

# QUARTERLY REPORT ON INFLATION

## March 2012



MAGYAR NEMZETI BANK



**QUARTERLY REPORT ON INFLATION**  
**March 2012**

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*Act CCVIII of 2011 on the Magyar Nemzeti Bank, 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, since August 2005 the Bank has sought to attain price stability by ensuring an inflation rate 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 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 clear insight into the operation of monetary policy and to enhance transparency, the Bank publishes the information available at the time of making its monetary policy decisions. The Report presents the inflation forecasts prepared by the Monetary Strategy and Economic Analysis and Financial Analysis Departments, as well as the macroeconomic developments underlying these forecasts. The Report is published quarterly. The forecasts of the Monetary Strategy and Economic Analysis and Financial Analysis Departments are based on assumption of endogenous monetary 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 staff in the MNB's Monetary Strategy and Economic Analysis and Financial Analysis Departments and Financial Stability Departments. From chapters 1 to 4 and 6 were prepared under the general direction of Ágnes Csermely, Director while chapter 5 was directed by Áron Gereben, Director. The project was managed by Barnabás Virág, Senior Economist of Monetary Strategy and Economic Analysis. The *Report* was approved for publication by Ferenc Karvalits, Deputy Governor.

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The *Report* incorporates valuable input from the Monetary Council's comments. The projections and policy considerations, however, reflect the views of staff in the Monetary Strategy and Economic Analysis and the Financial Analysis Departments and do not necessarily reflect those of the Monetary Council or the MNB.

*The projections is based on information available in the period to 20 March 2012.*



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# Summary

**The baseline scenario of the report in March forecasts declining inflation over the medium term and modest growth**

According to the March forecast, the gradual adjustment of economic agents' balance sheets will continue in both Hungary and Europe, leading to modest growth over the forecast horizon. In response to cost shocks and tax measures, inflation is expected to be significantly higher than the inflation target in 2012. However, in 2013, as the impact from indirect tax increases and cost shocks wear off, weak domestic demand may become the dominant factor in developments in the price index and inflation may quickly decrease. Stable financial markets and a stable financial intermediary system are indispensable for the economy to embark on to a path of permanent growth. The base rate consistent with the baseline scenario will stay at the current level during the next quarters. Over the second half of the forecast horizon the base rate may decrease gradually if developments in inflation are in line with the forecast and there is a lasting improvement in the risk perception of Hungary. To meet the budget deficit targets for 2012 and 2013 further government measures are expected. These haven't been announced yet in detail, so these are not incorporated in the baseline scenario of the report. Government measures aiming to meet budget deficit targets may significantly alter developments in inflation and growth.

**The pick-up in economic activity at the end of 2011 was mainly due to temporary factors**

In the final quarter of 2011 economic growth was more dynamic than expected, mainly due to temporary factors. Growth in the agricultural sector remained robust in the final quarter as well, and state infrastructure projects supported the construction industry and investments at the end of the year.

**Slower economic activity in Europe may translate into slow growth of exports over the forecast horizon**

Growth continues to be characterised by two main trends. On the one hand, the contribution of exports to growth remains significant, while on the other hand, domestic demand is still subdued. Although economic activity in Hungary's main export partners slowed after 2011 Q1, export sales continued to rise dynamically. Export sales were probably boosted by the performance of the German manufacturing sector and the depreciating exchange rate. Nevertheless, European economic output may contract over the short term, and only a slow recovery is likely afterwards. The outlook for moderate growth can be ascribed to tighter fiscal policies in most European countries and the fact that the European banking system will have to make considerable adjustments, despite the supporting measures. As a result, its contribution to growth will be limited. In line with the growth prospects in Europe, external demand is likely to recover slowly in the years to come.

**Domestic demand remains subdued over the forecast horizon**

Weak domestic demand continues to hamper domestic growth. Uncertainties surrounding growth, decreasing income of households and continuously tight credit conditions are all factors working against a pick-up in household consumption. These effects can only be partly offset by the new fixed exchange rate programme, which decreases the amount and the volatility of households' repayment obligations. Investment activity remains very sluggish.

With the exception of a few export companies implementing large-scale investments in manufacturing, most corporations have postponed investments, given the uncertain economic outlook and tight lending conditions. Protracted balance sheet adjustments in the private sector and fiscal adjustments point to subdued domestic demand over the entire forecast horizon.

**Tight lending conditions, further balance sheet adjustment in the banking sector and contracting retail and corporate loan portfolios are expected**

The banking system has supported economic recovery only to a limited extent recently. A pick-up in lending is hindered by poor credit demand and consistently strong constraints on the supply side. The financing-related problems facing the European banking system make access to funds difficult and expensive for domestic banks, which, in turn, curbs a recovery in consumption and investments. Foreign parent banks have withdrawn funds from their Hungarian subsidiaries over the past period. Underlying reasons for this were fewer lending opportunities and the deteriorating profitability of the domestic banking system, along with the mounting problems of the European banking system and the balance sheet adjustments it had to make. The domestic banking system's lending activity continued to decline in the corporate sector. Non-price conditions remain tight, with the banking sector focusing mainly on corporate clients with a good credit standing. In response to the early final repayment scheme, there was a pick-up in lending in the household segment, but consistent with a subdued real estate market, lending may slow down in the short term.

We assume that both the corporate and the retail loan portfolios will shrink further in the years to come. Tight credit conditions, supply constraints and the banking system's reluctance to lend may hinder recovery in lending for a prolonged period, in addition to weak credit demand. To counterbalance these unfavourable developments, the central bank introduced several measures to provide liquidity to the banking sector, but these measures can only soften the negative impact of the uncertainty related to the availability of foreign funds on lending activity.

**GDP growth will be close to stagnation in 2012 and the growth rate is expected to remain modest in 2013**

The above factors suggest that GDP growth will be close to stagnation in 2012 and the growth rate is expected to remain modest in 2013 as well. The potential rate of economic growth will lag behind its pre-crisis rate in the coming years, but due to subdued growth output will only slowly approach its potential, and thus the output gap will remain negative over the entire forecast horizon.

**The labour market is expected to remain consistently slack, and – discounting the temporary impact of the minimum wage increase – wage dynamics will remain sluggish**

In keeping with the outlook for weak growth, the labour market is likely to remain consistently slack. In response to the government measures adopted earlier, labour market activity may continue to recover in 2011. However, in parallel with the renewed deterioration in the growth outlook, corporations will continue to make extremely cautious decisions on employment. Labour demand in the private sector will not increase significantly, and only job programmes subsidised by the government are expected to provide additional demand for labour.

The slack labour market environment curbs nominal wage growth. Administrative measures introduced early this year may accelerate wage dynamics temporarily, but wage growth is anticipated to slow down again in 2013.

**Inflation will remain high this year due to government measures and cost shocks, but the impact of the weak demand environment will become dominant by 2013, as a result of which the inflation target can be met in 2013 H1**

Despite weak domestic demand and the slack labour market environment, inflation rose significantly in early 2012. The rise in inflation was mainly attributable to the government's indirect tax increases, but the marked depreciation of the exchange rate in 2011 H2 and persistently high commodity prices also had an impact on more and more components of the consumer basket. The magnitude and the pass-through of the shocks were somewhat larger than previously expected, pointing to slightly higher inflation than anticipated earlier.

In our baseline scenario, inflation is well above the inflation target in 2012. However, in 2013, with the waning impact of indirect tax increases and cost shocks, weak domestic demand may become the dominant factor in the development in inflation and the price index may decrease quickly. Keeping the base rate at its current level will also support lower inflation. Our projection is that inflation will reach the 3 percent inflation target in 2013 H1.

**The risk premium of domestic money and capital market instruments is still high**

Developments in the money and capital markets may continue to influence the economic outlook to a large extent. The pronounced volatility on the money and capital markets in the past quarter was driven by global developments and changing market expectations related to the starting date and the outcome of the talks with the European Commission and the IMF. After a rise in the risk premium early this year, the government reiterated its commitment to starting the talks, helping to put the financial markets at ease. Thanks to the European Central Bank's liquidity providing measures, the financial markets of the euro area returned to normal, which also helped to reduce domestic premiums. Nevertheless, the risk premium of the domestic money and capital market instruments is still high.

Our projection is that the historically high risk premiums will remain over the short term, followed by a gradual decline. The gradual decline in risk premium may be supported by the agreement to be concluded with the European Commission and the IMF, along with further improvement in the European financial market environment and increasing global risk appetite.

**In 2011 the central budget stimulated aggregate demand significantly, however, we anticipate a contraction of around 3 percent of GDP, of aggregate demand in the next two years**

Fiscal measures, primarily the reduction in income taxes, resulted in significant easing in 2011. However, in order for fiscal deficit targets to be met, sizeable fiscal adjustments curbing demand are likely to occur in 2012. Based on the budget bill and the announced fiscal measures we anticipate a fiscal adjustment of around 3 percentage points in 2012. Judging from the measures so far announced, no further fiscal tightening is anticipated in 2013.

**In response to fiscal adjustments and increasing export, the net lending position of the economy may remain significantly positive**

With economic actors' balance sheet adjustments, the net lending position of the economy may remain significantly positive over the forecast horizon. The projected decline in the general government's net borrowing improves lending position in 2012. Although household savings may decline gradually in the years to come, they may remain high over the entire forecast horizon. The net lending position may be permanently strengthened by increased exports due to recent automobile industry investments, the anticipated pick-up in external economic activity from end-2012 and increasing use of EU transfers.

**Uncertainties surrounding economic outlook are mainly related to Hungary's risk perception and developments in commodity prices**

There is considerable uncertainty surrounding the baseline scenario of the forecast. In the Monetary Council's view, the most important risk is related to the developments in the risk perception of Hungarian assets. In contrast to what is assumed in the baseline scenario, the Monetary Council also believes that there is a significant risk that oil prices will remain high over the forecast horizon.

**Rapid improvement in risk perception may justify lower base rates**

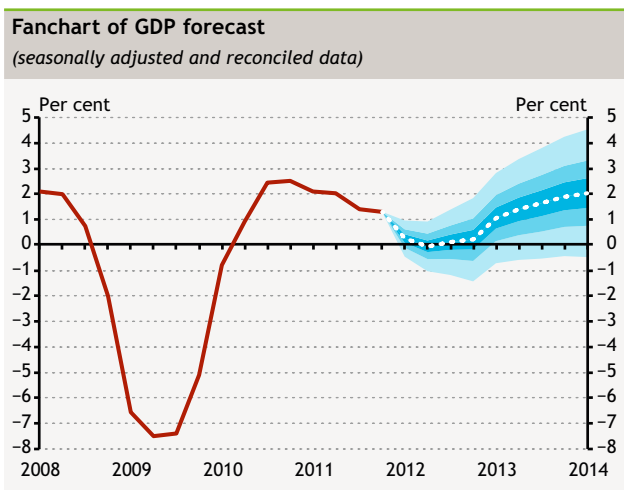
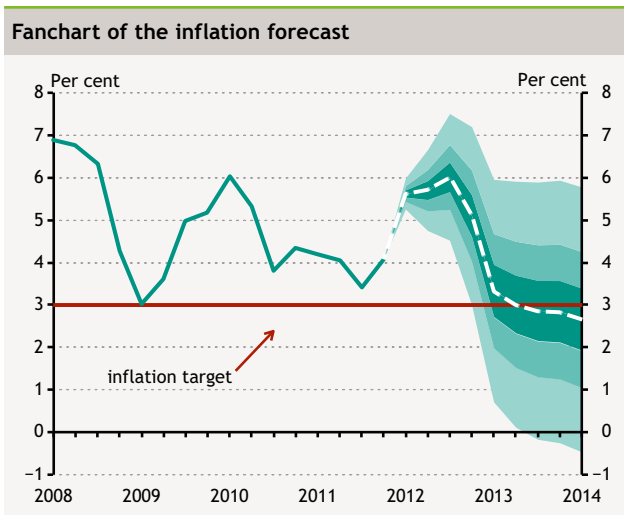
In our baseline forecast, risk premiums will stay at their current levels over the short run, and then gradually decline. Risk perception may improve more quickly if an agreement between the government, the European Commission and the IMF is reached soon and the risks related to the financing of the general government diminish. The risk perception of the domestic financial market instruments may also improve if the European financial market environment improves further and global risk appetite increases. Improved risk perception boosts economic growth and, through a stronger exchange rate, mitigates inflation. A rapid reduction in the sovereign risk premium may already allow a gradual easing of the base rate to begin in 2012.

**If risk premiums remain at their current high levels over the longer term, the base rate may not be decreased even in the second half of the forecast horizon**

Given the highly volatile money and capital markets, it cannot be ruled out that risk premiums will remain at their current high level. This would translate into lower growth, a weaker exchange rate and a less favourable outlook for inflation. Increasing inflation triggered by a weaker forint and higher risk premium necessitates maintaining the base rate at its current level.

**Consistently high oil prices also warrant maintaining the current base rate**

Our baseline forecast assumes that oil prices will decline gradually over the forecast horizon, in line with futures prices. If geopolitical risks materialise, that may lead to a long-term contraction in oil supply and a perpetuation of the current high prices. Consistently high oil prices deteriorate the inflation outlook. In order to offset this, the current base rate may remain unchanged until the end of the forecast horizon.



<b>Summary table of baseline scenario</b>			
<i>(our forecast were based on endogenous monetary policy)</i>			
	2011	2012	2013
	Fact	Projection	
<b>Inflation (annual average)</b>			
Core inflation <sup>1</sup>	2.7	5.3	2.9
Core inflation without indirect tax effects	2.5	3.0	2.7
Consumer price index	3.9	5.6	3.0
<b>Economic growth</b>			
External demand (GDP based) <sup>2</sup>	2.8	0.9	1.8
Household consumption expenditure	0.0	-0.9	0.2
Gross fixed capital formation	-5.4	-1.4	1.8
Domestic absorption	-0.5	-1.5	0.3
Export	8.4	5.8	8.7
Import	6.3	4.6	8.2
GDP*	1.7	0.1	1.5
<b>External balance</b>			
Current account balance	1.6	3.1	3.7
External financing capacity	3.6	5.7	7.0
<b>Government balance<sup>3</sup></b>			
ESA balance	4.2	-4.0 (-3.1)	-4.3 (-3.4)
<b>Labour market</b>			
Whole-economy gross average earnings <sup>4</sup>	5.0	3.1	3.1
Whole-economy employment <sup>5</sup>	0.8	1.8	0.7
Private sector gross average earnings <sup>6</sup>	5.3	6.5	4.1
Private sector employment <sup>5</sup>	1.4	-0.1	0.5
Unit labour costs in the private sector <sup>5, 7</sup>	5.0	3.8	3.5
Household real income <sup>8</sup>	1.6	-2.2	-0.1

<sup>1</sup> From May 2009 on, calculated according to the joint methodology of the CSO and MNB.

<sup>2</sup> In line with the changes in Hungarian export structure by destination countries we revised the weights in our external demand indicator.

<sup>3</sup> As a percentage of GDP. Data in parenthesis include cancellation of free central reserves.

<sup>4</sup> Calculated on a cash-flow basis.

<sup>5</sup> According to the CSO LFS data.

<sup>6</sup> According to the original CSO data for full-time employees.

<sup>7</sup> Private sector unit labour costs calculated with a wage indicator excluding the effect of whitening and the changed seasonality of bonuses.

<sup>8</sup> MNB estimate. In our current forecast we have corrected the data of household income with the effect of changes in net equity because of payments into mandatory private pension funds.

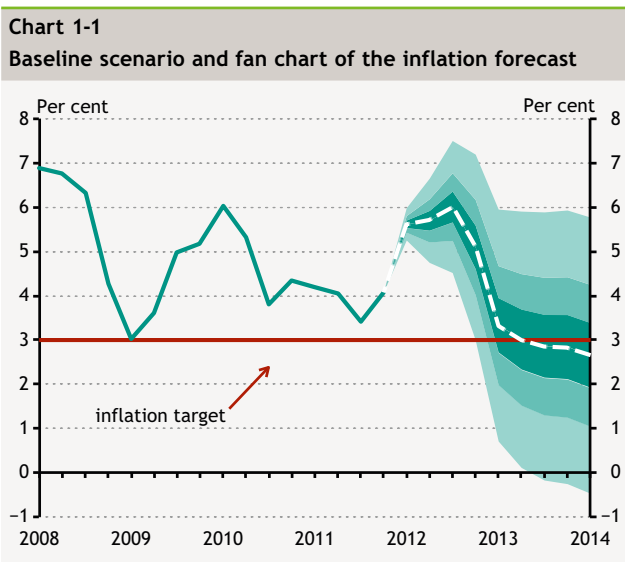
\* Data adjusted by working day effect.

# 1 Inflation and real economy outlook

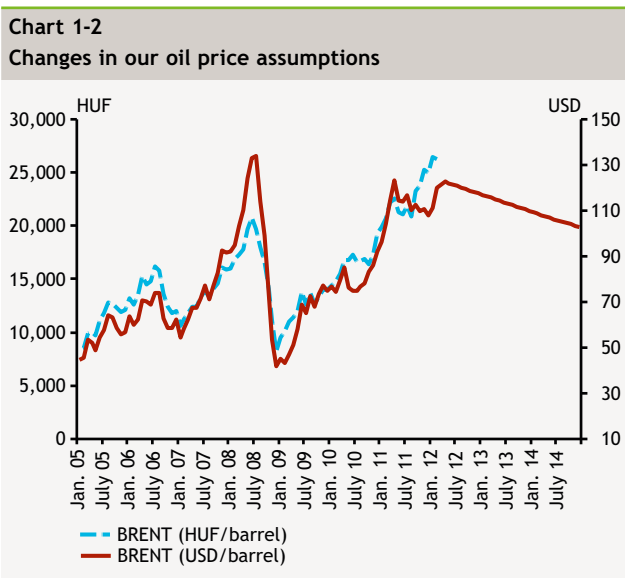
*The Hungarian economy is likely to stagnate this year, with growth expected to resume in 2013. The level of output will remain below its potential over the entire forecast horizon. Due to the indirect tax increases and the weak exchange rate, the consumer price index will remain above the inflation target in 2012. Underlying inflation is likely to increase as a consequence of rising costs. As the effects of indirect tax increases, weak exchange rate and cost shocks wane, the disinflationary impact of the subdued domestic demand is likely to be the key determinant of consumer prices and the inflation target can be achieved in the first half of 2013. Path of the base rate consistent with the baseline scenario is flat during the next quarters. Over the second half of the forecast horizon it may decrease gradually if developments in inflation are in line with the forecast and there is a lasting improvement in the risk premium.*

# 1.1 Inflation forecast

Over our forecast horizon, inflation is shaped by the government's indirect tax measures, global market developments, rising commodity prices caused by the weak forint, and consistently low demand. Due to indirect tax increases, in force from early 2012, repeated rises in the global market price of oil and a EUR/HUF exchange rate weaker than the 2011 average, inflation may exceed 5 per cent in 2012. Underlying inflation is likely to increase due to rising costs. In an environment of persistently subdued demand, as the direct inflationary impacts of the tax measures and cost shocks are wearing off, inflation may start falling and reach the target in the first half of 2013.



Despite an environment of permanently subdued demand, the short-term outlook for inflation has deteriorated compared to the forecast in December. This higher inflation is attributable to several separate impacts. Despite weak demand, the impact of the indirect tax increases passed through into prices more markedly than expected. Oil prices are high despite the deteriorating outlook for the global economy. The rising costs gradually feed through to consumer prices despite weak demand as corporations with deteriorating profit outlook pass on their costs to consumers. Therefore underlying price developments will accelerate in the first half of this year. Higher commodity prices will only gradually be reflected in consumer prices, which will boost underlying inflation in 2012 H1. After temporarily accelerating, tax-adjusted core inflation will remain around 2.7 per cent in the second half of the forecast horizon.

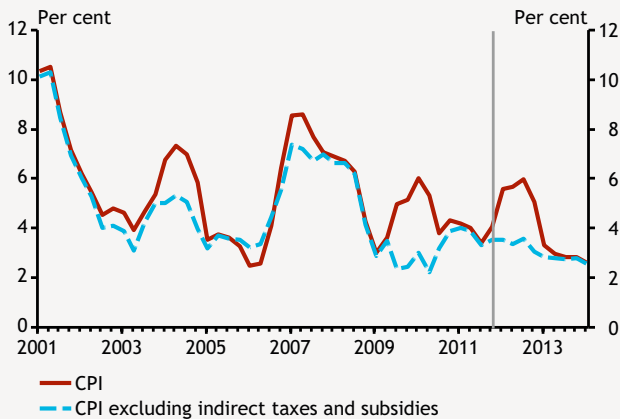


In response to dwindling global economic activity and government measures curbing demand, the output gap may start to widen again this year. From 2013 it then narrows gradually but remains negative over the entire forecast horizon. As a result, with the inflationary impact of the indirect tax increases and cost shocks wearing off, the disinflationary effect of the permanently weak domestic demand may play a key role in developments of the consumer price index. The inflation target can be met in 2013 H1 (Chart 1-1).

