension fund system.

\* Our projection takes account of the approximately 0.5 per cent GDP-proportionate negative effect on the current account resulting from the Gripen fighter procurement.

\*\* The band indicates the uncertainty of the application of the ESA methodology in Hungary.

Sources: Consensus Economics Inc. (London) Eastern Europe Consensus Forecasts (March 2006); European Commission Economic Forecasts, autumn 2005; IMF World Economic Outlook (April 2006); Reuters survey April 2006, World Bank EU-8 Quarterly Economic Report (November 2005); OECD Economic Outlook (December 2005).

# **4.2. Developments in general government deficit indicators**

In the course of 2006, fiscal policy will continue to ease aggregate demand (in our estimate, easing amounts to around 0.8 per cent of GDP), which means that the broadly defined government sector increasingly raises the income of other economic sectors compared to 2005.

The so-called augmented (SNA) balance we estimate indicates a deterioration of around one half per cent of the balance in 2006. The underlying reason is that the effect of tax cuts was only partly offset by actual measures. The fiscal demand impact indicator, which reflects the change in the aggregate demand of the broadly defined government sector, estimates the government's aggregate demand increase as 0.8 per cent of GDP in 2006. Developments in the estimated general government demand in the past period are illustrated in the chart below.

#### Chart 4-3



1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 \* Including the lump-sum recording of the Gripen fighters expected to arrive in 2006.

We believe that without further balance-improving measures during the year, the ESA deficit of the general government will not decline this year. Moreover, it may increase significantly compared to the preliminary actual figure for 2005. The underlying reason is that the deficit-increasing effect of tax cuts and increases in welfare expenditures can only partly be offset by the reduction of investment and curtailment of expenditures by budgetary institutions. In addition, the deficit cut planned by the government for 2006 partly stems from the 'outsourcing' of a considerable part of government investment to participants falling outside budgetary accounts.

A summary of past and this year's developments in various deficit indicators is shown in the table below. According to our main projection scenario, the ESA balance target defined by the government cannot be met without measures to be taken by the government. The deficit is expected to be exceeded by around 1.5 per cent of GDP, excluding the methodological risks related to the highway constructions (line 9 of Table IV.6 contains our projection increased by the methodological risks; see our estimate for the size of the risk below).

Our GDP-proportionate projection for the cash-based deficit in 2006 has changed only slightly compared to the November Report, although its composition has changed. Net cash-based interest expenditure may be around 0.3 per cent of GDP higher than previously assumed, and our projection for the deficit of the local governments has been increased, although the revision of GDP in the meantime improved the GDP-proportionate cash-based balance by nearly 0.2 percentage points.

Provided that fiscal policy remained unchanged, based on the determinants visible for 2007 and 2008, the ESA deficit would increase by approximately 1.5 per cent of GDP by 2008 compared to our main scenario for 2006. In order to attain joining the euro area in 2010 as specified in the updated Convergence Programme, deficit reducing measures amounting to at least 5.7 per cent of GDP should be taken in the next two and a half years (if the highway construction expenditure cannot be recorded statistically outside the general government in the future, the same amount of additional measures will be required).

#### Developments in deficit indicators in 2005

Fiscal developments (revenues from major types of taxes and major expenditure items) in 2005 were broadly in line with earlier Reports. Although the cash-based deficit of the

#### Fiscal indicators in our baseline scenario

 $(as\ a\ percentage\ of\ GDP)$ 

	Ac	Projection	
	2004	2005	2006
1. GFS balance	-6.5	-4.9	-8.2*
2. Adjustment of the balance of interest payments according to ESA	-0.4	-0.2	+0.0
3. Other corrections on ESA basis	0.4	-2.5	+0.4
4. ESA balance (1+2+3)**	-6.5	-7.6	(-7.8)–(-8.9)
5. Balance according to national definition***	-5.4	-6.1	(-6.3)–(-7.4)
6. Quasi-fiscal expenditures and other adjustments	-1.8	-1.7	-2.0
7. Augmented (SNA) balance (1+6)****	-8.3	-9.3	-9.8
8. Augmented (SNA) primary balance	-4.3	-5.3	-6.2
9. Fiscal impact on demand	-0.4	+0.9	+0.8

\* Excluding the revenues from the sale of MOL shares in May. There has been no government decision on the use of the privatisation revenues that may reach HUF 240 billion. Our forecast refers to the so-called GFS less privatisation revenues indicator.