The projected labour market trends suggest continued low inflationary pressure in the years to come. Due to the poor growth outlook, we expect labour market conditions to remain slack. The bulk of the rise in corporate wage costs from the increase in the minimum wage will be offset by state compensation; therefore, this measure is unlikely to lead to any considerable inflationary impact over the short term. However, as the amount of wage compensation will start to decrease from 2013, the effect of the rise in the



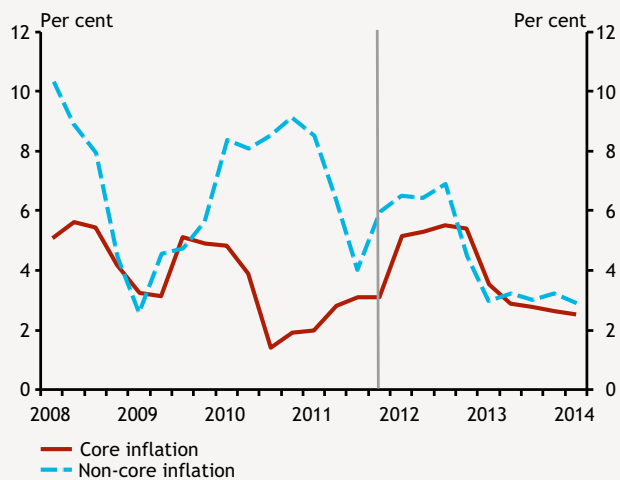
**Chart 1-3**  
Our forecast for the consumer price index



minimum wage is likely to be reflected in inflation. Nevertheless, given that demand is expected to remain subdued, this impact may also be moderate (Chart 1-3).

Apart from changes in the indirect taxes, the following developments are likely to characterise the prices of the most important items in the consumer basket (Chart 1-4). Inflation in tradables was higher early this year, due to the depreciation of the forint exchange rate, the new data may reflect stronger pass-through. As the cost shocks wear off the price index of tradables may decrease considerably due to weak demand. As regards market services, after a sharp rise early this year, we expect restrained inflation in accordance with the slack demand. Over the medium term inflation in this group could be in the range of 2-3 per cent in line with the inflation target. The sharp rise in the price of processed food early this year was due to higher producer prices and the rising oil prices. High prices in Europe and a weaker forint may sustain a high inflation dynamics until mid-2012. This year's harvest may support a slowdown in inflation.

**Chart 1-4**  
Our forecast for core inflation and items outside core inflation  
(2008-2014 Q1)



The price of alcoholic beverages and tobacco is markedly influenced by excise tax increases, which may pass through entirely into consumer prices.

In respect of items outside core inflation, the prices of unprocessed food are likely to be influenced by changes in the global prices of raw materials. After a significant decrease in 2011 H2, unprocessed food prices may increase moderately over the short term. After that, the trend-like increase observed in the price index of this group over the past decade is likely to continue. Fuel prices are expected to move in conjunction with oil prices calculated in HUF. Despite weak global economic activity oil prices are consistently high, presumably due to geopolitical reasons. However, futures prices suggest a decrease in prices. Therefore, we anticipate declining fuel prices in line with our assumption based on futures prices and expected monetary policy (Table 1-1).

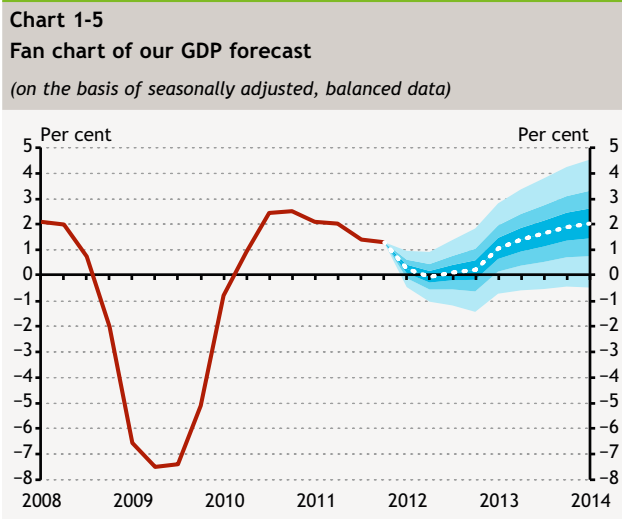
**Table 1-1**  
Details of our inflation forecast

		2011	2012	2013
<b>Core inflation</b>		2.7	5.3	2.9
<b>Non-core inflation</b>	Unprocessed food	4.3	3.7	4.0
	Gasoline and market energy	13.8	11.3	-0.4
	Regulated prices	4.0	4.5	4.6
	Total	6.4	6.1	3.1
<b>Consumer price index</b>		<b>3.9</b>	<b>5.6</b>	<b>3.0</b>

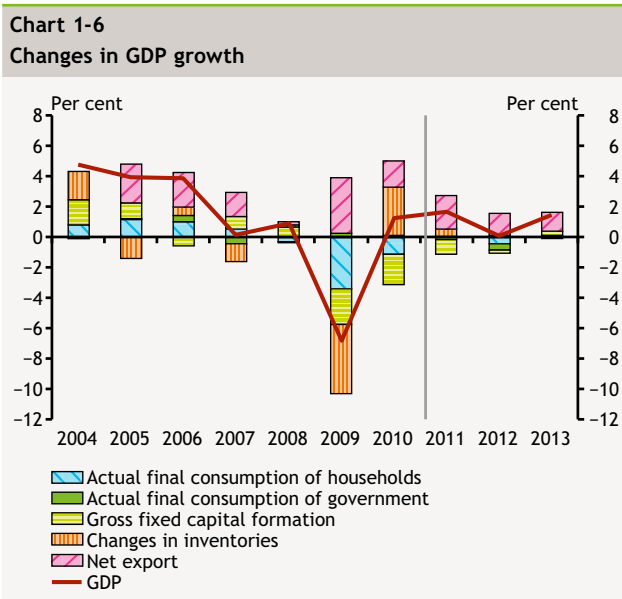
As regards regulated prices, in line with the government's intention, we expect moderate, lower-than-inflation changes in prices in 2012. High oil prices and a consistently weak USD/HUF exchange rate add to the costs of service providers, which may result in a gradual pass-through of costs in early 2013.

## 1.2 Our forecast for the real economy

Our forecast for the real economy points to a slowdown in economic growth. The slowdown in global growth, problems facing the European banking system and the expected fiscal measures in the euro area suggest an unfavourable external environment in Hungary's export markets, which may, in turn, curb the export dynamics. This may be offset in part by major investments in the manufacturing industry. Tight credit conditions and the uncertain outlook for growth may lead to subdued investment activity. Households' deteriorating income position will entail a decline in consumption. Government measures aimed to ensure that deficit targets are met will directly curtail domestic demand in the short run. The output gap may widen further in the first half of the forecast horizon and from 2013 it narrows gradually, but remains negative over the entire forecast horizon.

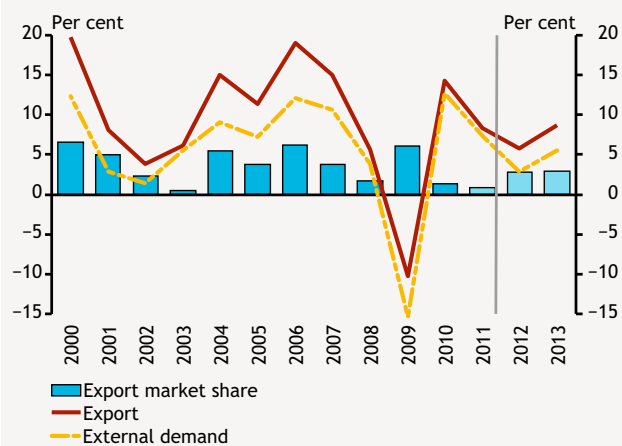


Our forecast for the real economy points to a significant slowdown in economic growth. In part, the better-than-expected growth data in 2011 Q4 is attributable to an outstanding performance, of the agricultural and the construction sectors (relative to the preceding year), with infrastructural investments by the state also contributing to the excellent performance of the latter. With these one-off impacts wearing off, growth is expected to slow, and this is corroborated by short-term indicators. Economic growth is expected to reach 0.1 per cent this year, and 1.5 per cent next year (Chart 1-5). In keeping with the slowdown in Hungary's export markets, export dynamics may also weaken; but exports still remain the main driver of economic growth. The modest growth this year is attributable to lower consumption and investment. At the same time we expect higher consumption and investment next year. The output gap may widen further during the first half of the forecast horizon. From 2013 it narrows gradually but remains negative over the entire forecast horizon.



Similar to the forecast in December, we still find outlook for global growth rather poor. The anticipated balance sheet adjustments in the European banking system and the protracted debt problems in the euro-area periphery point to a less benign external environment. Although the ECB measures eased the financing difficulties of the banking system, they only prevented the occurrence of an unfavourable risk scenario. In order to tackle the debt problems in the euro area, tight fiscal rules were adopted. In order for the new regulations to be complied with, austerity measures may have to be adopted, which will in turn slow economic growth in the euro area. A slowdown in the economies of Hungary's foreign trade partners will restrain export dynamics over the forecast horizon.

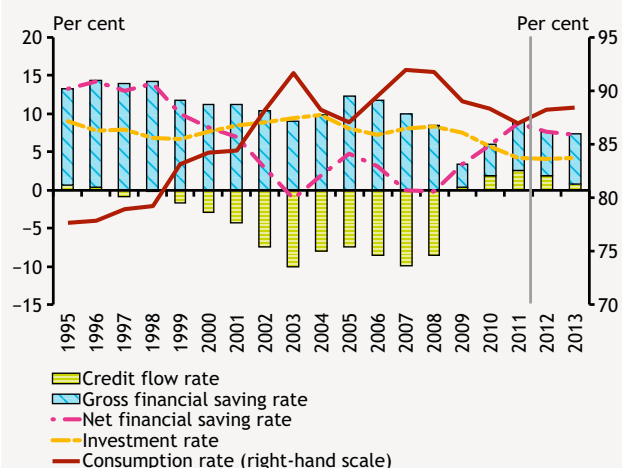
**Chart 1-7**  
Developments in the export market share



Nevertheless, we expect Hungary's export markets and hence the export dynamics to pick up from mid-2012. A weak HUF exchange rate and the gradual start of the operation of the large-scale investment projects in the automobile industry may support a rise in Hungary's share of the export markets (Chart 1-7).

**Chart 1-8**  
Use of household income

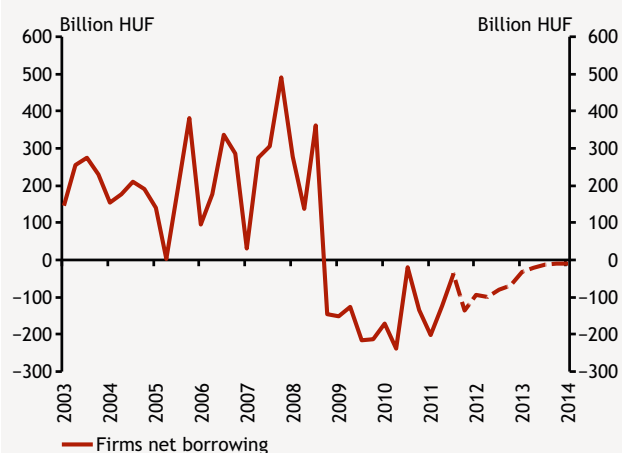
(as a proportion of available disposable income)



Note: Financial savings do not include the mandatory contributions paid into private pension funds.

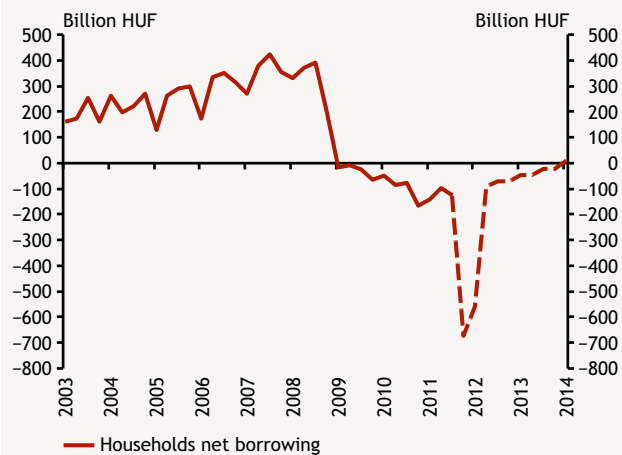
Households' income position will deteriorate over the first half of the forecast horizon due to accelerating inflation, consistently sluggish economic activity and government measures aimed at meeting the fiscal deficit targets. Concurrently, household consumption is expected to decline this year. Moderate growth is only expected in 2013. Even though the increase in the minimum wage and wage compensation may help keep net nominal wages steady for those in lower income brackets, higher-than-expected inflation will erode the purchasing power of their income. Government measures aiming at increasing labour market activity and hence boosting potential growth, reduce direct budgetary transfers to households. The early final repayments of FX loans improved the wealth of the households that participated in the scheme; but its beneficial impact is likely to take longer to exert itself on consumption. In the short run, consumption-savings decisions are likely to be strongly influenced by precautionary motives and therefore the savings rate may remain above the pre-crisis level. Under the agreement with the Hungarian Banking Association, the fixed exchange rate programme has been adopted to alleviate the burden of high FX instalments of households. We expect a high participation rate in this scheme, which may lead to a pick up in consumption especially in the case of low-income households with liquidity constraints (Chart 1-8).

**Chart 1-9**  
Our forecast for lending to corporations



We continue to assume a subdued investment dynamics over our forecast horizon. Fiscal discipline may decrease the government's own investments. New investments may only be implemented mostly from EU funds. Private sector investment is likely to fall this year as well. Expectations for a pick up in economic activity have been deteriorating in the corporate sector over the past period. Furthermore, credit conditions are anticipated to remain tight. Combined with the above-mentioned bleak expectations, this suggests a historically low investment rate in most sectors in the short run. This is only partially offset by investment projects in the automobile industry, which are also likely to continue over the coming quarters. Aside from the impact of large investments, corporate investments will in effect only consist of amortisation replacement. Household investments may reach a trough in 2012, and perk up somewhat over our forecast horizon. This trend may be supported by the government's new housing loan scheme.

**Chart 1-10**  
Our forecast for lending to households



Lending both to the corporate and to the household sector may be moderate in the next years as loan redemption will exceed borrowing over the entire horizon. Beside weak credit demand indicated by unfavourable outlook for economic growth, credit supply constraints have also become tighter. The central bank instruments engineered to improve banks' lending capacity may exert their beneficial effects as lending picks up. Over the short term financial intermediaries' willingness to lend may remain a barrier to lending, as a result of which credit conditions may only ease from 2013 (Chart 1-9, 1-10).

The potential rate of economic growth may also significantly lag behind its pre-crisis rate in the coming years. One of the reasons for this is that the potential growth rate of Hungary's export markets has been declining, which has a negative effect on Hungary's long-term economic growth rate. On the supply side, the uncertain outlook for economic activity and tight lending conditions point to a persistently sluggish private investment activity.

#### Box 1-1

##### The probable macroeconomic effects of expected fiscal measures aim to hold the 2012–2013 deficit target

Our view on fiscal policy may change significantly in the months to come. The reason for this is that exit from the Excessive Deficit Procedure (EDP) and meeting the government's own deficit targets for 2012 and 2013 will require further deficit reducing measures. In the absence of quantifiable measures, however, we do not expect any adjustment to our baseline scenario.

According to our baseline assumptions, GDP-proportional deficits of 3.1 percent and 3.4 percent are expected in 2012 and 2013 (see chapter 5.3.), respectively, provided that all reserves are cancelled. Thus, in order for the government's deficit targets to be met, further adjustment of 0.5 percent and 0.6 percent will be called for this year and in 2013, respectively. A 0.5 percent adjustment in 2012 will also satisfy the condition of exit from EDP set by the European Commission in early March and guarantee, in line with the Commission's criteria, an ESA deficit below 3 percent.

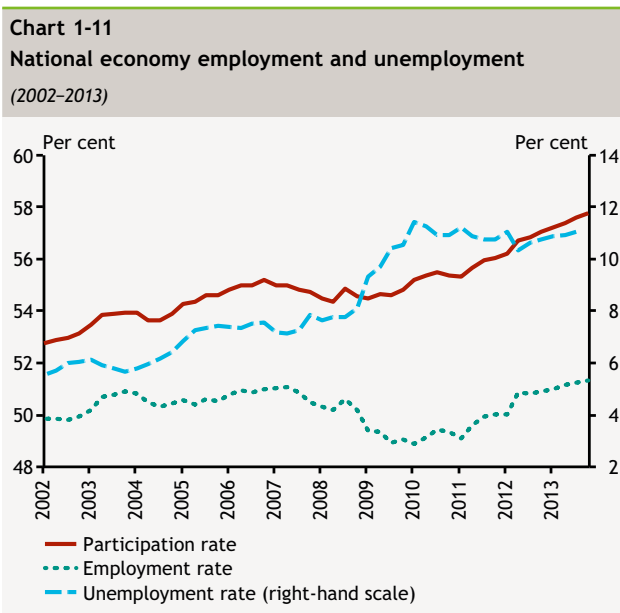
The impact of the possible measures on macroeconomic developments is determined by their actual form, size and structural nature. If the government intends to reduce the deficit mainly through increasing indirect taxes and the discontinuation of direct or indirect price subsidies, the relevant package may generate a sizeable inflationary pressure already in the short term; however, there will be no change in the underlying inflationary processes as determined by supply and demand. If, however, the adjustment takes the form of expenditure cuts and measures which increase revenues without directly influencing prices, then the resulting negative fiscal impulse may translate into a reduction in domestic demand and the widening of the output gap. This, in turn, may mitigate inflation. The impact of an adjustment package on macroeconomic developments and monetary policy will also depend on how markets respond to the measures. If, in the opinion of market actors, the adjustment is predominantly structural, and relies on measures that can guarantee a lasting reduction in the deficit, then announcements may lead to lower risk premiums, i.e. a stronger forint and lower yields.

The government has not yet made any announcement which could form the basis for quantifying the impact of the measures. Nevertheless, government decree no. 1036/2012 published in February and adopted by the government in order to secure compliance with the fiscal deficit targets for 2012 and 2013 offers a glimpse into the intentions of the decision makers. According to the decree, the government is striving to reduce the deficit through the reduction of subsidies on medicine, a cutback of central budget subsidies granted to the BKV (Budapest Transport), the July 2013 introduction of E-toll (electronic road usage fee) and a reduction in the

expenditures of budgetary chapters and entities. The government decree does not specify the expenditure reductions or revenue increases expected in particular areas. If the government wishes to achieve the 0.5 percent adjustment in a manner only affecting the above areas, then prices of medicines, tickets and fares will rise in response to the reduction of subsidies. This may lead to a substantial increase of inflation in the short run.

## 1.3 Labour market forecast

The outlook for the labour market is influenced by the government's measures intended to boost activity, uncertain growth and weak labour demand due to increased burden on corporations. Consistent with the outlook for economic activity, the labour market is expected to remain slack over the long term. The increase in the minimum wage and mandatory wage increases may temporarily lead to accelerating wage growth in 2012, but as unemployment will remain high for a sustained period, wage dynamics may return to a more moderate pace from 2013.



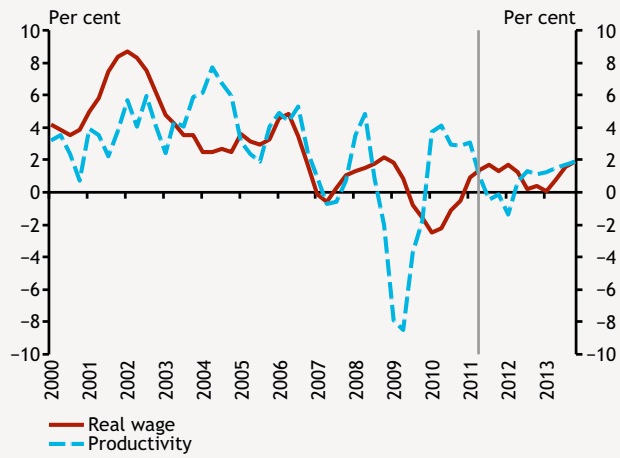
In response to the adopted and the planned tightening measures affecting disability retirement and old-age pension, labour supply may continue to expand over our forecast horizon. However, employment is still determined by the unfavourable outlook for economic growth and therefore we expect employment to decline in the short run. A considerable increase in employment is also not anticipated in 2013 either. The government's public employment scheme may alleviate the impact of unfavourable growth prospects, particularly in regions with high unemployment and low employment opportunities. Overall, unemployment may become stuck at a high level over the entire forecast horizon (Chart 1-11).

The effect of the increase in the minimum wage, the guaranteed minimum wage, and the mandatory wage increases on wage costs is largely offset by the transformation of the tax credit scheme into a tax benefit scheme (wage compensation) in 2012. However, as state compensation will start to decrease from 2013, so will corporations' profit.

Altogether, the adopted measures will lead to an increase in costs for private sector corporations equal to 1 per cent of the total wage costs.<sup>1</sup> However, corporations have more room for manoeuvre to mitigate the adverse effects of the shock than we previously assumed. The required increase in wages applies only to regular wages, therefore, corporations can offset increase in regular wages by reducing their non-regular benefits (e.g. bonus and fringe benefits). Furthermore, these measures mainly affect low-income employees, and therefore employers can mitigate the effect of increasing wage costs by granting a more moderate increase in wages to higher income employees. This is confirmed by the results of the survey of Hay Group in

<sup>1</sup> It is assumed that gross wages would rise by 4 percent apart from the effects of minimum wage hike while inflation remains above 5 percent. Resorting to the wage compensation, the affected corporations' wage bill will increase by 5 percent. Those firms that cannot bear these costs may additionally apply for auxiliary compensation.