 $** Including \ methodological \ risks \ (`Programme \ Roads').$ 

\*\*\* Modification of the ESA deficit, including the revenues and expenditures of private pension funds. As of 2007, this indicator will not be applicable, and thus in the spring 2007 notification (pertaining to 2006), Eurostat will no longer specify Hungary's ESA balance on this basis. See details in the relevant box.

\*\*\*\* Cash-based deficit of the general government excluding certain extraordinary income and expenditure, and including the income from quasi-fiscal activities recorded outside the general government (MNB estimate).

general government in 2005 was slightly below the level specified in the Budget Act, this phenomenon was clearly attributable to the one-off privatisation income at the end of the year (sale of Budapest Airport) and concession-type income (extraordinary payments by MOL). The 7.6 per cent GDP-proportionate level of the deficit indicator which is in conformity with European statistical standards, and the 6.1 percent level of the deficit adjusted for private pension funds, was in conformity with the deficit modified during the year, but it exceeded the original target determined in the Budget Act by 2.9 and 2.5 per cent, respectively.

The 2005 ESA balance materialised at the lower value of the target range specified in the November *Report.*<sup>31</sup> This was due to two major factors. On the one hand, a part of extraordinary budget revenues was recorded in the ESA balance as well, which improved the deficit by approximately 0.1 per cent of GDP, and on the other hand, the balance improving effect of the GDP revision carried out by the CSO in the meantime and the shift to FISIM GDP is close to 0.2 per cent of GDP.

The 2005 fiscal demand impact is estimated to be 0.8 per cent of GDP, which is below the earlier estimate of 1 per cent. An underlying reason is that the quasi-fiscal activity of the Hungarian Privatisation and State Holding Company

(ÁPV Zrt.) was less significant than expected, and another reason is that, based on the April 2006 EDP Report, our estimate for the base year of 2004 also changed.

## ESA deficit target for 2006 will probably not be attained without further balance improving measures

The Budget Act adopted for 2006 contains a target of 4.7 per cent of GDP with regard to the ESA general government deficit adjusted for private pension fund payments. According to Eurostat's earlier statement, in the EDP Report next spring and the Convergence Programme to be updated in December 2006 the government's targets for the ESA balance excluding adjustments for private pension funds will have to be updated (see details in the box below). The exclusion of the pension fund adjustment will increase the GDP-proportionate deficit by approximately 1.4 percentage points. According to Eurostat's position, expenditure related to the procurement of the Gripen fighter planes has to be accounted for in the ESA balance in the year of arrival of the aircraft, which adds a further 0.3 per cent of GDP to the deficit. Therefore, the general government deficit defined in the Budget Act is consistent with a 6.4 per cent deficit including the adjustments.

<sup>&</sup>lt;sup>31</sup> However, the ESA deficit may be modified during the September notification, based on the final 2005 accounts; e.g. final balance sheets of local governments are prepared as late as the end of April.

#### Box 4-1 Taking the costs of the pension reform into account in the budget

In the European-level co-ordination of fiscal policies the problem arose that general government deficit data are not comparable, since a part of the countries had introduced funded pension pillars, and adjusted the general government deficit indicator for the resulting short-term loss of income (Denmark, Poland and Sweden) with the justification that although the reform is costly in the short term, it improves the sustainability of fiscal processes in the long run.

Eurostat's relevant March 2004 decision stipulates that according to the ESA95 rules the contributions paid to the second, funded pension pillar have to be classified outside general government, although Eurostat's statement dated 23 September 2004 allowed the contributions paid to the funded pillar to be recorded within the general government temporarily, i.e. prior to the March 2007 fiscal notification (which is for the year 2006). The Hungarian government has used this opportunity by reporting in the Convergence Programmes and in fiscal data supply sent to Eurostat deficit figures which do not contain the balance deteriorating effect of contributions paid to the second pillar. This practice can continue as long as spring 2007, but starting from March 2007 a return to accounting for the contributions paid to the private pension fund sector outside general government will be required, i.e. a higher deficit indicator will have to be published. From that time on, even retrospectively for earlier years the time series excluding pension reform adjustments will have to be published as official general government deficit and government debt data.

The Stability and Growth Pact takes account of the costs of the pension reform on the basis of other principles. In the excessive deficit procedure, which is of key importance from the aspect of adopting the euro, one must start from the total deficit indicator, although a part of the lost revenues due to the introduction of the funded pension pillar may be taken into account temporarily. According to the regulation, starting with the first year from introduction, or starting with 2005 in case of earlier introduced reforms, when calculating the excessive deficit, losses in revenues due to the pension reform can be taken into account in a degressive manner for 5 years, i.e. 100, 80, 60, 40 and 20 per cent of the losses. (Accordingly, the general government deficit criterion in 2008 can be met if the deficit exceeds 3 per cent of GDP by a maximum 40 per cent of the cost of the pension reform.) This regulation temporarily makes it easier to meet the deficit criterion required for the adoption of the euro, but at the same time it also requires a gradual adjustment of the general government to the costs of introducing the second pension pillar.

#### Table 4-6

The MNB's projected 2006 ESA balance relative to the government's ESA deficit target (as a percentage of GDP)

	1. Deficit target according to national definition	4.7
	2. Adjustment for private pension funds	1.4
Target interpretation	3. The government's original deficit target (1+2)	6.1
	4. Settlement of accounts with the procurement of Gripen fighters	0.3
	5. The government's deficit target with adjustment for the Gripen procurement (3+4)*	6.4
Porformanaa riak	6. Assumed slippage	1.4
r enormance risk	7. Expected ESA deficit (5+6)	7.8
	8. Methodological risk (motorway construction included in the ESA deficit)	1.1
	9. Expected ESA deficit with methodological risk	8.9

\* Official deficit target of the government, based on the EDP notification sent in April 2006.

In our central projection, the expected slippage in the ESA deficit – if no additional measures are taken by the government – is 1.4 per cent of GDP, i.e. the centre of our projection for the ESA deficit of the general government is 7.8 per cent of GDP. (Our forecast for the cash-based deficit in 2006 – assuming that no additional measures are taken – is an around 8.2 per cent deficit, as opposed to the 6.9 per cent deficit level envisaged by the government.) The revenues stemming from the sales of MOL

shares qualify as privatisation revenues, that cannot be accounted in the in the ESA balance. If the government decides to account the revenues stemming from the sales of MOL shares in the GFS balance then the difference between the GFS and ESA balances will change with the same amount but in the opposite direction. (The revenues stemming from the sales of MOL shares – that can be accounted in the GFS balance – may be between 1.0-1.3 percent of GDP.

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A major part of the so-called performance risks (see line 6 in the table above) incorporated in our baseline projection is due to the increasing net interest expenditure of the central budget and our larger deficit projection of social security and local government sub-systems. The cash-based interest balance of the central government may exceed the value stipulated in the Budget Act by 0.3–0.4 percentage points of GDP. Considering that in accrual-based accounting the increasing interest expenditures are spread over several years, the higher interest expenditure in the ESA deficit is likely to amount to 0.1–0.2 per cent of GDP.

As for the target of social security funds, as a consequence of the excessively optimistic planning on the 2005 basis, an overplanning of contributions and exceeding certain open-end provisions (mainly medicine and pensions) are expected. Even using the relevant 'chapter-based' reserves of the National Health Insurance Fund (OEP), meeting the budget target of the close-end medical services will only be possible if additional measures are taken. With regard to local governments, we believe that the deficit of the sub-system may be in line with the usual election cycle (around 0.5 per cent of GDP).

The Budget Act counterbalances the effect of the decline in tax revenues related to the government's 5-year tax cutting programme<sup>32</sup> and the real-value increase in family support expenditure by restraining investment, carrying out a nominal reduction of institutional and chapter expenditures and by slightly reducing the financing of the system of local governments. The reduction of the GDP-proportionate expenditure targets at chapter level and of government institutions may lead to a situation where a part of this year's expenditure obligations is not covered by the expenditure targets. Therefore, we assume that in the case of central government provisions the creation of the socalled chapter-based general government reserve will not be effective during the year, and frozen reserves will be spent. (Should this not happen, the so-called carry-over holding may continue to grow, which would mean rolling the expenditure difficulties forward.)