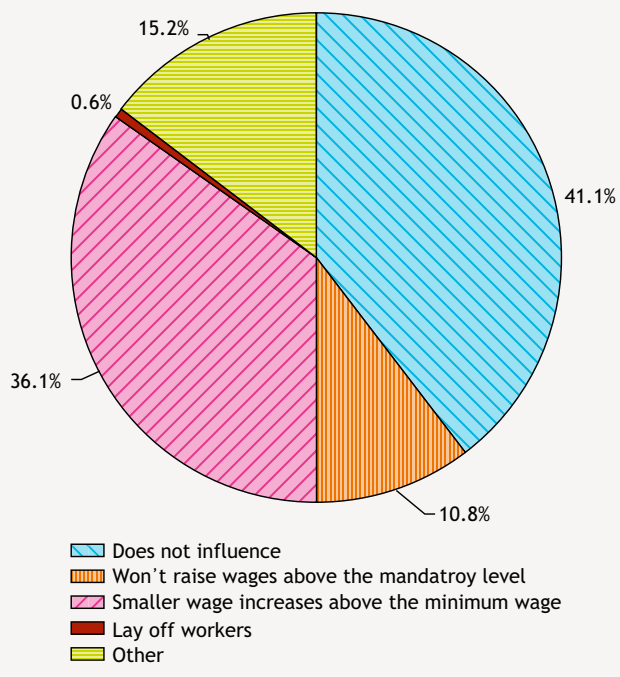
**Table 1-12**  
**Productivity and real labour costs in the private sector**



January 2012 (Chart 1-13). The surveyed corporations intend to raise the wages most for lower income administrative and blue-collar workers while wage growth of mid-level and senior executives may be moderate. Corporations contemplate laying off almost no workers as a result of the minimum wage hike.

Due to poor outlook for growth, we expect labour market conditions to remain permanently slack over the entire forecast horizon. Thus, although the measures introduced by the government may lead to a higher wage index in 2012, wage growth is anticipated to rise moderately next year. Real wages may increase at a slower pace than productivity (Chart 1-12).

**Chart 1-13**  
**How does the minimum wage hike influence the corporate wage policy in 2012**





**Table 1-2**  
**Changes in our projections compared to the previous Inflation report**

	2011	2012		2013	
	Fact	Projection			
		December	Current	December	Current
<b>Inflation (annual average)</b>					
Core inflation <sup>1</sup>	2.7	4.6	5.3	2.4	2.9
Core inflation without indirect tax effects	2.5	2.7	3.0	2.1	2.7
Consumer price index	3.9	5.0	5.6	2.6	3.0
<b>Economic growth</b>					
External demand (GDP-based) <sup>2</sup>	2.8	0.9	0.9	1.9	1.8
Household consumer expenditure	0.0	-0.7	-0.9	0.2	0.2
Government final consumption expenditure	0.4	-2.9	-3.6	-1.2	-0.6
Fixed capital formation	-5.4	-1.4	-1.4	1.9	1.8
Domestic absorption	-0.5	-1.3	-1.5	0.2	0.3
Export	8.4	6.3	5.8	9.2	8.7
Import	6.3	5.5	4.6	8.6	8.2
GDP	1.7	0.1	0.1	1.6	1.5
<b>External balance</b>					
Current account balance	1.6	3.8	3.1	4.5	3.7
External financing capacity	3.6	6.4	5.7	7.8	7.0
<b>Government balance<sup>3</sup></b>					
ESA balance	4.2	-3.7 (-2.8)	-4.0 (-3.1)	-3.9 (-3.0)	-4.3 (-3.4)
<b>Labour market</b>					
Whole-economy gross average earnings <sup>4</sup>	5.0	3.6	3.1	2.9	3.1
Whole-economy employment <sup>5</sup>	0.8	2.9	1.8	0.2	0.7
Private sector gross average earnings <sup>6</sup>	5.3	7.1	6.5	3.8	4.1
Private sector employment <sup>5</sup>	1.4	-0.2	-0.1	0.3	0.5
Private sector unit labour cost <sup>5, 7</sup>	5.0	4.9	3.8	3.0	3.5
Household real income <sup>8</sup>	1.6	-1.2	-2.2	-0.1	-0.1

<sup>1</sup> From May 2009 on, calculated according to the joint methodology of the CSO and MNB.

<sup>2</sup> In line with the changes in Hungarian export structure by destination countries we revised the weights in our external demand indicator.

<sup>3</sup> As a percentage of GDP. Data in parenthesis include cancellation of free central reserves.

<sup>4</sup> Calculated on a cash-flow basis.

<sup>5</sup> According to the CSO LFS data.

<sup>6</sup> According to the original CSO data for full-time employees.

<sup>7</sup> Private sector unit labour costs calculated with a wage indicator excluding the effect of whitening and the changed seasonality of bonuses.

<sup>8</sup> MNB estimate. In our current forecast we have corrected the data of household income with the effect of changes in net equity because of payments into mandatory private pension funds.

<b>Table 1-3</b>			
<b>MNB basic forecast compared to other forecasts</b>			
	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b>Consumer Price Index (annual average growth rate, %)</b>			
MNB (March 2012)	5.6	3.0	-
Consensus Economics (March 2012) <sup>1</sup>	5.0 – 5.3 – 5.8	2.5 – 3.2 – 4.0	3.2
European Commission (February 2012)	5.1	4.1*	-
IMF (January 2012)	5.0	3.7	-
OECD (November 2011)	4.9	2.9	-
Reuters survey (March 2012) <sup>1</sup>	5.2 – 5.5 – 6.2	2.5 – 3.3 – 4.2	2.8 – 3.2 – 3.6
<b>GDP (annual growth rate, %)</b>			
MNB (March 2012)	0.1	1.5	-
Consensus Economics (March 2012) <sup>1</sup>	(-1.5) – (-0.4) – 0.5	0.5 – 1.5 – 2.5	2.2
European Commission (February 2012)	-0.1	1.4*	-
IMF (January 2012)	0.3	1.5	-
OECD (November 2011)	-0.6	1.1	-
Reuters survey (March 2012) <sup>1</sup>	(-1.5) – (-0.3) – 0.5	0.6 – 1.4 – 2.5	-
<b>Current account balance (percent of GDP)</b>			
MNB (March 2012)	3.1	3.7	-
European Commission (November 2010)	3.2	3.8	-
IMF (January 2012)	2.2	1.1	-
OECD (November 2011)	1.4	1.2	-
<b>Budget Balance (ESA-95 method, percent of GDP)</b>			
MNB (March 2012) <sup>4</sup>	- 4.0 (-3.1)	-4.3 (-3.4)	-
Consensus Economics (March 2012) <sup>1</sup>	(-2.8) – (-3.3) – (-4.8)	(-2.5) – (-3.1) – (-4.4)	-
European Commission (November 2011)	-2.8	-3.7	-
IMF (January 2012)	-3.5	-3.7	-
OECD (November 2011)	-3.4	-3.3	-
Reuters survey (March 2012) <sup>1</sup>	(-2.5) – (-3.1) – (-4.5)	(-2.2) – (-3.1) – (-4.6)	-
<b>Forecasts on the size of Hungary's export markets (annual growth rate, %)</b>			
MNB (March 2012)	2.9	5.6	-
European Commission (November 2011) <sup>2</sup>	3.8	5.7	-
IMF (January 2012) <sup>2</sup>	4.5	4.9	-
OECD (November 2011) <sup>2</sup>	3.0	5.4	-
<b>Forecasts on the GDP growth rate of Hungary's trade partners (annual growth rate, %)</b>			
MNB (March 2012)	0.9	1.8	-
Consensus Economics (March 2012) <sup>1</sup>	0.8	1.9	-
European Commission (February 2012) <sup>2</sup>	0.8	2.0*	-
IMF (January 2012) <sup>2</sup>	0.7	1.8	-
OECD (November 2011) <sup>2</sup>	1.1	2.2	-
<b>Forecasts on the GDP growth rate of euro area (annual growth rate, %)</b>			
Consensus Economics (March 2012) <sup>3</sup>	0.1	1.2	-
European Commission (November 2011)	0.7	1.4	-
IMF (January 2012)	-0.3	1.1	-
OECD (November 2011)	0.4	1.6	-

<sup>1</sup> For Reuters and Consensus Economics surveys, in addition to the average value of the analysed replies (i.e. the medium value), we also indicate the lowest and the highest values to illustrate the distribution of the data.

<sup>2</sup> Values calculated by the MNB; the projections of the named institutions for the relevant countries are adjusted with the weighting system of the MNB, which is also used for the calculation of the bank's own external demand indices. Certain institutions do not prepare forecast for all partner countries.

<sup>3</sup> Aggregate based on Euro area members included in our external demand indices.

<sup>4</sup> As a percentage of GDP. Data in parenthesis include cancellation of free central reserves.

\* November 2011 forecast.

Sources: Eastern Europe Consensus Forecasts (Consensus Economics Inc. [London], February 2012, November 2011); European Commission Economic Forecasts (February 2012, November 2011); IMF World Economic Outlook Database (January 2012, September 2011); IMF Country Report No 12/13 (January 2012) Reuters survey (March 2012); OECD Economic Outlook No. 90 (November 2011).

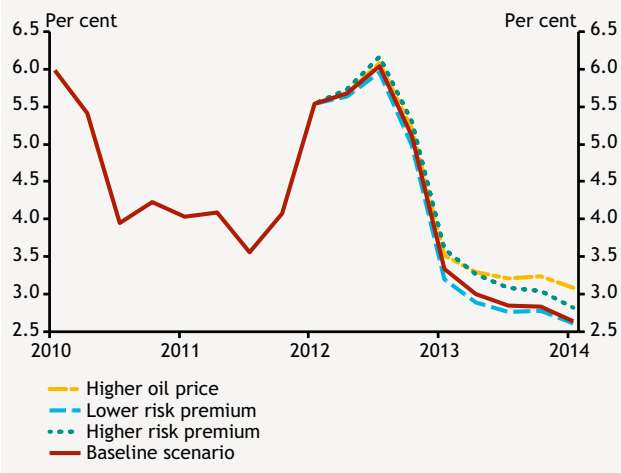
## 2 Effects of alternative scenarios on our forecast

*In the followings three alternative scenarios – considered as the most relevant by the Monetary Council- are presented to illustrate the risks corresponding to the baseline scenario. In the first two scenarios we illustrate the two-way risks related to Hungary’s risk perception, while the third shows the consequences of higher oil prices than those forecasted in the baseline scenario. While a more rapid improvement in risk assessment relative to that assumed in the baseline scenario, enable an earlier – already in 2012 – start to a gradual interest rate decrease, risk perception remaining high for a more prolonged time period and the higher oil price path contribute to the build-up of inflationary pressure necessitating monetary conditions to be maintained at the prevailing level for a more prolonged period.*

Due to concerns regarding the financing of public debt, the high level of foreign currency exposure of both the private and public sectors as well as the risks associated with the financial sector, Hungary’s risk premium has been permanently high since the beginning of the financial crisis. In our forecast we assume that domestic economic agents’ balance sheet adjustment will continue to go on. This process could be prolonged for years, thus the economy’s vulnerability as well as risk premiums could decrease only at a more gradual pace. Risks associated with the financing ability of public debt could significantly be moderated by the agreement between the government, the European Commission and the IMF. The future evolution of Hungary’s risk perception remains surrounded by many uncertainties, which can result in higher, but also lower risk premiums during the forecast horizon than those assumed in the baseline scenario.

In the first of the scenarios related to the evolution of Hungary’s risk assessment, we assume a faster improvement of the risk premium relative to that in the baseline scenario. The scenario’s probability of occurrence would be increased if the agreement between the government, the European Commission and the IMF materialized earlier and as a consequence risks associated with the financing of public debt were already moderated in the shorter term. Domestic financial assets risk assessment could also be better than in the baseline forecast in case the European financial environment improved further and global risk appetite increased. The lower risk premium could aid domestic economic recovery, and at the same time, through an appreciation of the Forint’s exchange rate would result in a moderation of inflationary pressure. A more rapid moderation of Hungary’s country risk, therefore, allows for

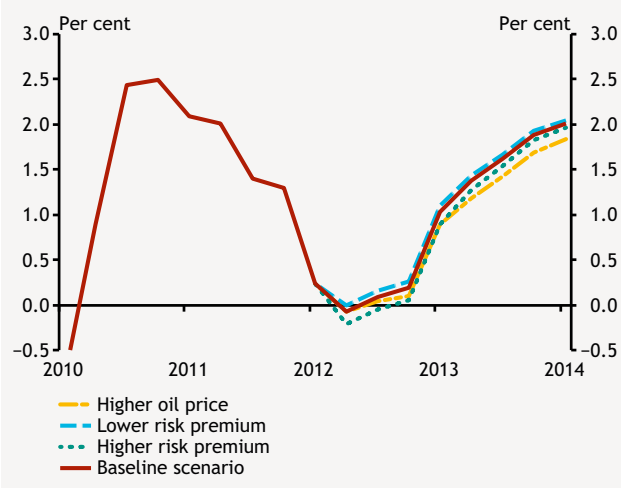
**Chart 2-1**  
The effect of the alternative scenarios on our CPI forecast



an earlier – already in 2012 – start to a gradual base rate cut.

In the prevailing more volatile financial environment there is also a non-negligible risk of the Hungarian risk premium getting stuck at its current higher level for a more prolonged time. This could be a consequence if uncertainties regarding the financing of public debt prevailed for a longer time, and if global risk appetite were to become more moderate. The persistently higher premium adversely affects domestic economic growth prospects, and at the same time, through a depreciation of the Forint’s exchange rate would result in higher inflation. The worsened inflation outlook necessitates the maintaining of monetary conditions at their current level for a longer time period, and a significant decrease of the base rates would not be feasible in the second half of the forecast horizon even.

**Chart 2-2**  
The effect of the alternative scenarios on our GDP forecast



In our baseline scenario we have assumed that, in line with futures’ prices, oil prices follow a decreasing trend during the course of the forecast horizon. This decreasing trend of oil prices could, however, be substantially jeopardized by the realization of geo-political risks – such as realization of the oil embargo against Iran. In such a case oil supply could substantially contract which would result in oil prices sustaining their current, relatively high price level. If oil prices remain at this higher level for a more prolonged period, this would substantially worsen inflation outlook. To counterbalance such an effect, the current monetary conditions would need to prevail until the end of the forecast period. The tighter monetary conditions would result in a more appreciated exchange rate than that forecasted in the baseline scenario and at the same time, in line with higher oil prices, would contribute to a slower closing of the output gap (Chart 2-1, 2-2).

## 3 Macroeconomic overview

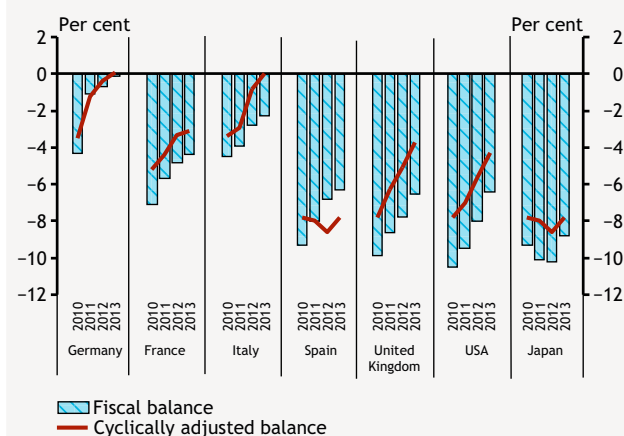
### 3.1 International environment

During recent quarters the global environment has been characterised by worsening demand conditions and uncertainty surrounding the economic outlook. The deteriorating global economic environment affected different regions in various degrees. The economic climate continued to improve gradually in the USA and Germany, while the deepening of the euro-area debt problems contributed to a decline in demand in several euro area countries. In developed economies, the large-scale fiscal adjustments targeting sustainable government debt and the continued downsizing of balance sheets in the private sector may cause a slowdown in growth this year.

The effect of weakening global economic activity is also reflected in inflationary trends. Following the acceleration measured during the past year, the inflation rate in developed economies has been decelerating in recent months. The deterioration in global growth prospects interrupted the rapid rise of prices on the main commodity markets, although substantial price decreases are not expected in the short term. This can be attributed to the fact that geopolitical risks may have strengthened in recent quarters, in parallel with rapid growth witnessed in developing economies, where demand for specific resources is higher. In line with these trends, the global inflation of processed products may generally remain subdued, although a substantial adjustment of commodity prices (crude oil, natural gas, unprocessed food), which play a key role in determining domestic inflation, is not expected, despite the worsening growth prospects. Commodity prices may remain at high levels over the longer term.

#### 3.1.1 DEVELOPMENTS IN THE GLOBAL ECONOMY

**Chart 3-1**  
Fiscal balance in the major developed economies  
(percentage of GDP)

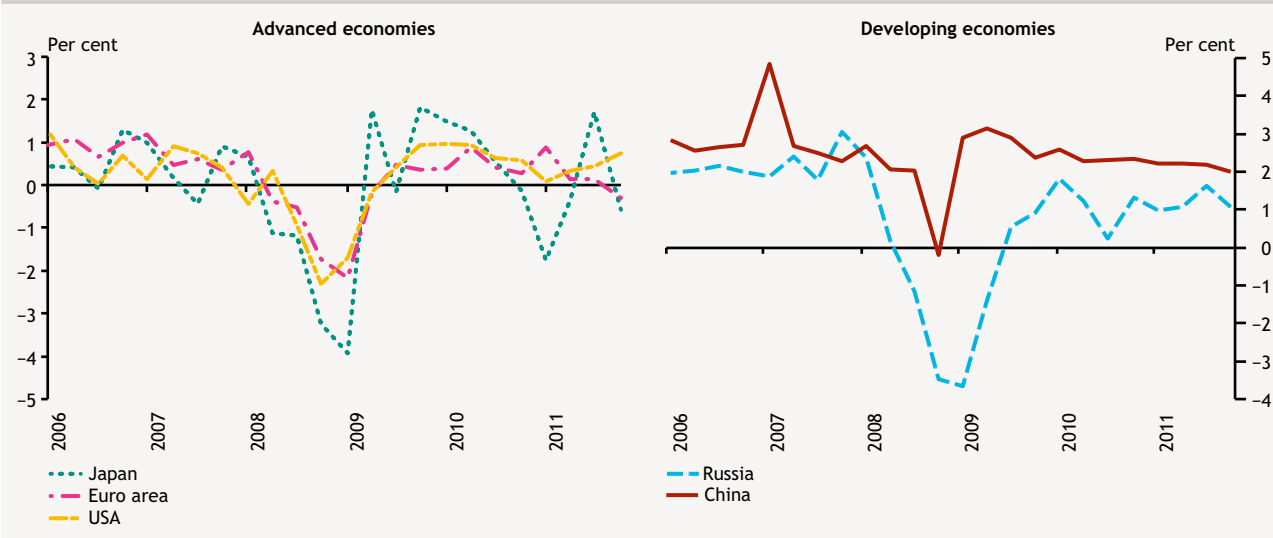


Note: Based on IMF, Fiscal Outlook, January 2012.

Developments in the global economy are predominantly shaped by the debt problems in the euro area and the measures being implemented to resolve them. Government debt – weighted in proportion to GDP – in developed countries has increased dynamically since 2008; preliminary IMF estimates suggest that debt rose to 103.5 per cent in 2011. This is primarily attributed to fiscal stimulus measures applied in the first phase of the crisis, bank consolidation and the use of automatic stabilisers. In reaction to the European sovereign debt crisis, strict fiscal measures have mainly been applied in euro area member states since May 2010. Austerity measures resulted in worsening demand conditions. However, fiscal positions and the effectiveness of the consolidations show major differences. Fiscal austerity may substantially slow economic growth via aggregate demand. According to the end January forecasts of the IMF, the GDP-proportionate budget deficit may decrease below 3 per cent in Germany and Italy, while additional major adjustments are necessary in France and Spain (Chart 3-1).

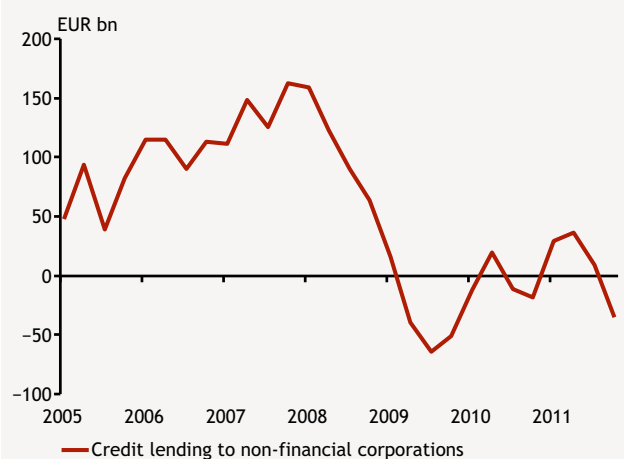
**Chart 3-2**  
**GDP growth in major economies**

(quarterly change in seasonally adjusted data)



Measures targeting the fiscal consolidation are gaining emphasis in developed economies outside of the euro area as well. Debt sustainability risks are already visible in Japan and the USA, although financing problems have been avoided so far-, and thus it is possible to pursue an economic policy based on looser fiscal conditions than that of the international average. Over the medium term, however, structural adjustments to the budgets of these countries may be necessary to arrest the growth of government debt.