Assessing the deficit target is hindered by the fact that, as opposed to 2005, the cost of motorway construction, which constitutes a significant part of government expenditure, falls out of the budget this year. This measure continues to be coupled with a methodological risk, as Eurostat will retrospectively examine whether the highways built in the 'Programme Roads' system can be statistically accounted for outside the general government (see line 8 and 9 of Table 4-6).<sup>33</sup>

We have not prepared a separate estimate for the statistical adjustments between the cash-based (GFS) and the ESA deficits, but modified the adjustment deduced by the Ministry of Finance with the difference stemming from the interest balance we have projected.

## Projection on the 2006 cash-based deficit involves considerable risks

Asymmetrical risks are related to the deficit of around 8.2 per cent expected for 2006 in our baseline case. The magnitude of risks suggesting a higher deficit has remained broadly unchanged compared to our November risk perception. However, based on fiscal developments in 2006 Q1, risks pointing to a lower deficit declined, as tax revenues were usually below the time-proportionate level, and no extraordinary savings can be seen on the expenditure side as a whole either.

<sup>&</sup>lt;sup>32</sup> See our relevant estimate for the magnitude of this on page 58 of the November Report.

<sup>&</sup>lt;sup>33</sup> On 9 May 2006 the Minister of Economy disclosed the new scheme of funding motorway constructions. According to current plans, the constructions financed so far by the government would be taken over, together with the management and operational rights, by the State Motorway Management Company Ltd. (ÁAK Zrt.). As a first step, ÁAK Zrt. would collect foreign exchange resources by issuing foreign exchange bonds and borrowing in foreign exchange, while further plans include the involvement of private capital in a magnitude of 20-40 per cent, by capital increase through a partial privatisation in the stock exchange within half a year. The Government hopes that this form of financing would meet the criteria specified by Eurostat and would be acceptable as a PPP scheme. Exact details of the planned scheme are not yet known. However, we still consider it uncertain whether Eurostat will really accept the recording of the new system of motorway financing outside of the budget.

### Uncertainty surrounding the MNB's 2006 projection (as a percentage of GDP)

Central projection on the GFS balance: -8.2 per cent						
Tax revenues are higher than assumed in the central projection.	+0.1	Tax revenues remain below the central projection.	-0.2			
Part of the general government reserves assigned to chapters can be frozen.		Measures taken to reduce spending are performed by institutions only in part.	-0.3			
		Higher-than-expected open-end expenditures.	-0.2			
		A part of the expenses related to motorway construction appears in the GFS deficit (debt assumption)	-0.5			
Local governments' cash-based deficit is lower.	+0.2	Investment spending by local governments exceeds expectations, investment cycle.	-0.1			
Impact of favourable developments on the balance	+0.5	Impact of unfavourable developments on the balance	-1.3			
GFS deficit in a favourable case	-7.7	GFS deficit in an unfavourable case	-9.5			

Of the risks related to tax revenue targets we see basically symmetrical risks at the net VAT revenues. In terms of corporate tax revenues we see downside risks due to the 2005 basis.

The government delegated the task of carrying out the expenditure reduction to the powers of institutions, thus it is more difficult to assume the attainability of expenditure reduction tasks than earlier. Actual expenditures in 2006 Q1 indicate that at the end of the year there may be tensions again at the institutions and with regard to chapter-based targets, and also in the medicine fund and health services financing.

The risk related to our interest balance projection prepared on the basis of the forward yield curve indicates a higher net interest expenditure in the magnitude of around 0.1 per cent of GDP. A lower net interest expenditure compared to our projection in our main scenario could only materialise, if fiscal adjustment during the year were followed by a fall in yields in the government securities market.