**Chart 3-3**  
**Credit lending to non-financial corporations in the euro area**



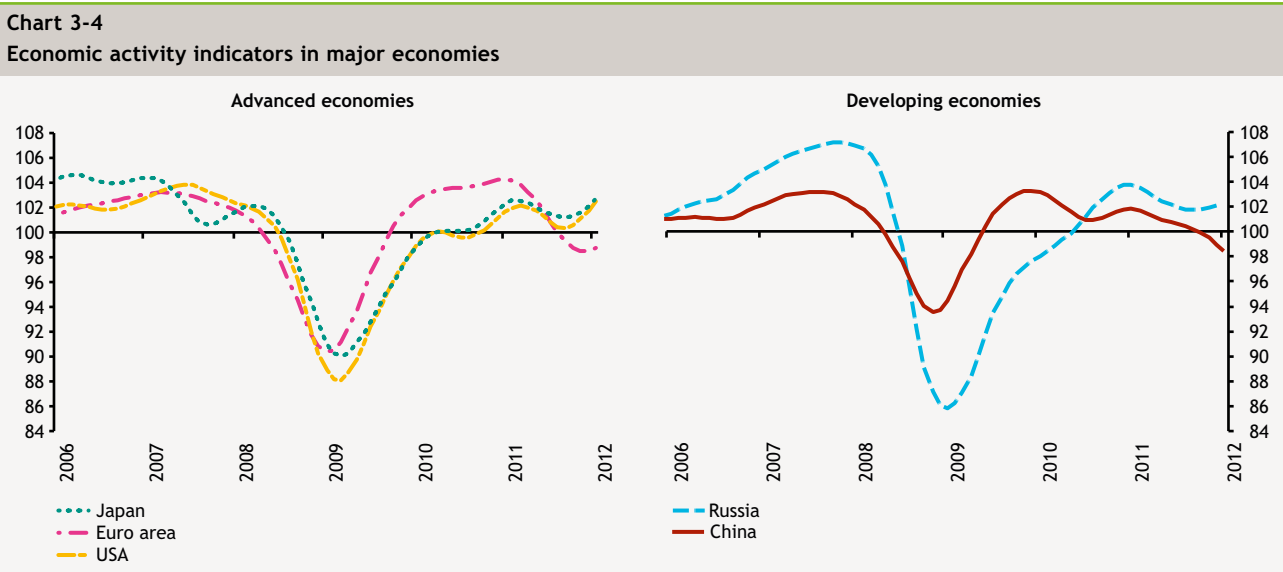
In addition to fiscal austerity and debt stabilisation measures, growth prospects are also substantially affected by the deleveraging of European banks (Chart 3-2). Weak lending in the developed region principally affects Europe, where tensions in the banking sector at the end of last year led to worries about a possible credit crunch (Chart 3-3). Tensions within the banking sector eased early in the year due to the recently implemented measures of the ECB, but, deleveraging in the euro area continues, similarly to other developed regions. Lending may slow in emerging regions as a result of large volume cross-border withdrawals to related the large European banks, which may particularly hit South America and Central and Eastern Europe this year. Inflows of portfolio capital, however, have strengthened because of the liquidity facilities of developed central banks; problems may arise in connection with the flow of working capital.

Economic growth in the euro area decelerated substantially in 2011 H2. Owing to worsening business and household confidence, as well as liquidity problems in the banking sector, the region came close to a recession by the end of 2011 and early 2012. Among the major economies, only France recorded growth in 2011 Q4. Weakening exports may

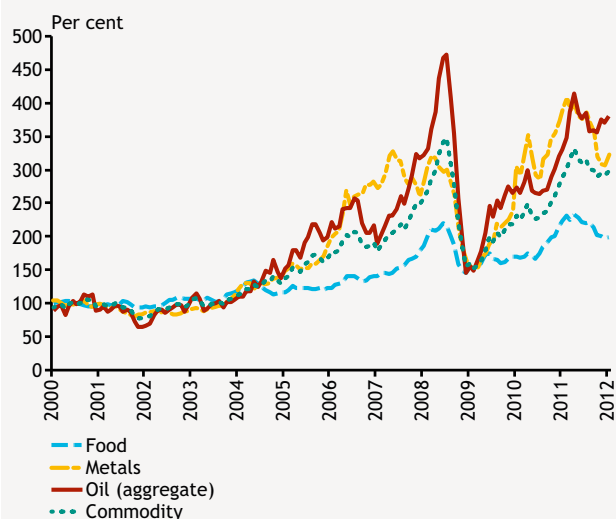
have played a key role in the 0.2 per cent downturn of the German economy. Economies implementing the largest fiscal adjustments – e.g. Italy, Spain – are likely to remain in a recession in 2012. Most forecasts suggest that the German economy may grow this year, but the rate of growth will remain moderate due to slack global demand.

Economies outside of Europe show a slightly more favourable economic picture. After a poor start to the year, the growth in the US economy picked up by the end of 2011; employment and household consumption also moved on a favourable trend. According to the most recent Beige Book of the Fed, industrial production and retail trade increased this year, while the labour market and the housing market conditions moderately improved. The report underlines the fact that robust growth characterised the automobile and steel industries early in the year. The recovery in the Japanese economy following the earthquake in March 2011 was restrained by the slowdown in global trade and supply problems caused by the floods in Thailand at the end of 2011. Positive industrial production figures in December and improving confidence indicators, however, suggest that economic activity may improve at the beginning of 2012. Growth in China is gradually slowing, as the annual rate of growth fell below 9 per cent in 2011 Q4. Along with stricter fiscal and monetary policy, real estate market regulatory measures have led to a gradual slowdown in investment activity. Moreover, weakening demand in the global economy decreased exports as well. In line with the above trend, the Chinese government reduced this year’s growth target to 7.5 per cent.

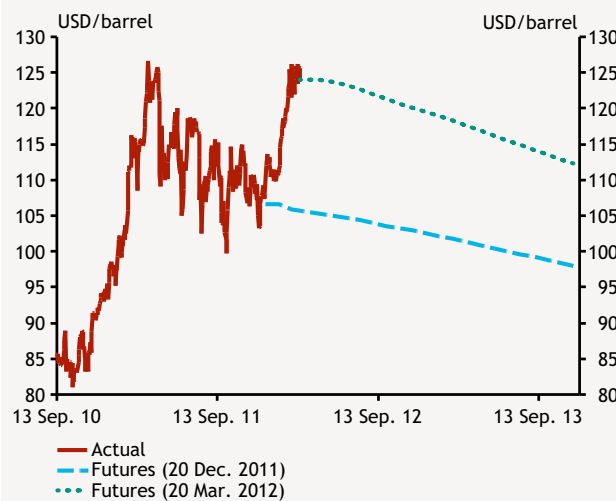
Although the recently published Q4 growth data reveal weakening economic performance in many countries, several confidence indicators suggest that global economic



**Chart 3-5**  
Price of major commodities  
(USD)



**Chart 3-6**  
Expected price of Brent crude oil  
(USD/barrel)



activity may recover in the coming quarters (Chart 3-4). The interest rate cuts and coordinated liquidity injections of the ECB in November, December and February, and the curbing of the debt crisis may have supported the stabilisation of business and household confidence in European countries.

Global economic growth, however, may remain modest in the medium term. The balance sheet adjustments of indebted households and budget deficit cuts in developed economies may narrow demand for a prolonged period. Developing economies has grown dynamically since the crisis, but the weaker performance of developed countries may negatively affect them through trade ties. In addition, domestic demand may worsen in China, particularly on the real estate market. Thus, growth may fall short of the historical average in 2013 as well.

### 3.1.2 GLOBAL INFLATIONARY TRENDS

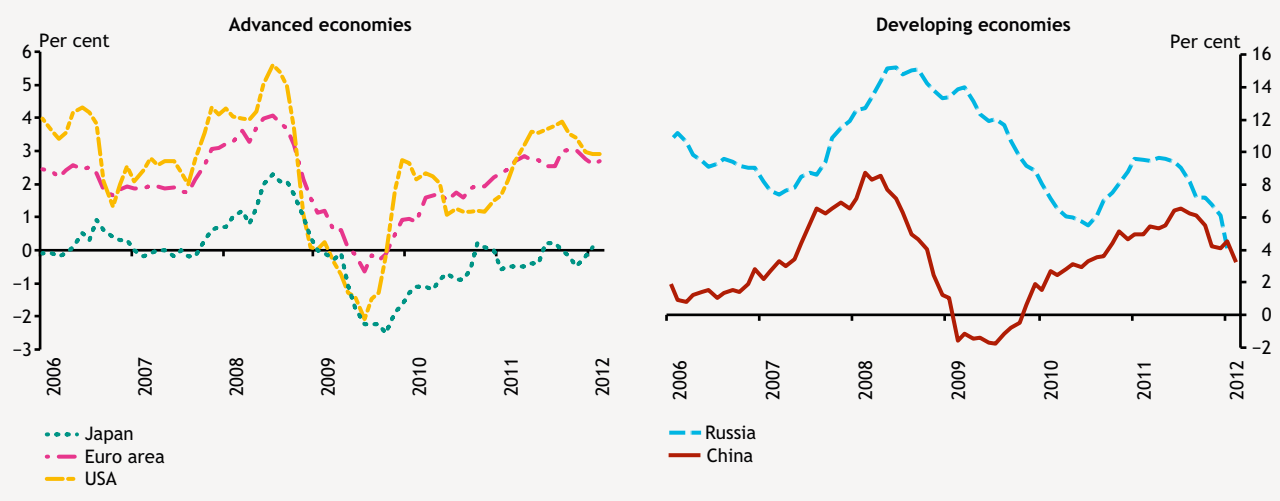
The gloomy global economic growth prospects are also reflected by inflationary trends. More pessimistic growth prospects have moderated inflation fears. Commodity prices declined in 2011 H2, in parallel with fading growth prospects, contributing to a stabilisation in the prices of industrial goods on the global market. In relation to agricultural raw materials, favourable harvests also supported falling prices. Prices of both metals and food commodities increased moderately in early 2012, but this increase does not represent an inflationary risk due to the falling prices in the previous year (Chart 3-5).

The price of oil has continued to rise in recent months, presumably due to mounting geopolitical tensions. The European Union and the USA are planning an oil embargo against Iran, in response to the country's continued nuclear programme. Domestic tensions in several Arab countries are also interrupting production. Finally, analysts argue that due to growing government expenditures, Arab countries are able to sustain fiscal stability only with higher oil prices, which may also pose a limit to reducing oil prices in a period of recession. Owing to the above factors, the 18 per cent increase of the price of Brent crude oil since mid-December exceeds the average price increase of commodities, as the price rose to USD 125 by the end of February. Forward quotes this year indicate a stabilisation of the Brent oil price at approximately USD 120 (Chart 3-6).

Since the effects of the cost shocks ceased, inflation declined in most economies at the end of 2011. Looking to the future, surplus capacities in developed economies may lead to a further decline in inflation in 2012 and 2013. Growth has also slowed in several, previously overheated



**Chart 3-7**  
**Inflation in major economies**  
 (% , year/year)



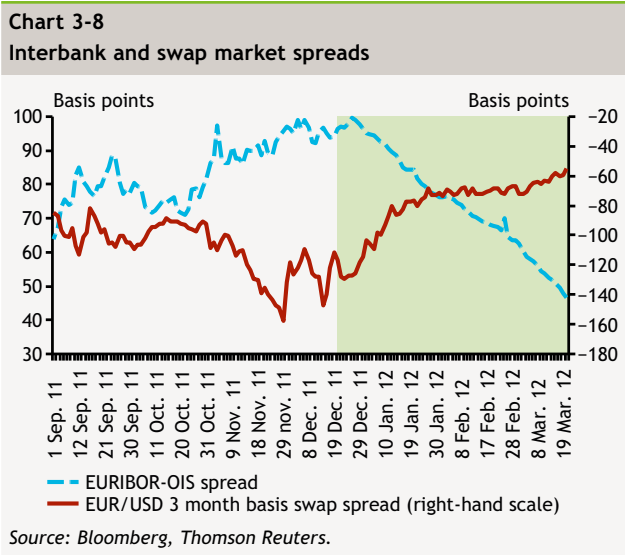
developing economies, particularly in China, which may support slowing inflation in commodity prices (Chart 3-7).

### 3.1.3 DEVELOPMENTS IN MONETARY POLICY

The deterioration of the global economic outlook and waning inflation risks in recent months are also reflected by the interest rate decisions of central banks around the world. The main central banks of the world have basically implemented a zero base rate; the sole exception, the ECB, has cut the base rate in two steps, by a total of 50 basis points to 1 per cent since October. The Governing Council explained the cuts on the grounds that inflationary pressure is low on the wage, price and cost side over the monetary policy decision horizon. In the survey of Consensus Economics, conducted directly before the interest rate cuts, market expectations were consistent with a 25-basis point cut by the end of 2011, and a further decrease of the interest rate was only minimally anticipated in 2012.

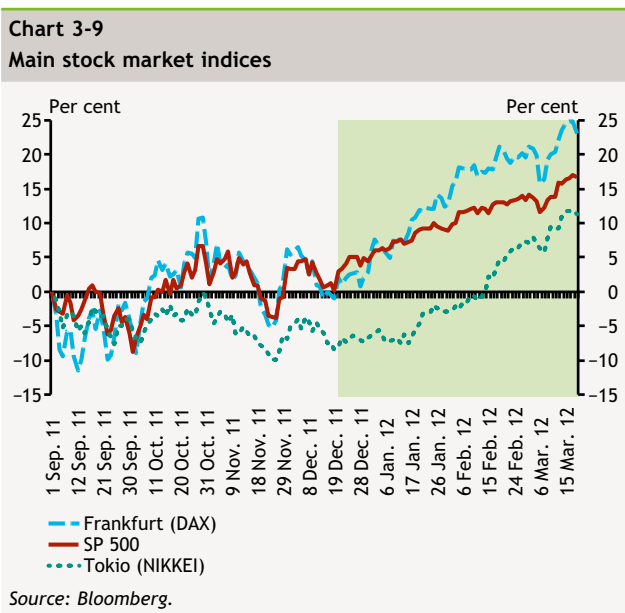
**Table 3-1**  
**Nonconventional monetary policy tools in the CEE region during the crisis**

Country	Nonconventional monetary policy measures in the CEE region
Czech Republic	Since the 15th Oct. 2008 2 weeks maturity credit facility, interest rate of the base rate + 10 bps Since the 20th Nov. 2008 3 month maturity credit facility, interest rate of the base rate + 30 bps 2 weeks and 3 months FX-swaps (the 3 month tool ended in 2010)
Poland	Long term credit facility (the longest maturity was 1 year) FX-swap tenders Relaxed eligibility criteria EUR/CHF swap agreement with the Swiss National Bank 10 billion euro repoline facility with the ECB
Romania	Reducing the reserve requirements (from 20% to 15% for RON)



Following the interest rate decisions, analysts expected a significantly lower interest rate path of approximately 40 basis points less in January 2012. An interest rate increase is only expected in 2013 based on the yield curve derived from Euribor forwards. In developed countries outside of the euro area, central banks in Australia, Israel, Norway and Sweden also cut their base rates.

Due to dampened economic expectations, central banks in countries applying a zero base rate aimed to ease monetary conditions with unconventional monetary policy measures. The Japanese central bank increased the overall amount of its asset purchase programme to 55 trillion yen and 65 trillion yen (12.1 per cent of 2010 GDP) in October and February, respectively. It was argued that growth in Japanese economy had stalled by the end of the year, despite rising domestic demand. The negative trend predominantly affected declining exports and industrial production attributed to European recessionary expectations and the flood in Thailand. The British central bank increased its asset purchases by 50 billion pounds in October and by an additional 75 billion pounds in early February, equalling a total of 325 billion British pounds (22.3 per cent of 2010 GDP). The decisions were said to be necessary due to the declining economic activity, as the medium-term 2 per cent inflation target would probably be undershot without further monetary easing. Markets still do not rule out the announcement of third quantitative easing programme by the Fed.

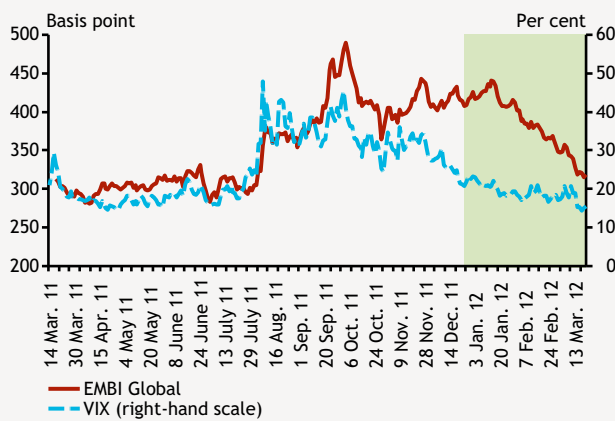


Both the Fed and the Japanese central bank announced an official inflation target in recent months. At the end of January, the Fed announced that in the future it aims to fulfil its triple mandate (price stability, maximum employment, low long-term interest rates) by introducing an explicit, long-term inflation target. It set the inflation target at a 2 per cent level with the personal consumption expenditures price index. It was argued that the communicated inflation target supports the stringent anchoring of long-term inflationary expectations, which enhances the ability of monetary policy to promote maximum employment through moderate long-term interest rates. The Japanese central bank announced a 1 per cent inflation target for the medium and long term. Japan has witnessed continuous deflationary problems since the end of the 1990s, and therefore the modification of monetary policy in the direction an inflation targeting regime would seem a reasonable step in its case.

### 3.1.4 FINANCIAL MARKETS

Due to deepening and contagion of the debt crisis, by the end of 2011 the European banking sector faced mounting

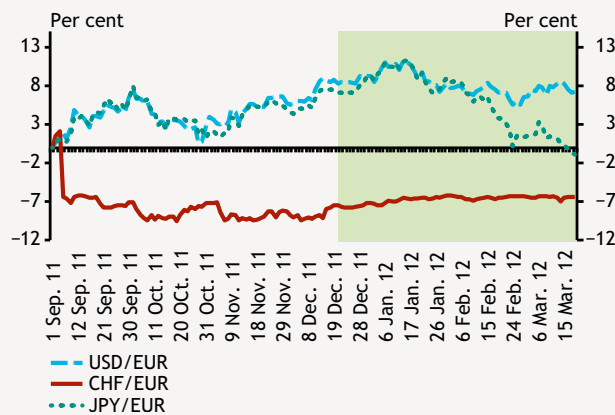
**Chart 3-10**  
Risk indices



Source: Bloomberg.

**Chart 3-11**  
Main foreign exchange rates

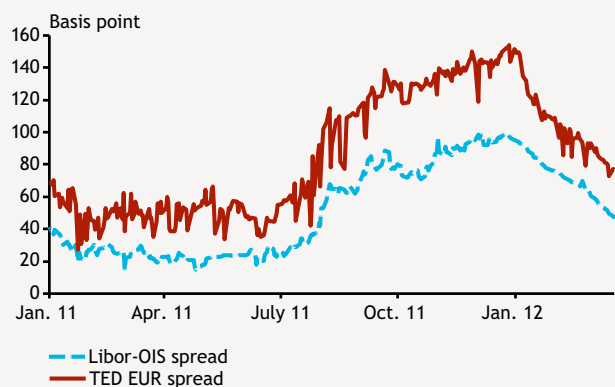
(1. Sep. 2011 = 0)



Note: Negative values indicate the appreciation of the euro.

**Chart 3-12**  
Interbank market indices

(basis point)



Source: Thomson Reuters.

liquidity tensions, its capital adequacy worsened and the risk of possible capital losses increased significantly. The ECB attempted to ease these tensions primarily by sustaining financial stability and improving the commercial banking channel and announced the application of an additional coordinated instrument scheme. On 3 November 2011, the ECB announced details of the second covered bond purchase programme (CBPP 2). In the framework of the programme, the ECB will purchase bonds in the total value of 40 billion euro. The asset purchase programme was launched in November 2011 and is expected to be completed in October 2012 at the latest. The central banks of developed countries launched a coordinated action at the end of November to manage US dollar funding disruptions. They reduced the costs of the outstanding US dollar swap funds as of December 5 (OIS + 50 basis points, previously OIS + 100 basis points) and announced they would continue the campaign until February 2013.

The ECB announced its new 3-year credit instrument (LTRO) in December 2011 and in February 2012, which was used by euro-area banks in an amount of EUR 489 billion and 529 billion euro respectively. Regarding the effects of the LTRO there is a consensus that it has significantly decreased tensions in the European financial markets. The credit facility supported the euro-area banks to a healthier balance sheet structure and cheaper longer-term financing that does not contain term premium; financial institutions were hardly able to obtain low-cost long term financing with bad quality collaterals as securities which can be used as collaterals on the market only with high haircuts or cannot even be used as collaterals at all. However, the LTRO cannot really remedy the banks' balance sheet problems caused by low quality assets which cannot be used for repo transactions. Furthermore, the LTRO may be neutral in terms of financing needs, as it is almost equivalent with rolling a position of short-term ECB credit facilities.

The central bank measures recently announced on developed markets have improved liquidity, but are unable to substantially influence balance sheet downsizing in the public sector and the European banking sector. Market confidence has improved mildly as growth worries have eased easing since December and the European debt crisis also eased. Relief on the markets was supported by the coordinated steps of the ECB, the Fed's communications with an emphasis on loose monetary conditions in the long term and expansion of the quantitative easing programme by the Japanese central bank. Easing tensions in the European banking sector and the smaller than expected decline in lending moderated previous recession fears. The instruments of the ECB applied since early November

significantly eased tensions on the market of covered bonds and led to a yield decrease not witnessed since the beginning of the debt crisis. The instruments substantially improved liquidity tensions peaking at the end of the year in the European banking sector. Thanks to the successful three-year ECB credit facility, money market conditions improved significantly and long-term yields declined on the government securities market in the peripheral countries of the euro area.

The improved position of the European banking sector and reduced risks have led to improved sentiment on the financial markets in recent months. The narrowing of the EURIBOR-OIS spread suggests strengthening interbank confidence, while the significant decrease of the 3-month euro/dollar based swap spread indicates the easing of US dollar liquidity tensions in the euro-area banking sector. Owing to optimistic sentiment, stock market indices in the leading developed and emerging markets have produced substantial growth of over 15-20 per cent since December. The VIX index fell from 23 to 16 per cent and the EMBI yield index decreased by 100 basis points, suggesting that improving sentiment also positively affected the risk perception of sovereign debtors on emerging markets. The euro appreciated by 1 per cent against the US dollar and by 7 per cent against the yen in reaction to strengthening global risk tolerance and temporary resolution of the Greek crisis. For the time being, the Swiss central bank is maintaining the exchange rate limit set in September of last year, thus the franc/euro exchange rate hovered around the 1.2 level for most of the period.

Concerns related to the debt crisis in the euro area and the withdrawals of fundings of global banks remain a negative risk underlying global investor sentiment. Reduced uncertainties relating to the Greek bond exchange programme and the new IMF-EU bail-out package may further improve money market sentiment, but the management of Greek government debt over the medium term remains a negative risk. Tensions on the European money markets have abated significantly since mid-December, although longer-term global economic trends continue to be determined by the motivation to downsize balance sheets.

**Box 3-1****Deleveraging in the European banking sector**

The adjustment and elimination of the imbalances which built up before the crisis, is a prolonged process. Balance sheet adjustments within the banking sector, particularly in relation to European banks, have accelerated since the end of last year and is part of this process. According to the latest BIS international banking statistics (data on 2011 Q3), European banks have withdrawn large volumes of funds from emerging countries since September, particularly from the Central and Eastern European region. This was possible last year due to the relatively high liquidity of subsidiary banks (compared to the situation at the end of 2008 and in 2009). The cross-border withdrawals of funds further worsens the growth outlook of the affected regions. Due to balance sheet downsizing, central banks in Eastern Europe, South America and Asia have been forced to apply liquidity-providing measures. The provision of liquidity may be necessary, as the rapid pace of withdrawn funds may cause disruptions on the FX swap market, which may lead to liquidity tensions on the local financial markets.

The withdrawal of funds is partly attributable to the capital adequacy rule of the European Banking Authority announced in the autumn of 2011, prompting banks on the continent to reduce their exposure to emerging markets. On the basis of the international banking statistics of the BIS, balance sheet downsizing trends affect the exposure of European banks to emerging markets to a greater degree. European banks withdrew large volumes of funds from their subsidiaries in global emerging markets in the second half of the year, presumably on account of the liquidity disruptions and capital adequacy obligation. The withdrawal of funds is partly attributed to the 9 per cent Tier 1 capital adequacy rule required by the European Banking Authority (EBA). This rule accelerated the reduction of the exposure of European banks with global interests on emerging markets, resulting in substantial capital withdrawals. The process predominantly affected the Eastern European and Mediterranean region, which accounts for roughly 60 per cent of the change in the cross-border bank claims of the euro-area banks. The cross-border claims of euro-area banks providing data to the BIS decreased significantly from Poland, Hungary, Turkey, Romania, Kazakhstan and Ukraine.

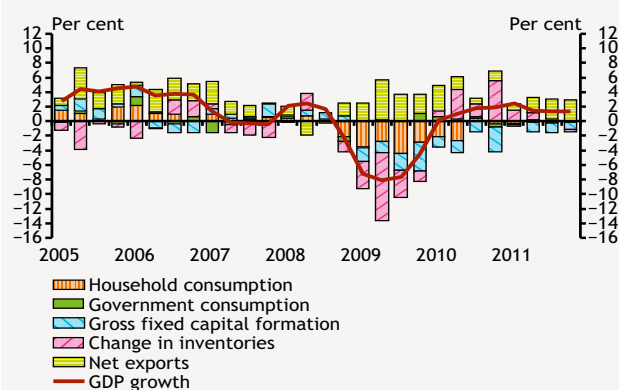
The European Bank Coordination Initiative ("Vienna Initiative") is also relevant in explaining capital flows in Central and Eastern Europe, this agreement required European banks to maintain exposure relative to level measured in 2008 in countries signing an IMF credit line agreement. (A 95 per cent minimum was determined for Hungary.) Accordingly, non-resident banks may not reduce their Eastern European exposure at a faster rate during the term of the IMF facility, and thus the agreement slows down balance sheet downsizing. There is growing demand in Eastern Europe for a new, similar agreement (Vienna Initiative 2). Without such an initiative, the extension of new loans may decline in the Central European region at an even higher rate, which would further worsen growth prospects.

## 3.2 Aggregate demand

Despite the slowdown in the global economy, the Hungarian economy exhibited stronger-than-expected growth in the fourth quarter. Growth continues to be characterised by a significant duality: the contribution of net exports to growth remains high, while overall domestic demand continues to be moderate. Household consumption may have moderately increased at the end of the year, presumably due to mainly temporary factors. Investments within the national economy continued to decline, albeit at a slower pace.

Improving demand conditions may also have contributed to the acceleration in core inflation and the higher-than-expected increases in consumer price at the beginning of the year. We believe that the rise in domestic demand at the end of 2011 is temporary and that consumption is likely to decline again over the short term. The renewed weakening in demand conditions may continue to dampen the pass-through of high producer prices to consumer prices, supporting the gradual decrease of inflation, which was high in early 2012.

**Chart 3-13**  
Structure of changes in Hungarian annual GDP  
(2005–2011)

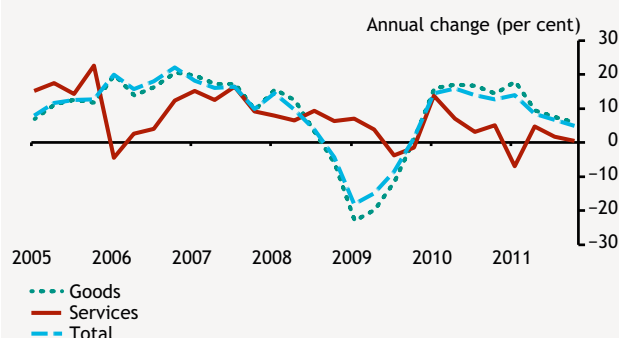


Hungarian GDP showed stronger growth in 2011 Q4 than we had expected. Despite slowing growth experienced by Hungary's key foreign trading partners, the effect of external demand continued to play the key role in determining GDP. Domestic demand continued to underperform at the end of 2011. As in previous quarters, household consumption decreased further. Investments continued to decline, notwithstanding the large-scale automotive industry projects (Chart 3-13).

### 3.2.1 FOREIGN TRADE

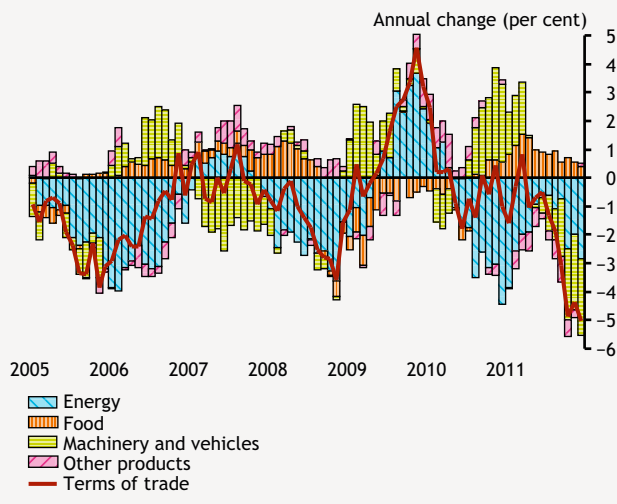
The economic activity of Hungary's main foreign trading partners continuously declined after 2011 Q1, negatively affecting sales of Hungarian export goods. Despite the worsening conditions, the volume of domestic export sales continued to show strong growth in the final months of the year. On account of stable robust Asian demand, the performance of automotive companies operating in Hungary was favourable throughout the year, as indicated by the dynamic growth in export sales. By contrast, the negative effects of reorganisation and factory closings in the past quarters were reflected by sales in the communications sector (Chart 3-14).

**Chart 3-14**  
Volume of exports of goods and services  
(2005–2011)



Domestic exports were presumably also spurred by the weakening exchange rate at the end of the year. The agricultural and tourism sectors likely benefited from the positive short-term effects of this trend. Continuing weak domestic demand and worsening global economic prospects

**Chart 3-15**  
Annual change in terms of trade

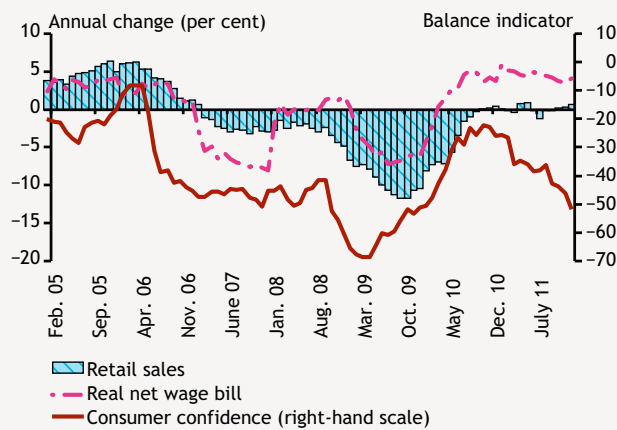


caused a decline in import volumes, and thus net exports continued to substantially contribute to positive national GDP growth. Aside from the positive trends in sales volumes, the negative effects of rising and persistently high energy prices seen last year were also reflected by the continuous deterioration of the national terms in trade. As a result of worsening terms of trade, the trade surplus continuously declined in 2011 H2 (Chart 3-15).

The global economy may recover from its low in the first half of 2012, and thus we can expect a gradual growth in exports from the second quarter. The gradual start-up of production at the Mercedes factory in Kecskemét may also boost the volume of exports. This effect, however, is offset by the bankruptcy of Malév in the first quarter and the downsizing of Nokia’s production capacities.

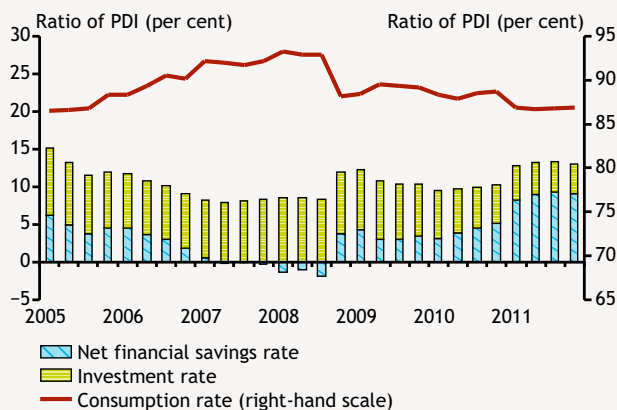
### 3.2.2 HOUSEHOLD CONSUMPTION

**Chart 3-16**  
Retail sales, wages and the consumer confidence index



Household consumption deteriorated further at the end of 2011. Macroeconomic indicators determining households’ consumption (employment, economic prospects, consumer confidence indicators, credit supply of the banking system) have not been improving in past months. The early repayment scheme announced for debtors with foreign currency loans and also the further tightened credit standards for households may have also worked against rising demand in the short term. The consumption-stimulating effects of the programme are expected to materialise in the longer term. Since a large portion of participating households prepaid loans using own funds, this may have limited the year-end consumption of the households involved. For households not participating in the programme, depreciation of the exchange rate in recent quarters reduced income available for consumption. The option provided by the new fixed exchange rate programme introduced this year may ease the resulting tensions for those households. The fall in demand may have been mitigated by the prolonged effect of real yield payments in July, the December timing of year-end bonus payments, purchases brought forward due to the VAT increase in January, particularly in relation to durable industrial goods, and the weakening of the forint exchange rate in the final months of the year. The latter probably strengthened the demand of non-resident households (Chart 3-16).

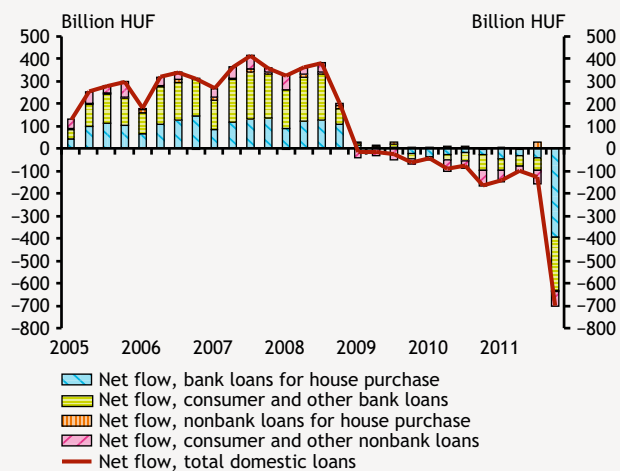
**Chart 3-17**  
Use of household incomes  
(2005–2011)



Household lending in 2011 Q4 was driven mainly by the early repayments of foreign currency loans. The net effect of the prepayments (gross amount less refinancing loans) amounted to HUF 550 billion. Early repayments affected both the reviewed product groups of the household segment; they

**Chart 3-18**  
**Net quarterly change in domestic loans outstanding to households: breakdown by loan purpose**

(2005–2011)



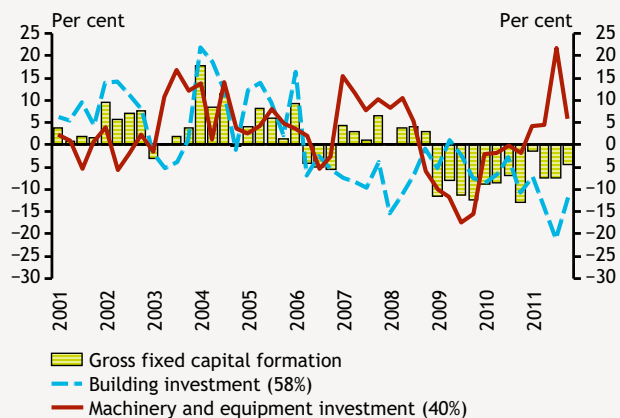
not only affected home loans, but also consumer loans including home equity loans (Chart 3-18).

In addition to early repayments, the decline in lending was significantly attributed to other causes as well. On the supply side, households faced tightened credit standards in terms of both price and non-price conditions. At the same time, household credit demand remains slack: the disposable income of households with foreign currency loans remains burdened by the strong Swiss franc, while households participating in the prepayment scheme are expected to build up earlier buffers over the short term, rather than drawing down new loans. Overall, the loan repayments of households continue to exceed the amount of newly disbursed loans, resulting in declining lending that surpasses the volume of early repayments.

We expect consumption to decline again in early 2012. Underlying household income trends continue to be weak. Higher-than-expected inflation and compensation for the minimum wage increases may strengthen the expected decrease of real incomes in the first months of this year. The low level of confidence indicators also suggests cautious consumer behaviour in the short term.

**Chart 3-19**  
**National economic machinery investments and industrial confidence indicator**

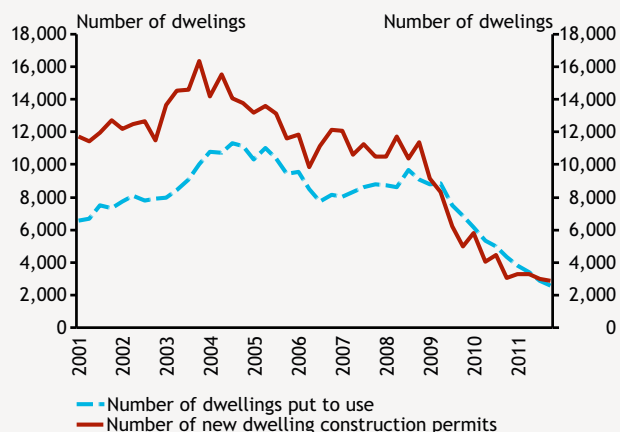
(2001-2011, year/year)



### 3.2.3 PRIVATE INVESTMENTS

The general macroeconomic environment did not stimulate investment activity in the past year. The low rate of investment is attributable to both demand and supply side factors. The deterioration of short-term growth prospects and the recurring decline in the use of capacities has prompted companies to take a cautious approach to investment, possibly resulting in a continued delay of investments. Lending by the banking sector is still tied to tight terms, and thus there is limited access to the funds necessary for investments. Furthermore, non-financial corporations may also prefer liquid assets due to the tight credit conditions of the banking sector (Chart 3-19).

**Chart 3-20**  
**New housing construction and number of issued permits quarterly**

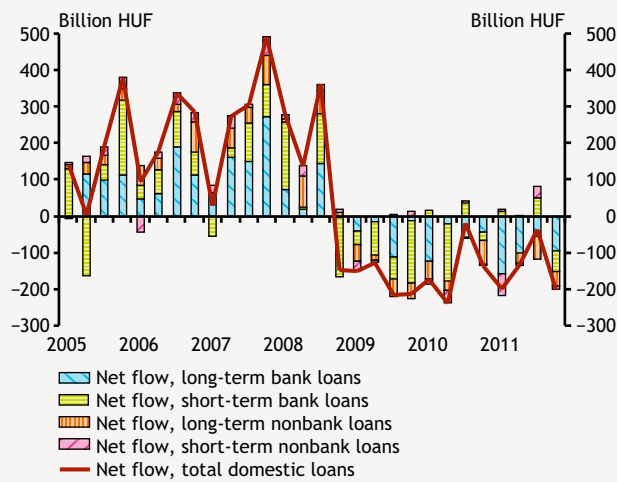


While investments in sectors producing for external markets have increased primarily as a result of key large-scale investments in the manufacturing industry, sectors producing for the domestic market were mainly characterised by a decline in the fourth quarter again. Agricultural investments represent an exception to this, where – as a result of favourable performance in 2011 – there was more room to implement additional investments which are also in accordance with farming directives applied by the EU.

Household investment continues to be characterised by a high level of caution and a wait-and-see approach. The key



**Chart 3-21**  
**Net quarterly change in the domestic loans outstanding to corporations, broken down by maturity**



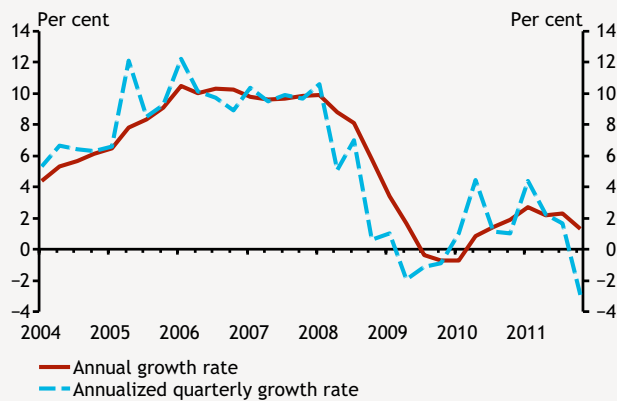
indicators measuring the new home market reveal historically low activity on the housing market. The number of new home construction permits decreased in the second half of the past year, albeit by a very low rate, thus the national real estate market can gradually reach a low in the course of the next year (Chart 3-20).

The lending activity of domestic financial intermediaries has further declined in the corporate segment in the last quarter of 2011. Both bank and non-bank lending decreased in the reviewed period, irrespective of product maturity. The lending capacity of the banking sector has significantly worsened in the past quarter, in relation to both the liquidity position and, through rising losses, the capital position as well. Beyond supply constraints, weak corporate lending is also attributable to demand factors, therefore the borrowing of long-term loans remains at a low level. Short-term lending (i.e. working capital financing) also decreased at a higher rate during the quarter, which is presumably correlated with the relatively low level of capacity utilisation. Short-term lending to companies in the manufacturing industry, which are performing strong within the export sector, was also characterised by a moderate decline in the period (Chart 3-21).

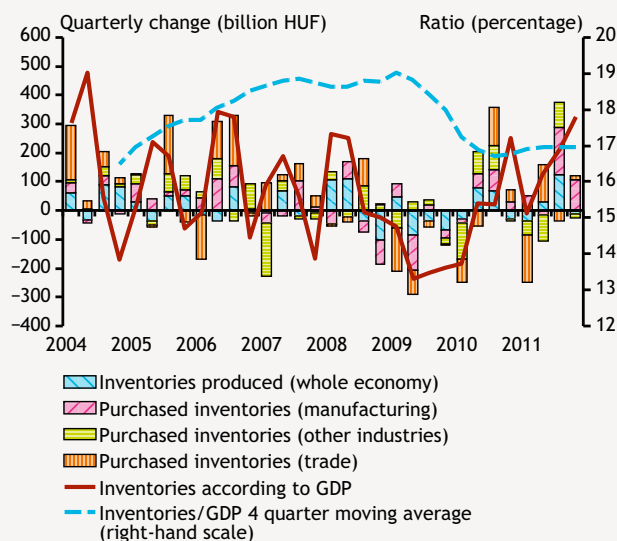
Declining external demand, deteriorating domestic economic prospects and tight credit conditions within the domestic banking sector suggest that lending to domestic companies remains subdued, due to the joint contraction of demand and supply.

With poor economic prospects and continuously tight credit conditions, both corporate and household investments may remain weak in the first months of the year. A rise in investment is still expected in the manufacturing sector, as a result of the large scale automobile industry investments in progress.