## Available information foreshadows a further increase in the deficit in 2007 and 2008

Although there is no adopted Budget Act for 2007 and 2008 yet, already several determinations are visible which will affect the scope of action for the budget in the future. In our analysis, those determinations and risks are quantified which are the expected consequences of announced government measures (decisions) and trend-like macroeconomic and market developments. Our estimates were compiled using the assumptions listed below:

- The impacts of the announced tax cuts were quantified taking account of the measures indicated in the information material titled '13 steps of the five-year tax cut programme', based on our own estimates.
- As for the pension expenditures, we prepared our own projection for the expected future developments in the Swiss index.
- Relying on past experience, we assumed that expenditures related to the family support scheme will not be valorised in 2007 and 2008.
- In calculating the loss of one-off revenue items, we assumed the abolition of the special corporate tax on financial institutions in 2007 and we estimated a GDPproportionate decrease in replenishing the compensation fund for natural gas.
- The projection for the developments in the accrual-based interest balance and the MNB's profit/loss was based on the yield curve.
- Past experience was used for estimating the investment cycle of local governments.
- In all other areas unaffected by determinations, revenue and expenditure items are assumed to grow along with GDP, as any departure from this assumption presupposes measures.

## Announced measures and current trends affecting the ESA balance in 2007 (as a percentage of GDP)

	2007	2008
Impact of the announced programme of tax cuts	-1.2	-0.7
Relations with the EU and customs duties	0.0	+0.1
Loss of temporary income	-0.2	0.0
Pension and pharmaceutical expenditures	+0.1	+0.1
Family support-related spending	+0.1	0.0
Other additional expenditures (Gripen)	-0.1	+0.2
Local government's investment cycle	+0.2	+0.1
Changes in the interest balance and the MNB's profit/loss	-0.1	-0.1
Total of determinations*	-1.2	-0.3

\* Negative numbers denote deterioration in the balance (rise in the deficit) relative to the level of the previous year.

In response to the determinations of which we are currently aware, the ESA deficit in 2007 would be a further 1.2 per cent of GDP higher than the ESA deficit in the previous year, based on our current estimates. The government measures (tax cut) announced would add significantly to the 2007 deficit, and other developments would not be able to counterbalance this effect.

The impact of the known government measures and steps is much lesser for 2008, i.e. 0.5 per cent of GDP. However, this is offset by the fact that in 2008 the deficit will not contain the Gripen aircraft procurement, which will reduce the deficit by 0.2 percentage points.

As a joint effect of determinations for the coming two years, the ESA deficit level would grow to a value around 9 per cent of GDP by 2008. Consequently, to assure joining the euro area in 2010 would require the attainment of an approximately 5.7 per cent fiscal adjustment to reduce the ESA deficit by 2008 to the level which is required for the adoption of the euro.<sup>34</sup>

<sup>&</sup>lt;sup>34</sup> In meeting the deficit criterion of the Stability and Growth Pact, countries introducing the funded pension scheme may take into account a part of the costs of the pension reform. This part will steadily decline in the coming years; in 2008 40 per cent of the total cost can be taken into account, i.e. by 2008 Hungary will have to reduce the deficit below an approximately 3.6 per cent reference value, rather than a 3 per cent reference value.

## 4.3. Developments in external balance

According to official data, in 2005 the combined current and capital account balance, i.e. the external borrowing requirement declined considerably, by nearly 2 percentage points, to 6.5 per cent as a proportion of GDP. Although an increase in methodological uncertainty may also have played a role in the decline in the external imbalance shown in official statistics, fundamental developments also facilitated the fall in external borrowing requirement in 2005.

The decline in external borrowing requirement attributable to fundamental factors stemmed from the increase in the private sector's willingness to save: as a result of further easing of the fiscal policy, the financing requirement of the general government in a broader sense continued to grow in 2005, and reached 9.4 per cent of GDP. At the same time, an increase in households' financial savings more than offset the growth in the financing requirement of the general government. The sector's GDP-proportionate financing capacity increased from 2.5 per cent in 2004 to 4.2 per cent, influenced partly by lasting and partly by temporary factors. It can be considered a lasting and fundamental change that willingness to consume declined, and household investment as a proportion of GDP became subdued. At the same time, in Q4 several one-off incomes<sup>35</sup> added to households' financial savings. In case of the corporate sector, favourable developments in external business conditions suggest an improvement in profitability, although as a result of the continued favourable economic outlook the sector's expenditures related to fixed capital formation increased rapidly. Consequently, the financing requirement of the sector as a whole may have declined only to a small extent.