**Chart 3-22**  
**Private sector lending in the euro area**



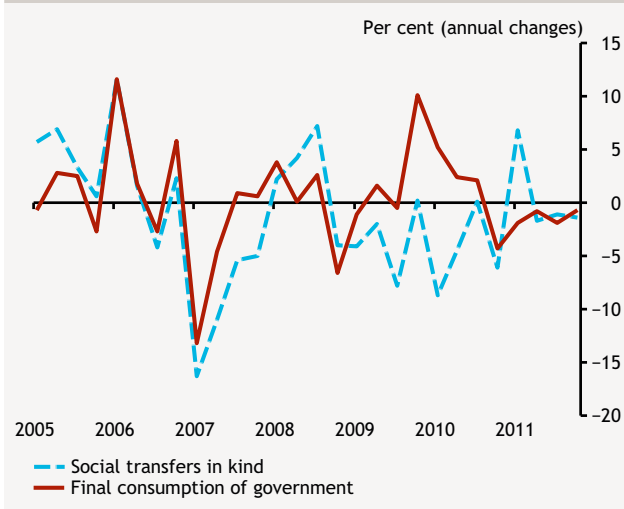
**Chart 3-23**  
**Inventory change at current price and based on GDP, inventory level in proportion to nominal GDP**



### 3.2.4 INVENTORIES

The level of inventories in the national economy may have been determined by conflicting trends. Uncertain demand prospects and continuously tight corporate credit standards may continue to result in activity characterised by tight, low inventory levels in a broad range of sectors. The earthquake in Japan and the floods in Thailand, however, caused inventory problems for many manufacturing companies in the middle of last year. On the other hand, outstanding agricultural harvests in 2011 may have positively contributed to the rise in inventories within the national economy. In conclusion, the change in inventories made a negative contribution to GDP growth in the fourth quarter (Chart 3-23).

**Chart 3-24**  
**Changes in government consumption**  
 (2005–2011)



### 3.2.5 GOVERNMENT DEMAND

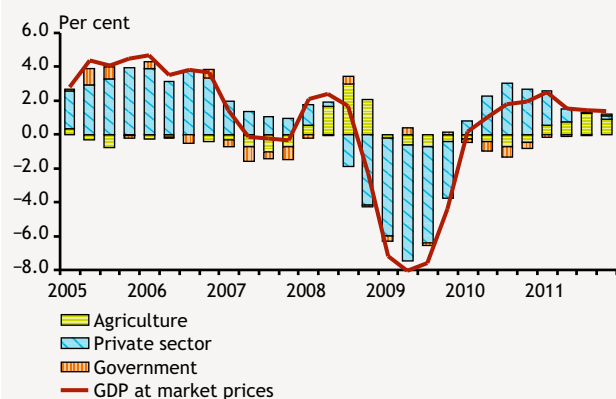
Public consumption expenditure diminished in the fourth quarter. In line with the improvement of the budget balance, tight fiscal management has characterised direct government expenditures in the past quarters. The level of public employment has gradually declined in recent quarters, while government investments implemented in part with EU financing have moderately increased. The rise in investments is mainly attributable to the implementation of the “Vásárhelyi Plan” which targets river control projects (Chart 3-24).

### 3.3 Production and potential output

In the last quarter of 2011, the national economy output increased faster than we expected. In addition to consistently strong industrial exports, GDP growth is also attributed to the agricultural performance which was significantly more favourable than in 2010. Sectors producing for the domestic market are still failing to promote growth. The economy's potential rate of growth may have recovered from the low last year, possibly followed by very slow, gradual growth.

The outstanding agricultural crop yields in 2011 contributed substantially to the normalisation of agricultural producer prices observed in the second half of last year thanks to growing supply, and this has also lowered domestic inflation in the past quarters.

**Chart 3-25**  
Structure of changes in Hungarian annual GDP  
(2005–2011, %)

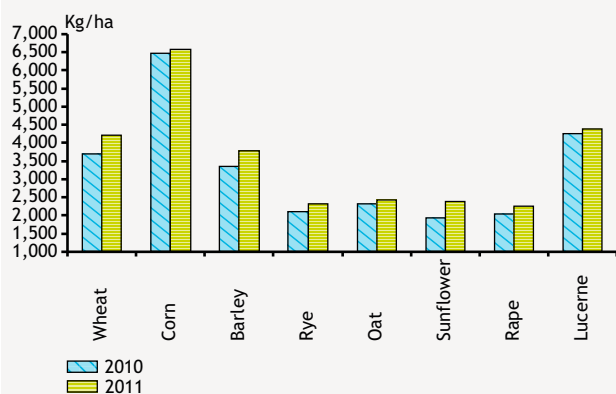


Note: The value added of sectors at basic prices.

National economic output increased in 2011 Q4, thus following the crisis the recovery of the Hungarian economy has been practically continuous since 2009, albeit at a slower pace in the past year. The level of economic output is currently still lower than in the years preceding the crisis. In addition to consistently strong industrial exports, crop yields significantly surpassed those registered in 2010 and this played a key role in promoting growth. As a result, the sector – which plays a minor role in terms of GDP – contributed approximately 1 percentage point to growth in 2011 (Chart 3-25).

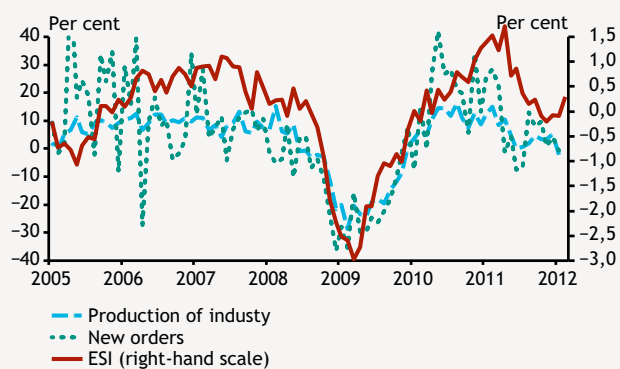
The strong duality observed in the performance of the private sector during the entire recovery period moderately weakened in the past quarter. Demand on Hungary's main export markets is gradually declining, causing slower growth in industrial added value than earlier, while the added value of some domestic service sectors increased moderately in 2011 Q4, despite the prolonged weakness in domestic demand.

**Chart 3-26**  
Average yield of main field crops  
(kg/ha)



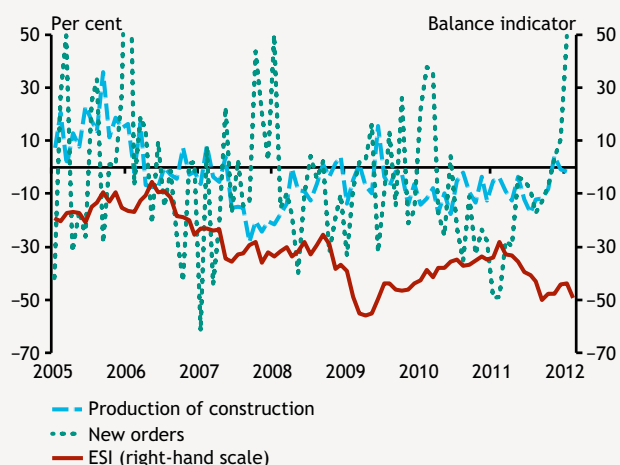
Following the adverse year of 2010 in agriculture, favourable weather conditions resulted in a substantial increase in harvests in 2011. In relation to almost all main plant crop, yields surpassed average yields for the past 10 years. Favourable conditions not only resulted in a substantial rise in quantity, but also significantly improved the quality of crops, further increasing added value in the sector. Following the harvesting period, the weakening of the HUF/EUR exchange rate in the autumn months supported immediate sales. We do not yet have information available to assess crop yields expected this year (Chart 3-26).

**Chart 3-27**  
Production of industry, new orders and ESI confidence indicators of the industry

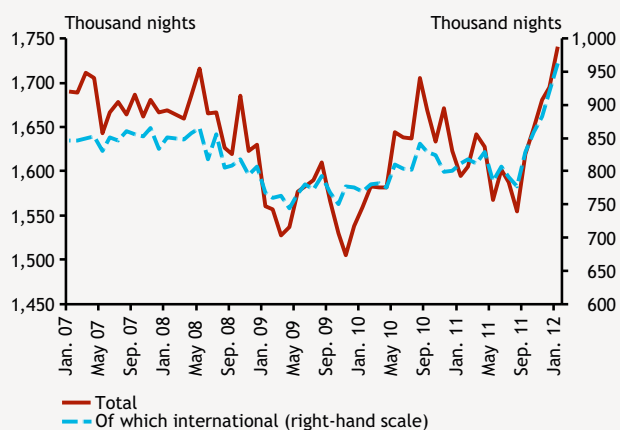


Note: The ESI series is normalized.

**Chart 3-28**  
Production of construction, new orders and ESI confidence indicators of the construction sector



**Chart 3-29**  
Number of guest nights spent at commercial accommodation establishments



Growth in *industrial* production has continuously decreased since the middle of 2010. Sales in the sector, however, showed moderate growth in the final quarter of 2011. Domestic consumption, however, is still failings to promote industrial growth, and thus exports continue to be the main engine of industrial growth. The level of new orders in the sector points to a further slowdown in the growth of sales in the first months of this year (Chart 3-27).

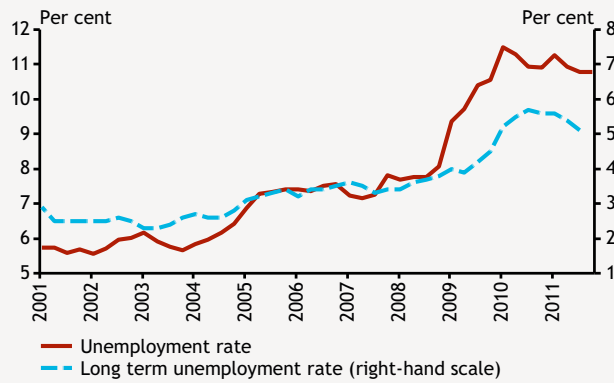
Declining output in the *construction industry* – which has been observed since 2006 – continued in 2011. The worsening trend, however, reversed in the final months of last year. Owing to government infrastructure projects (e.g. road and rail development), production in the sector moderately increased over the previous quarters. As a further positive sign, on the basis of contractual data on the sector, the number of new contracts concluded in December of last year increased by over 10 per cent for the first time in a long period. Despite the few positive trends, we expect production in the sector to moderately decline over the short term. Household investments on the housing market sank to a historical low, while companies may also wait and see with investment activity as the economic outlook worsens. Government projects implemented predominantly with EU funds will continue to support production in the sector (Chart 3-28).

The performance of the *commerce and catering* sector at the end of 2011 was characterised by tangible growth. In addition to real yield payments made in the middle of the year, higher-than-expected bonus payments in December also supported the rise in retail sales. Beyond these effects, the weak forint exchange rate may have strengthened cross-border shopping tourism before the Christmas season.

The weak exchange rate also affected *tourism*. Owing to the reservations of foreigners at the end of the year, the number of guest nights considerably increased at various accommodation establishments. Capacities were particularly filled in luxury and wellness hotels, suggesting strengthening health and conference tourism. In view of restrained general domestic income trends, continuously tight credit standards and deteriorating domestic consumer confidence, the performance of the sector may show adjustment early this year (Chart 3-29).

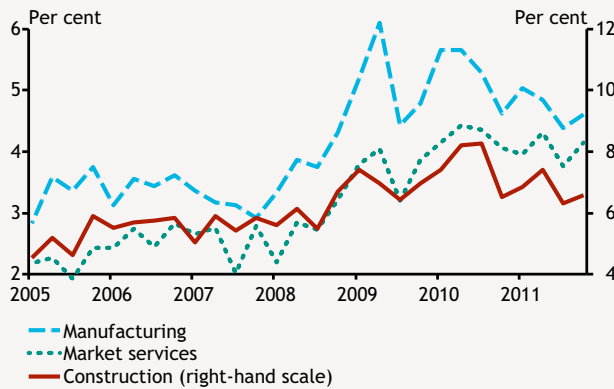
The added value of the *financial sector* further declined at the end of last year. Lending activity in the sector remains weak, while the deteriorating household and corporate portfolios produce additional losses. We are not expecting a reversal of the trend over the short term. In parallel with the continuous decline in new housing construction, the performance of the real estate sector also showed a gradual

**Chart 3-30**  
Long-term unemployment



downturn. The upturn in the sale of used homes related to total loan repayments in January may temporarily improve the performance of the sector in the first quarter of this year. On the basis of deteriorating consumer and business confidence indicators, the added value of the telecommunications sector – which is sensitive to domestic demand – and of other economic service sectors may also decline. A tangible rise in added value is only expected in the transport sector – which sensitive to industrial activity – in the first half of 2012.

**Chart 3-31**  
Corporate bankruptcy rates  
(2005–2011)

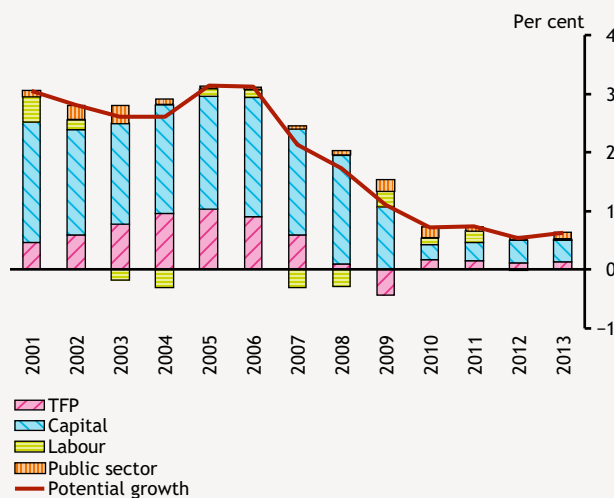


Note: Ratio of bankrupt companies relative to the number of companies four quarters before.

With government expenditure cuts, and particularly the lay-offs in the public sector, government added value moderately decreased at the end of last year. Rationalisation of the government operation of the education and health system remains a key focal point of government plans, which may also limit added value in these sectors in the short term.

Our view of the potential level of output has not changed significantly since the December issue of the Report on Inflation. The continuously high level of corporate bankruptcies indicates a further decline in capital stocks (Chart 3-31). Although the amortisation rate of capital normalised again after the most intense phase of the crisis, the new capacity expanding investments are not yet able to support an increase in production capacities.

**Chart 3-32**  
Estimation of potential output



Note: Bars indicate the growth contributions of inputs.

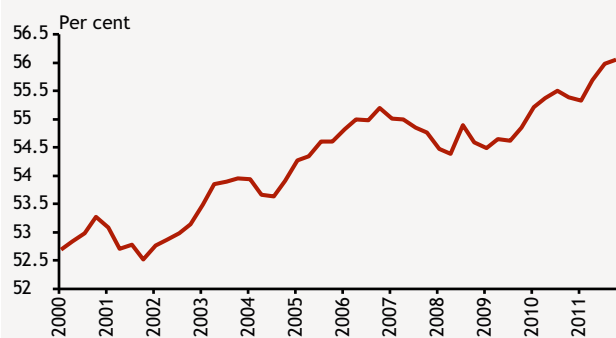
The continuous rise in labour supply observed in the past two years came to a halt in the final quarter. The ratio of long-term unemployed remains high, which continues to pose a risk to the renewed employment of those affected (Chart 3-30). The abilities of people who are out of a job over the long term will diminish, therefore they have greater difficulty in finding employment. The announced new government measures may contribute to a further rise in activity on the labour market from 2012, which may also moderately increase potential growth with the start-up of new automotive investments (Chart 3-32).

## 3.4 Employment and labour market

The labour force continued to grow in 2011. Although the trend faltered in the final months of the year, government measures promoting a further rise in activity may result in continuation of the improving trend this year. In line with weakening economic prospects, labour demand in the private sector gradually declined in recent months, while the public employment gradually declined in line with the rationalisation of the expenditure side of the budget. The unemployment rate remained consistently over 10 per cent throughout the whole of 2011, and thus conditions on the labour market continue to be loose.

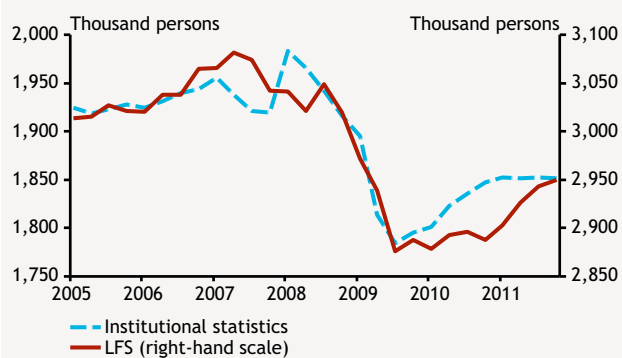
The loose labour market conditions may continue to limiting the rise in nominal wages. Administrative wage increases effected at the beginning of the year may accelerate wages, but upon filtering this effect, basic wage trends may be characterised by significantly slower dynamics compared to the average of the years before the crisis. In a weak demand environment, strong adjustment on the labour market side – which may also affect wage increases in addition to employment – in the coming quarters may dampen growing pressure on consumer prices attributed to the rise in other production costs.

**Chart 3-33**  
Activity rate in the 15-74 age group



The labour force continued to grow in 2011 as the activity rate increased by 1 percentage point to 56 per cent (Chart 3-33). The increase in activity since early 2010 may be primarily attributed to government measures implemented in previous years (particularly the raising of the retirement age and tightening of conditions of early retirement). The improving trend stalled in the past quarter, but may recover this year as a result of government measures aiming at the additional increase of activity (tightening disability retirement conditions, review of the entitlements of disability pensioners). The rise in activity predominantly affected the 45-59 age group, where rules relating to retirement have been tightened.

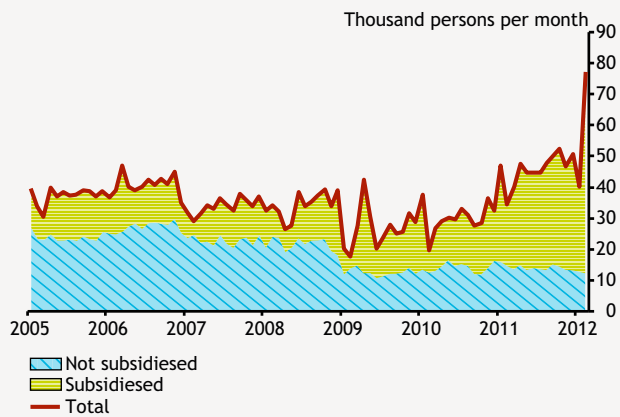
**Chart 3-34**  
Institutional statistics and employment in the private sector based on the labour survey



Labour demand in the national economy did not change significantly in 2011 Q4, similarly to the entire year (Chart 3-34). Subsidised jobs continue to make up most of demand for new labour, while new job vacancies in the private sector did not show any major change. The number of employees stagnated in the last quarter but it decreased significantly in January.

With the increasingly uncertain economic outlook, the private sector is marked by cautious employment decisions. In line with the stronger-than-expected Q4 GDP data in the last months of the year, a substantial rise in employment was only recorded in the accommodation industry. According to indicators available to us in relation to employment

**Chart 3-35**  
**Number of new job vacancies**  
 (2005–2012)

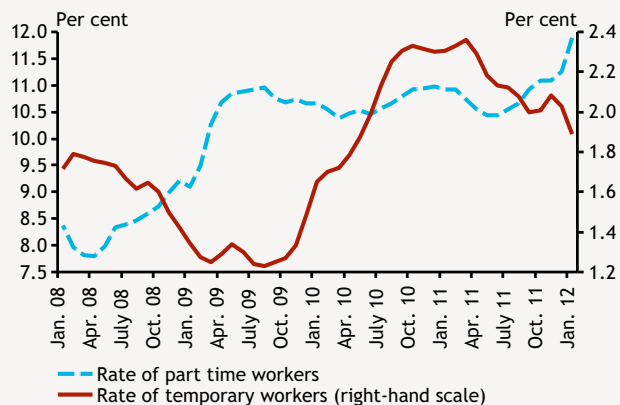


Source: National Employment Service.

prospects, labour demand declined in early 2012, as is also confirmed by institutional statistics in January. The decline in the number of employees is mainly attributed to the smaller enterprises, which employ 5-50 workers. These companies are affected firstly by the deterioration in the economic climate but the January statistics are biased (see Chapter 6.2 on the interpretation of labour market processes).

The number of employed in the private sector was also negatively affected by mass lay-offs announced by a few large companies at the beginning of the year (Malév, Budapest Airport, Nokia). A large portion of these dismissed employees appear on the labour market as jobseekers with high level qualifications and know-how, thus the probability of their re-employment is higher than average.

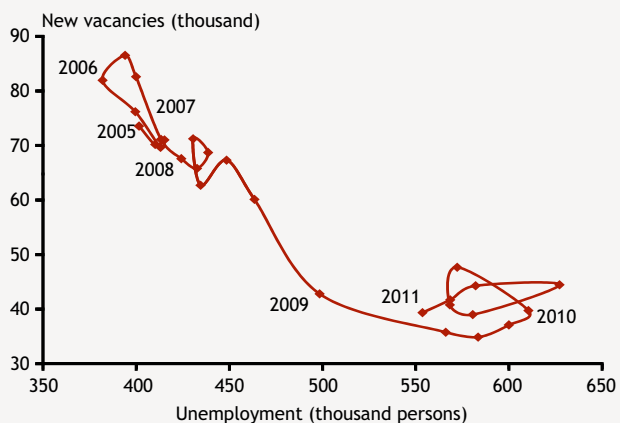
**Chart 3-36**  
**Ratio of part-time and interim employees in the private sector**



Government employment, not including community service programmes, continuously declined in the course of the past year. The decline in the number of employed was particularly high in the health and public administration sectors. The declining trend was positively affected by temporary hiring related to the census in the last months of the year.

The number of people participating in the community service programmes significantly increased over the year 2010. This effect, however, was not reflected by employment statistics due to the increasing weight of part-time employment and the decreasing period of employment. The number of people employed simultaneously in the programme has moderately decreased over the year 2010.

**Chart 3-37**  
**The Beveridge curve**  
 (2005–2011)



Note: The Beveridge curve shows the number of new (non-government supported) jobs relative to (registered) unemployment.

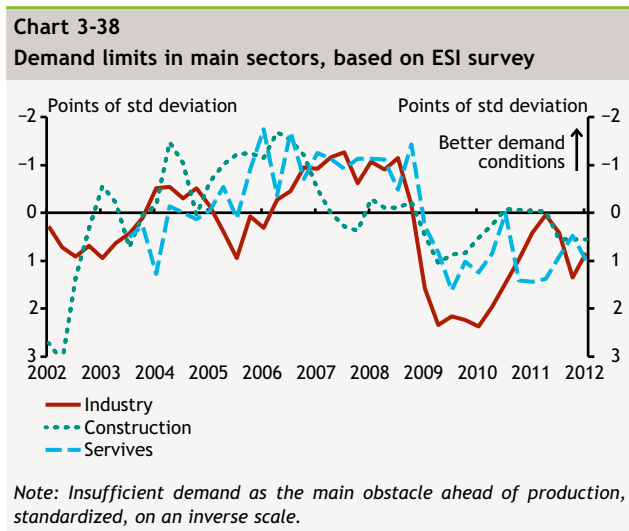
Since the crisis, in more uncertain demand environments the need for more flexible forms of employment has increased (Chart 3-36). The ratio of part-time workers continues to be high, while the ratio of interim labour is showing a moderately downward trend since early 2011 in parallel with the worsening economic outlook.

The unemployment rate did not change significantly in the previous year. The number of unemployed per job vacancy remains high. The labour market remains loose and the Beveridge curve has not shown major changes in the past quarters (Chart 3-37).

## 3.5 Cyclical position of the economy

At the turn of the year 2009–2010 the cyclical position of the economy moved past its low. Until the end of 2011, the cyclical position was characterised by slow, but gradual improvement, predominantly driven by improving external demand. The cyclical position of domestic moderately demand improved at the end of 2011, contributing to a rise in domestic core inflation as well. According to our current estimates, the output gap was negative in the past quarters as well. Output fell short of its potential level by 2-2.5 per cent.

We expect a renewed, moderate decline in the cyclical position, due to the temporary deterioration in the external environment and the expected contractionary effect of government measures on demand. The renewed weakening of the cyclical position may limit the pass-through of rising producer costs into consumer prices with greater pressure in the coming quarters.



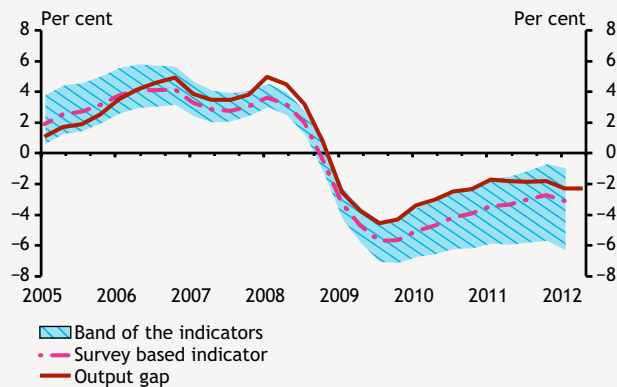
The better-than-expected year-end GDP results was also reflected in the improving position of the economic cycle. Use major production factors gradually intensified in the course of the past year, but still falls short of the historically typical value. Substantial unutilised capacities may still be present in the economy (Chart 3-38).

The macroeconomic time series and confidence indices moving together with the business cycle suggest that current output gradually approximated towards the potential level by the end of 2011, although the output gap may reopen in early 2012 with a renewed deterioration of a demand environment. According to our estimates, the output gap may be near 2-2.5 per cent in the second half of 2012 (Chart 3-39).

The development of several macroeconomic time series also confirms our view of the economy's cyclical position. Inflation excluding indirect tax changes remains at a historically low level, although it gained pace in recent months. The current account balance continues to show a substantial surplus as a result of limited domestic demand. The unemployment rate has exceeded its estimated equilibrium level for an extended period while overtime in the manufacturing industry – effectively moving with the economic cycles – decreased in recent months (Chart 3-40).



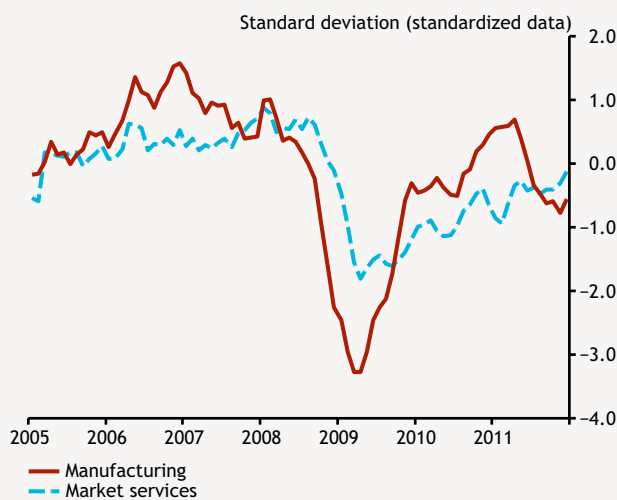
**Chart 3-39**  
**Changes in the output gap**  
 (2005–2011)



*Note: The band of output gap estimates is derived from various methodologies for measuring the output gap. The survey based indicator is derived with principal component analysis from data indicating capacity utilization in the private sector.*

Generally speaking the expenditure side items of GDP may currently fall short of their equilibrium level. The deterioration of the cyclical position of exports is due to the renewed downturn in external demand at the end of the year. Consumption demand also remains below the medium-term equilibrium level as a result of higher-than-equilibrium unemployment, low real wage increases and tight household credit conditions. The uncertain demand environment and weak bank lending activity also keep corporate and household investments at a low level.

**Chart 3-40**  
**Per capita monthly overtime in hours in the private sector**  
 (2005–2011)



*Note: Three month moving average of seasonally adjusted standardised data.*

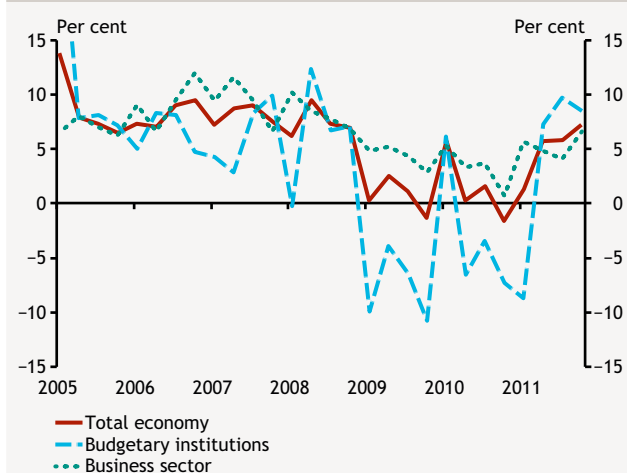
## 3.6 Costs and inflation

High wage growth was observed at the end of last year. The acceleration in the wage index is primarily attributable to year-end bonus payments which varied from payments made in 2010, while the 5 per cent increase in regular wages moderately exceeded the annual rate of inflation, but fell significantly short of the average rates measured before the crisis. Domestic inflation picked up significantly in recent months. The faster rise in the price index was mainly attributable to the government's indirect tax increases, but in addition to rising consumption, the inflationary effect of the weaker exchange rate and persistently high commodity prices affected a growing portion of the consumer basket.

The wage increase observed at the end of 2011 is mainly attributable to the temporary effect resulting from the timing of bonus payments, which may be corrected at the beginning of this year. Administrative wage increases in the first quarter cause a substantial rise in regular wages. The announced compensation scheme may significantly offset the inflationary effect of rising labour costs over the short term. Wage increases in the manufacturing industry are in line with the gradual improvement productivity, which may continue to sustain low inflation characterising the products of the sector. However, in view of weak domestic sales opportunities, rising wages in the service sector may pose risks in terms of our inflation and/or employment forecast for this year.

The general price-reducing effect of still weak domestic demand may persist throughout the year, and thus the pace of monthly price increases may gradually decline in the coming months. The trend may be supported by the normalised level of the EUR/HUF exchange rate which remained at stronger levels after January.

**Chart 3-41**  
Annual change of average monthly gross wages of employees  
(2005-2011)



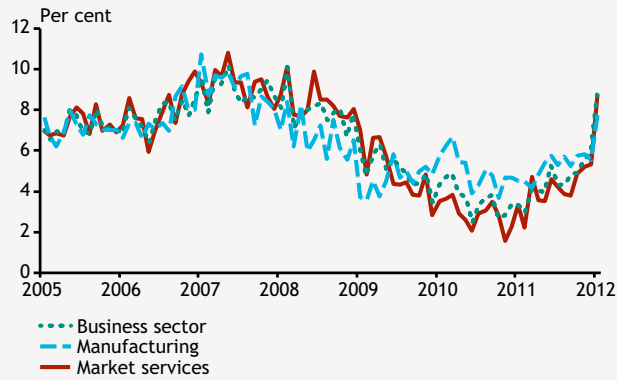
Note: Change compared to the same month of the previous year (per cent).

### 3.6.1 WAGES

Wage growth significantly accelerated in the national economy in the last month of last year. The substantial rise in wages is attributable to the timing of year-end bonus payments in December. Since companies timed their payments at the end of 2010 for January due to the PIT decrease at the beginning of the year, this also produced a strong base effect. The payment of bonuses at the end of the year was characteristic in both the private and public sectors. The payment of bonuses in December is a return to the practice applied before 2010. The ratio of paid bonuses to regular wages continues to show a declining trend in comparison to pre-crisis years, and thus irregular wage elements remain one of the key channels of labour market adjustment.

Regular wages in the private sector rose by an average of 5 per cent throughout the year. The duality characterising wage trends in 2010 declined substantially in the past year and wage increases in the service sectors approximated those effected by manufacturing industry companies

**Chart 3-42**  
Annual change of regular average monthly gross wages of full-time employees (2005-2011)

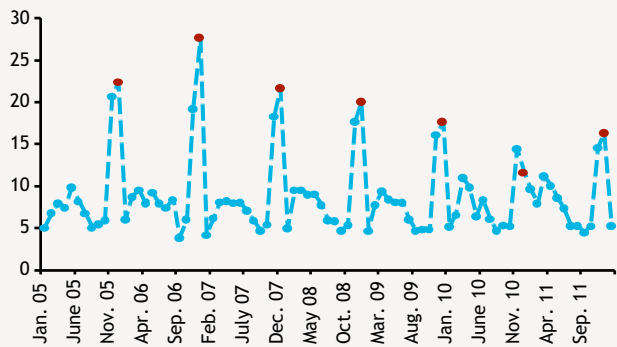


Note: Change compared to the same month of the previous year.

producing for export. The gradual wage increases observed in relation to market service sectors since early 2011 may suggest the mobility of workers in the manufacturing industry and service sectors and frictions arising in connection with certain sectors, despite the loose labour market (Chart 3-42).

Wage increases also accelerated in the public sector at the end of the year, not including community service workers, this is presumably attributable to the payment of remuneration (e.g. wage supplements, on-call fees) that was not paid during the year. Wages of full-time workers employed in the community service programmes substantially increased. Due to the significant rise in the ratio of part-time employment, however, the average wage of programme participants is lower than in 2010.

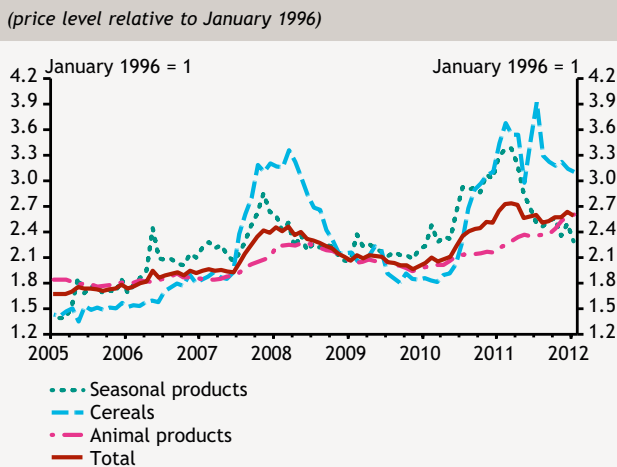
**Chart 3-43**  
Bonuses in the private sector in percentage of regular wages



Note: Red dots: december.

Wage dynamics expected over the short term are determined by the administrative wage increases effected at the beginning of the year in both the private and public sectors. We expect employers to implement the expected wage increases in relation to the employees concerned. A major portion of increased wage costs could be covered by the wage compensation scheme – supplemented with several tiers – as announced by the government. In the weak demand environment, however, companies may be forced to cut additional costs to maintain their profitability, possibly resulting in the limitation of bonuses and fringe benefits and lower wage increases provided to employees with higher wages.

**Chart 3-44**  
Agricultural producer prices (price level relative to January 1996)



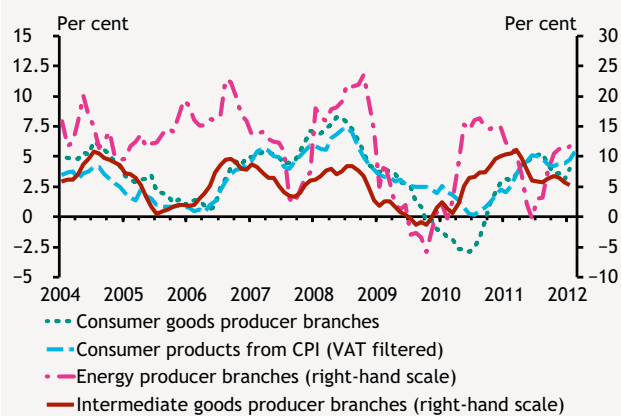
Note: Seasonal products: fruit, vegetables, potato, cereals: wheat, oil seeds; products of animal origin: pork, poultry meat, egg, milk; weighting was based on the estimated size of the effects on the consumer price index.

The first signs of this can be seen in the January data. In the private sector gross earnings without premiums rose by 9.6 per cent while gross earnings rose by 5.2 per cent. The acceleration of wage dynamics is mainly due to the remarkable administrative increase in lower-than-average wages while the bigger than average wages were characterised by historically low growth.

### 3.6.2 PRODUCER PRICES

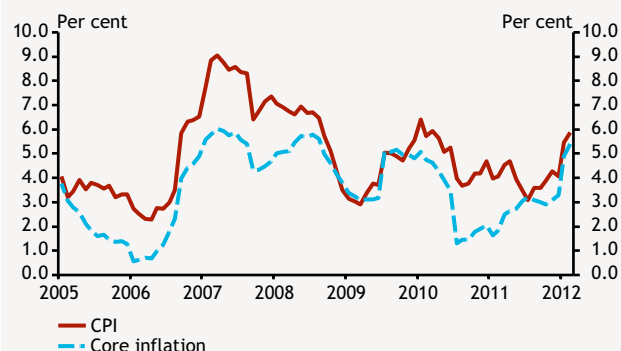
Favourable agricultural harvests in 2011 contributed to the drop in producer prices in the second half of last year. The largest adjustment was observed in relation to seasonal products (vegetables, fruit). The rise in the price of cereals came to an end, but price levels did not decrease significantly. In relation to products of animal origin, in addition to rising dairy product prices, the previously high raw material prices also contributed to a significant increase in the price of meat. As an additional price-boosting effect on products of animal origin, the price of eggs also increased significantly due to stricter animal keeping requirements. The weak exchange rate not only

**Chart 3-45**  
Industrial producer prices and consumer prices  
(annual change)

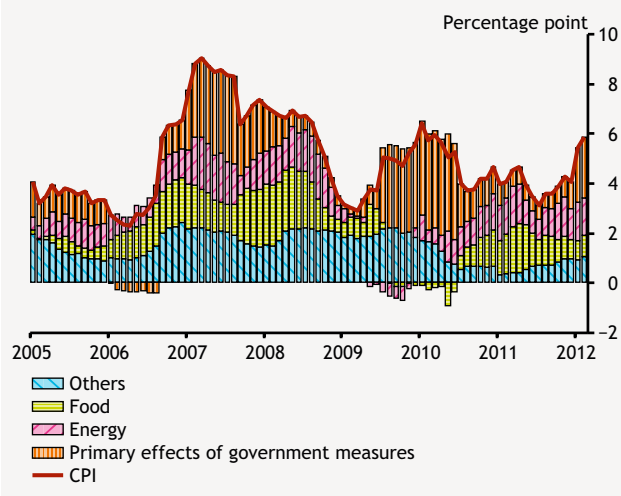


Note: Consumer prices refer only to products produced by the industry.

**Chart 3-46**  
Consumer price index and core inflation  
(annual change)



**Chart 3-47**  
Decomposition of consumer price index



contributed to an improvement of sales opportunities, but also to a rise in producer prices (Chart 3-44).

The depreciation of the HUF exchange rate early in the year and the renewed rise in oil prices caused another rapid rise of prices in the energy production sectors again. The effect of high commodity prices is passing through an ever broader segment of the industrial production chain, and thus an increase was also seen in the price index of sectors producing consumer goods at the beginning of the year (Chart 3-45).

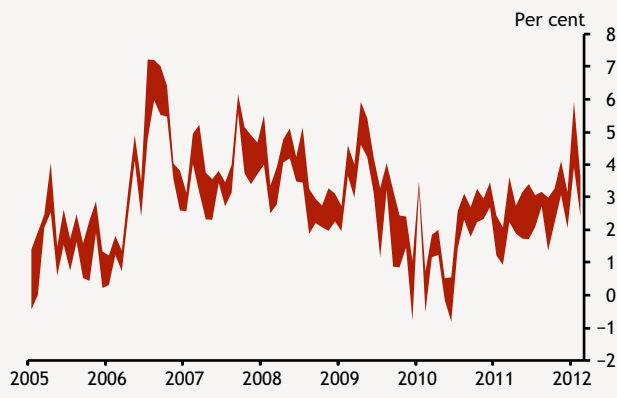
### 3.6.3 CONSUMER PRICES

The rise in domestic consumer prices slowed down in 2011, as the consumer price index came in at 3.9 per cent for the year as a whole. Domestic inflation was 4.1 per cent in the final quarter. In the beginning of 2012, the consumer price index increased significantly, approaching 6 per cent, while core inflation neared 5 per cent from 3.3 per cent in December (Chart 3-46). The jump in inflation at the beginning of the year was mainly caused by the indirect tax increases in January, while high commodity prices and the substantial depreciation of the forint exchange rate in the previous quarters produced an inflationary effect in an increasingly wide segment of the consumer basket (Chart 3-47). Inflation in the first month of 2012 was higher than we expected in December.

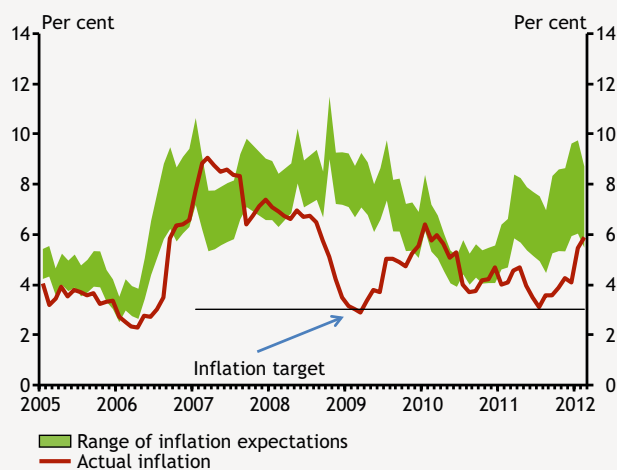
Temporary effects may have also contributed to the unexpected rise in *core inflation*. The VAT increase paved way for coordinated price increases, where most costs accumulated earlier could be passed on to consumers. Price increases may have also been brought forward in this regard. According to our current estimates, the pass-through of the VAT increase may be larger than we assumed earlier, but lower than observed in relation to VAT increases before the crisis.

Despite the weak demand, prices of *industrial goods* rose substantially. Prices of *non-durable goods* soared, and the rise might have been partially caused by increasing fuel and raw material prices and by the weak exchange rate. As a consequence of the January VAT-hike, coordinated price increases for non-durable goods may have had an effect on consumer prices in February as well. Although a part of the price increases is likely to be temporary, the significant acceleration of the inflation shows that firms may be able to pass through their costs into consumer prices even if domestic demand is subdued. Prices of *durable goods* decreased at the beginning of the year; the reduction of

**Chart 3-48**  
Band of indicators showing the basic inflationary trend

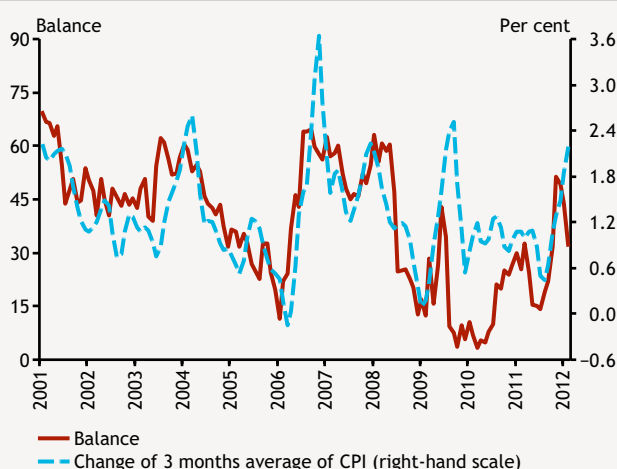


**Chart 3-49**  
Household inflationary expectations



Source: MNB calculations based on data from the EU Commission.