As we estimate, financing developments in 2005 would justify a decline of around 1 percentage point in the external financing requirement. Therefore, methodological uncertainties related to the developments in the trade deficit may have continued to play a role in the improvement of the external balance by nearly 2 percentage points indicated by the balance of payments statistics (see details in the boxes of the August and November 2005 Reports). The inconsistency of statistics describing external equilibrium is indicated by the fact that the value of errors and omissions increased to 2.6 per cent of GDP in 2005. Therefore, the external borrowing requirement, as shown in the financial account and 'calculated from below', corresponding to the sum of the external financing requirement and errors and omissions, declined by approximately 1 percentage point compared to 2004 and stood at 9.1 per cent of GDP.

#### Chart 4-4

**Sectors' financing capacities\*** (seasonally adjusted data, as a percentage of GDP)



\* Differences ascribable to imports brought forward because of Hungary's EU accession and data adjusted by the impact of the phasing out of customs warehousing as a result of the EU accession resulting in a rise in imports.

\*\*\* In addition to the fiscal budget, the consolidated general government includes local governments, the ÁPV Rt., institutions attending to quasi-fiscal duties (Hungarian State Railways (MÁV), Budapest Transport Limited (BKV)), the MNB and authorities implementing capital projects initiated and controlled by the government and formally implemented under PPP schemes.

The methodology of our projection for the current account deficit and for the external financing requirement is changing: Earlier, due to the methodological risks related to the trade deficit, we expected the uncertainty to decline during the projection period, i.e. that the accrual-based trade deficit would come closer to the cash-based trade deficit, which is more in line with financing developments, which would entail an increase in the external financing requirement. In our current projection, only the effect of fundamental developments expected by us is taken into account.

<sup>&</sup>lt;sup>35</sup> A one-off income-increasing item was the one-and-a-half-week amount of the 13th-month pension, the retrospective raising of pensions related to the indexing (a total HUF 80 billion), the area-based agricultural support from the EU paid in December (a HUF 30 billion effect), and another item that also had an income-increasing impact was that the household sector received shares under very favourable conditions in a value of nearly HUF 50 billion within the framework of a share allotment programme for employees.

	2002	2003	2004	2005	2006
		Forecast			
I. Consolidated general goverment*	-8.8	-8.4	-8.5	-9.4	-10.2
II. Households	2.7	0.2	2.5	4.2	4.3
Corporate sector and 'error' (= A - I II. )	-0.7	-0.5	-2.2	-1.2	-1.3
A. External financing capacity. 'from above'(=B+C )**	-6.8	-8.7	-8.3	-6.5	-7.1
B. Current account balance**	-7.1	-8.7	-8.6	-7.3	-8.3
– in EUR billions **	-5.0	-6.4	-7.0	-6.4	-7.4
C. Capital account balance	0.3	0.0	0.3	0.8	1.2
D. Net errors and omissions (NEO)	0.3	0.3	-1.7	-2.6	-2.6
External financing capacity 'from below' (=A+D)	-6.5	-8.4	-10.0	-9.1	-9.7

GDP-proportionate current account balance and the financial position of individual sectors

\* In addition to the fiscal budget, the consolidated general government includes local governments, the ÁPV Rt., institutions attending to quasi-fiscal duties (Hungarian State Railways [MÁV], Budapest Transport Limited [BKV]), the MNB and authorities implementing capital projects initiated and controlled by the government and formally implemented under PPP schemes.

\*\* Uncertainties over calculations related to trade statistics point to higher current account deficit and external borrowing requirement between 2004 and 2006.

According to our projection, fiscal expansion will continue in 2006, and the GDP-proportionate financing requirement of the general government in a wider sense, also taking account of the 0.3 per cent deficit increasing effect of the Gripen fighters, may grow over 10 per cent. In 2005, households' income-proportionate consumption returned to the level which had been typical before the introduction of the government housing subsidy scheme. Therefore, our projection suggests that households' net financing capacity will not increase substantially, despite growth in real income accelerating to 4.5 per cent. As, due to robust external economic activity, further dynamic expansion of corporate investment is expected, the private sector's net financing position may be around the level of 2005. Accordingly, fundamental factors add to an increase in external equilibrium, and external financing requirement is estimated to increase by 0.6 percentage point.

Assuming an unchanged favourable external financing environment and a slow decline in the general government borrowing requirement in 2007 and 2008, external financing requirement may decline slightly. However, only a credible fiscal consolidation can create the substantial and lasting conditions for an improvement in the external balance.

#### **Table 4-10**

#### Current account balance to GDP\*

(as a proportion of GDP, in per cent, unless otherwise indicated)

	2001	2002	2003	2004	2005	2006	2007	2008
		Final/preliminary data				Forecast		
1. Balance of goods and services**	-1.5	-2.4	-4.5	-2.9	-1.2	-2.4	-2.3	-2.2
2. Income balance	-5.5	-5.5	-5.0	-6.0	-6.3	-6.4	-6.4	-6.3
3. Balance of current transfers	0.8	0.8	0.8	0.3	0.3	0.5	0.5	0.5
I. Current account balance (1+2+3)**	-6.2	-7.1	-8.7	-8.6	-7.3	-8.3	-8.2	-8.0
Current account balance in EUR billions**	-3.6	-5.0	-6.4	-7.0	-6.4	-7.4	-7.7	-8.0
II. Capital account balance	0.6	0.3	0.0	0.3	0.8	1.2	1.4	1.7
External financing capacity (I+II)**	-5.6	-6.8	-8.7	-8.3	-6.5	-7.1	-6.8	-6.2

\* The forecast for 2006 and 2007 includes imports arising from the recognition of the lease fee paid by the Hungarian Army for the Gripen fighter planes and amounting to approximately 0.3 per cent of GDP.

\*\* In the period of 2004-2008, uncertainties over calculations related to trade statistics point to higher current account deficit and external borrowing requirement. In respect of the structure of the current account balance, in 2006 the deficit of the real-economy balance may increase considerably due to the accelerating expansion in consumption and the temporary deficit-increasing effect of the Gripen lease. The deficit of the balance of income to GDP may slightly increase due to the joint effect of the increase in debt and forint yields and the increasing weight of financing in foreign currency. Overall, the ratio of current account deficit to GDP may grow by 1 percentage point compared to 2005, equivalent to a deficit of EUR 7.4 billion. In 2007 and 2008, the GDP-proportionate value of the income and transfer balances may remain at an unchanged level, while the real-economy balance may improve in 2008 mainly because the deficit-increasing effect of the Gripen fighters will come to an end. The current account deficit may be around EUR 7.7-8 billion in 2007 and 2008.

#### Financing the current account deficit

In 2005, while external imbalance slightly declined, the GDP-proportionate value of the non-debt generating capital inflow increased markedly. However, a decisive role was played in this by privatisation revenues amounting to nearly EUR 2 billion, mainly from the sale of Budapest Airport Plc. Compared to 2004, the value of net direct and portfolio investment collected by the private sector declined.

Within debt-generating external financing, the ratio of foreign exchange denominated items increased, i.e. the exchange rate risk stemming from external financing is borne by domestic economic agents to an increasing extent. In 2005, non-residents' purchases of government

#### Chart 4-5

Structure of external financing: non-debt generating capital inflow and total foreign exchange risk taken by individual sectors as a percentage of the total external financing requirement\*



Source: MNB estimate.

\* The estimate of changes in sectors' foreign exchange positions take account of derivative positions as well. The total external borrowing requirement is the sum of net external financing requirement and the errors and omissions item of the balance of payments.

securities and mortgage bonds and their forint deposits declined significantly, while debt-like funding of credit institutions and the corporate sector from abroad increased. Taking account of the increase in non-residents' derivative position against the forint, the sector's total forint exposure also declined, thus the exchange rate risk stemming from external financing was completely borne by domestic economic agents, i.e. mainly by house-holds and corporations. Households' exchange rate exposure increased by EUR 3.3 billion, thus 40 per cent of the demand for foreign exchange created by the external borrowing requirement was generated by households.

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