**Chart 3-50**  
Expected retail sales prices in the next 3 months\* and actual inflation



\* The balance indicator shows the difference in the ratio of those expecting a price increase and those expecting a price decrease.  
Source: GKI.

the car registration tax related to the large segment of motor vehicles also contributed to the decline.

Inflation in the field of *market services* increased gradually at the end of 2011, but an even larger rise followed in January. The sharp rise in inflation is attributable to prices of service providers (telecommunications, insurance sector) which are subject to the payment of the special sectoral tax. It is also possible that companies brought forward the price increases commonly effected in the first months of the year to January of this year. As a one-off effect, the accident insurance tax introduced at the beginning of the year was settled in relation to market services, this alone increased the price index of the group by 0.6 percentage points.

Price of *processed foods* increased significantly at the beginning of the year. The weak exchange rate, high fuel prices and rising producer prices all contributed to price inflation for these products. In addition, the introduction of a health tax also affected the price index of the product group. The price of *alcohol and tobacco products* increased in excess of the VAT increase, presumably in reaction to the November excise tax increase. Intense competition on the market of tobacco products – characterising the previous year – is likely to have ended, and therefore we can expect a higher pass-through of taxes and costs this year.

Among non-core inflation items, apart from tax changes early in the year the price of *unprocessed food* increased at a lower rate than the seasonal average. Oil prices in USD rose in reaction to uncertainties related to the situation in Iran. The weakening of the euro also inflated oil prices denominated in euro and forints, which may result in high price levels for several quarters in relation to domestic *fuel prices*. The rapid depreciation of the EUR/HUF exchange rate also contributed to price increases in the first weeks of the year. *Regulated energy prices* increased in January 2012, earlier than we expected in December. Regulated price increases remain at a historically low level.

### 3.6.4 INFLATIONARY EXPECTATIONS

Inflationary expectations rose again in 2011 H2, presumably attributable to high fuel prices, the announced tax measures and the gradually weakening exchange rate (Chart 3-49). The trend underwent a correction early this year, as expectations regarding additional significant price increases dropped significantly and inflationary expectations also weakened.

Inflationary expectations in the retail sector, which playing a key role in relation to consumer prices also declined

substantially in January and February. This confirms our assumption that the inflation data for January may also reflect temporary effects and the weak demand environment may continue to limit planned price increases (Chart 3-50).

**Box 3-2**

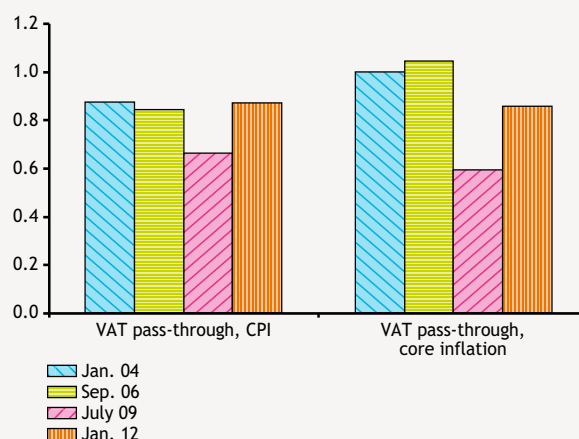
**Impact of the VAT rate increase in January 2012 on inflation**

With effect from 1 January 2012 the highest rate of VAT changed from 25 per cent to 27 per cent. Calculated with unchanged net prices, the 2 per cent hike has raised the prices of the items concerned by 1.6 per cent. As the VAT increase affects approximately 78 per cent of the consumer basket, the notional impact of the rise was 1.25 per cent at the level of the consumer price index. This means that, calculated with unchanged net prices, the VAT increase would have triggered such an equivalent in the price level.

Based on earlier domestic and international experience, changes in VAT are not incorporated in consumer prices immediately and fully. We used statistical methods to estimate the actual inflationary impact brought about by the VAT increase early this year. This impact reflects the difference between actually perceived changes in prices and the price changes that can be assumed without the VAT increase (hypothetical price changes). The inflation indicator net of this impact is relevant to monetary policy and offers information on changes in market prices, which move in conjunction with the supply and demand trends of the economy.

Based on the inflation data in January and February, we obtained the following results. The VAT hike in January raised the CPI by a total of 1.1 per cent, with the bulk of the increase materialising in January and a smaller portion in February (Table 3-2). For methodological reasons, the CSO incorporated part of the rises in

**Chart 3-51**  
Historical pass-through of VAT increases into consumer prices



**Table 3-2**

**Pass-through of the VAT increase in January 2012 into the individual inflation groups**

(percentage impacts on the price level of individual groups)

	Jan. 2012	Feb. 2012	Total	Pass-through
Food	0.7	0.1	0.8	76%
unprocessed	0.5	0.3	0.9	54%
processed	0.8	0.0	0.8	99%
Industrial goods	1.0	0.2	1.2	86%
durable	1.1	0.2	1.3	78%
nondurable	1.0	0.3	1.2	90%
Market services	0.7	0.0	0.7	78%
Market energy	1.4	0.1	1.5	92%
Alcohol, tobacco	1.4	0.0	1.4	90%
Fuel	1.6	0.0	1.6	100%
Administered prices	0.5	0.6	1.1	100%
CPI	0.9	0.2	1.1	87%
Core inflation	0.9	0.1	1.0	86%

regulated prices in the February data. Therefore, part of the VAT impact in February is attributable to this fact. On the other hand, we were able to identify the impact of the VAT increase in the February inflation data in the case of some market prices as well, such as unprocessed food, traded goods and market energy.

Based on the estimated VAT impact, relative to the technical impact, the pass-through into consumer prices amounted to 87 per cent at the level of the consumer basket as a whole, and 86 per cent in the case of core inflation. The magnitude of the pass-through exceeded the assumption underlying our inflation projection in December as presented in detail in Box 1-2 of the Report on Inflation published in September. The extent of the pass-through of core inflation has exceeded that of the last VAT increase in July 2009; however, it was smaller than the pre-crisis figures (Chart 3-51). Pass-through at the level of the CPI is similar to pre-crisis figures. Nevertheless, it should be noted that in the latter case comparability is rendered difficult by the fact that the VAT rate increases in the individual periods affected regulated prices to a varying extent, for which we assume a 100 per cent pass-through as a rule.

There may have been several reasons underlying a pass-through higher than the one in July 2009. One is that, compared with July, re-pricing is more frequent at the beginning of the year. This is likely to have facilitated the VAT increase in feeding through into consumer prices to a larger extent. Furthermore, it is likely that, due to the weaker profitability situation of the retail sector, the VAT increase could not be absorbed to a larger degree despite the permanently subdued demand.

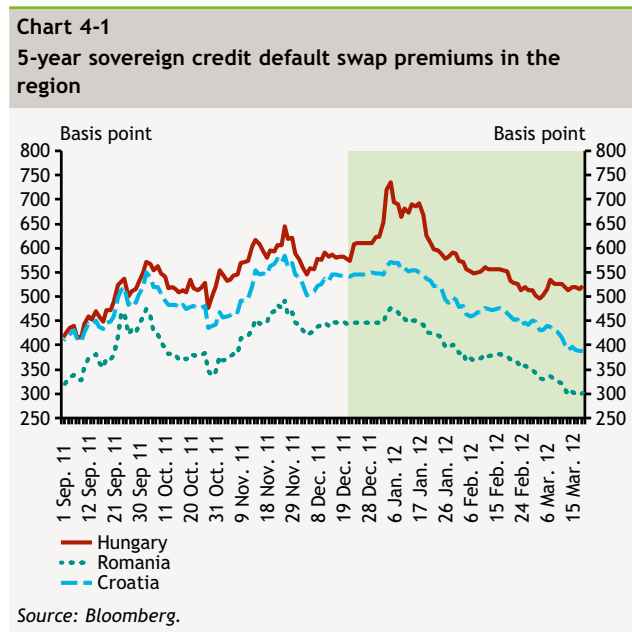
# 4 Financial markets and interest rates

## 4.1 Trends in the domestic financial market

Hungary's risk perception has been improving substantially and at a steady pace since the sudden deterioration in December 2011. Nevertheless, indicators continue to reflect an overall unfavourable picture, in both a regional and a historical comparison, resulting in worsening risk perception in the relative sense. Domestic financial market indicators had deteriorated significantly by mid-January. This trend came to a halt after the government's announcement of its commitment to reach an agreement with the EU and the IMF. In response to the favourable news on the approximation of standpoints, and underpinned by favourable regional and global trends, Hungary's risk perception started to improve from mid-January. Nevertheless, it was country-specific factors which amplified the negative trends when risk premiums were soaring, whereas in the period of consolidation it was global factors that came into play, offsetting unfavourable country-specific effects. Overall, in respect of the period as a whole, risk premiums and yields on government securities fell, the forint appreciated and government securities held by non-residents reached a historical high in March. Global trends and developments in the EU and IMF negotiations will probably continue to shape investors' attitude towards Hungary to the largest extent.

### 4.1.1 RISK PERCEPTION OF HUNGARY

The risk perception of Hungary deteriorated between December 2011 and mid-January 2012, owing to country-specific factors; then, due to country-specific factors to a lesser extent, and to global impacts to a larger extent, it started to improve markedly at a steady pace.

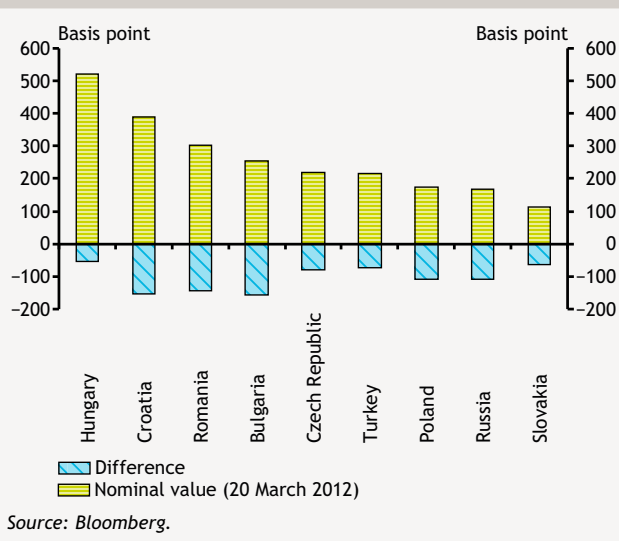


This change for the worse in Hungary's risk perception in late December and early January materialised, despite the fact that investor sentiment had improved thanks to concerted central bank measures at the global level, fading concerns about growth and measures in Europe aimed at managing the crisis. During these weeks, the risk perception of Hungary was completely out of synch with global and regional trends, which was primarily due to uncertainties related to the EU-IMF negotiations.

Several factors are likely to have contributed to such a high concentration of unfavourable events early this year. Along with numerous investment institutions voicing concerns about the negotiations during the first days of the new year, it is also possible that some agents responded with some lag early this year to the unfavourable events around Christmas time (e.g. a warning from the IMF and an increasingly heated debate with the European Commission).



**Chart 4-2**  
Changes in 5-year sovereign credit default swap premiums in the region since 20 December 2011

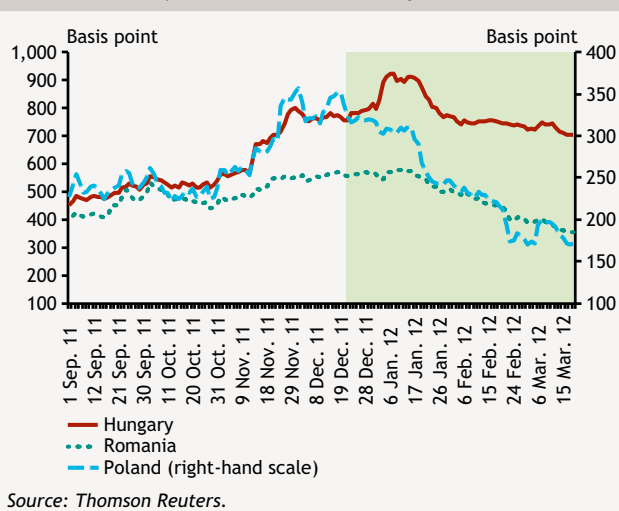


The ensuing improvement in risk perception can be attributed to a change in the government’s stance in relation to the EU-IMF talks and to favourable global trends. As a result of domestic events increasing the likelihood of an EU-IMF agreement (e.g. a more conciliatory tone on the acceptance of possible preconditions, and the announcement of the government’s intention to step up the pace of the talks as well as a meeting held by the prime minister and the central bank governor), the country’s risk perception began to improve from mid-January consistent with global trends. Overall, however, it was still unfavourable in regional comparison.

The 5-year CDS spread dropped from 576 basis points at the beginning of the period to 522 basis points at the end. The indicator was highly volatile over the entire period, ranging from 495 basis points to 735 basis points (Chart 4-1, 4-2).

Notwithstanding the favourable trends, risk indicators continue to respond very hectically to news concerning the talks. In early March, the 5-year CDS premium rose by 30 basis points in two days as some analysts expressed doubts about the government’s commitment to the talks.

**Chart 4-3**  
Premiums on 5-year FX bonds in the region

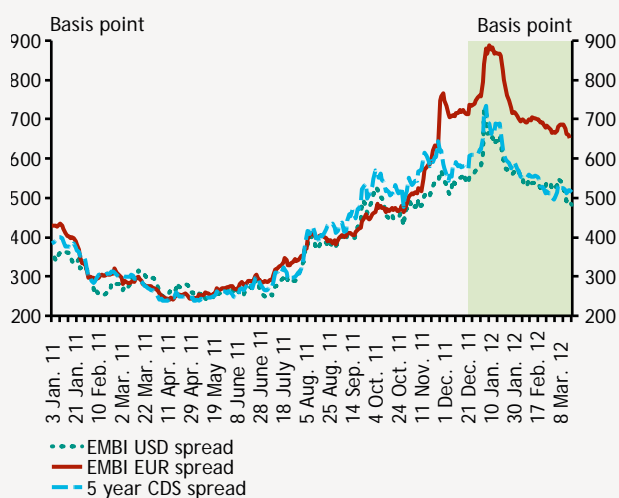


The focus may shift to yields on FX bonds this year, due to the government’s need for a sizeable amount of FX financing. The 5-year domestic FX bond spread is currently at an extremely high level of over 700 basis points. Although the spread on EUR-denominated Hungarian FX bonds, compared to its counterpart in Germany, has followed a path similar to that of the CDS spread over the past months, there is still a significant difference between the levels of these two indicators. The previous close-to-zero gap widened to 190 basis points over a span of one month from the second half of November, and has stabilised at around 200 basis points over the past 3 months (Chart 4-3).

The significant widening of the spread between these two indicators coincided with criticism from the credit rating agencies and the downgrades that followed. However, external factors may equally have contributed to this. An underlying internal reason is that, as a result of the country’s downgrade, EUR-denominated Hungarian bonds are no longer ECB-eligible coverage. In addition to this, the market is likely to have priced in a liquidity premium.

Underlying external reasons may have included the fact that, in response to the sovereign debt crisis in Europe, the market found CDSs on EUR-denominated bonds to be a less reliable instrument. Furthermore, it is likely that a higher exchange rate risk premium is priced in for EUR-denominated bonds. As there was a similar, albeit smaller, difference in respect of the bonds of the other countries in the region, it

**Chart 4-4**  
Hungarian composite EUR and USD yield indexes and the 5-year Hungarian CDS



Note: JPM EMBI GLOBAL HUNGARY – BLENDED SPREADS.  
Source: Thomson Reuters.

is safe to assume that the latter causes are also likely to have contributed to high spreads on FX bonds (Chart 4-4).

Such a wide difference in yields on EUR and USD bonds also suggests segmentation in the markets.

In mid-February MNB announced new facilities conforming to international practice. Market participants welcomed the introduction of the new two-year lending facility, the broadening of the range of eligible collateral, and the new universal mortgage bond purchase scheme. Whereas subdued lending has been mainly driven by a decline in willingness to lend, in the recent period the decline in the banking sector’s capacity to lend has also been a relevant factor. Thus – by alleviating the latter constraint – the facility is able to contribute to the strengthening of lending activity. The facility allows banks to access to funding at maturities of limited availability in the market without the need to pay a high term premium, which may result in improvement in the maturity match between assets and liabilities in banks’ balance sheets.

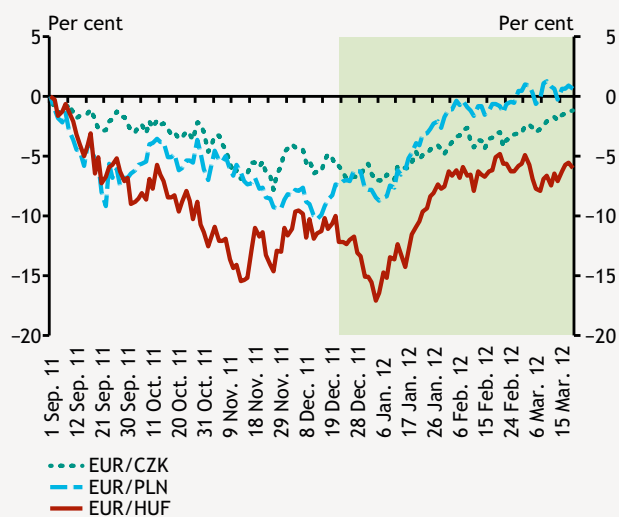
### 4.1.2 FX MARKET TRENDS

Trends in Hungary’s risk perception were also reflected strongly in the EUR/HUF exchange rate. Between 20 December and 5 January the exchange rate weakened from EUR/HUF 300 to EUR/HUF 320, which – taking into account trends in regional foreign exchange rates – can be interpreted as an occurrence specific almost entirely to Hungary. After the change in the government’s communication in January, the forint, like the Polish zloty, started to appreciate at a steady pace; nevertheless, news about and analyses related to the EU-IMF talks did have tangible impacts on the exchange rate on a number of occasions even after mid-January (Chart 4-5).

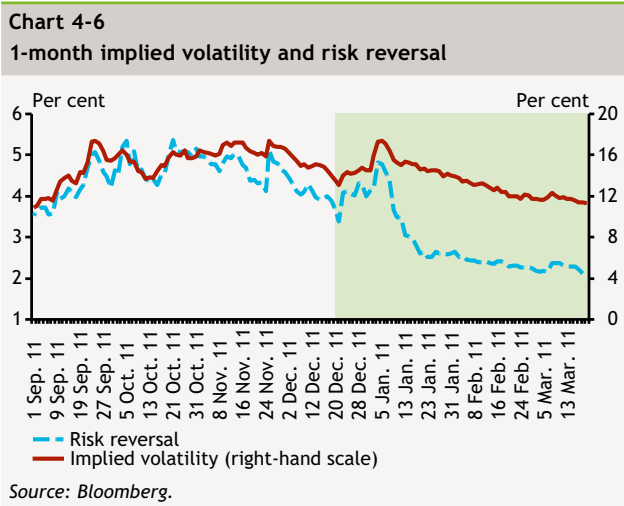
The sensitivity of the EUR/HUF exchange rate manifested itself most markedly in early March. Underlying reasons for this were that global risk sentiment deteriorated slightly because of concerns regarding the Greek debt swap deal, and that an increasingly large number of analysts voiced doubts about the possibility of a quick agreement between Hungary and the EU-IMF duo. In response, the HUF exchange rate depreciated from HUF 288 to HUF 298 over a span of 1 week. With the ensuing adjustment taken into account, the EUR/HUF exchange rate appreciated from HUF 300 to HUF 290 over the entire period, underperforming in a regional comparison.

Trends in option prices in the FX market confirm that the priced-in likelihood of forint depreciation has declined since early January. Risk reversal and the skewness indicator

**Chart 4-5**  
Developments in foreign exchange rates in the region



Source: Thomson Reuters.

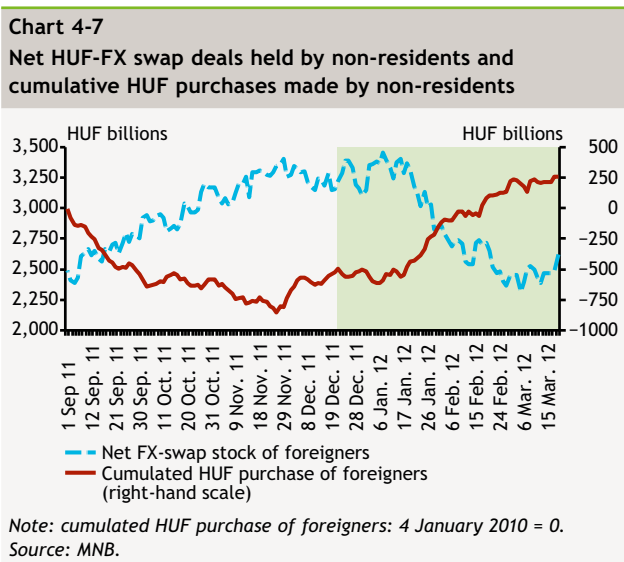


of the exchange rate have dropped to the low level last seen in the summer of 2011. The implied volatility of the exchange rate started to decline gradually, and in March it reached levels last seen in the autumn of 2011 (Chart 4-6).

The appreciation of the forint has been supported by the fact that non-resident actors purchased a total of HUF 790 billion in the spot market.

FX swap spreads reflected repeated episodes of tension (partly technical in nature) similar to those a year earlier and remained high at all maturities until end-January. By mid-March, with the exception of basis swaps with a maturity of over 1 year, spreads had returned to a level seen in earlier calmer periods, which can be attributed to improved FX liquidity conditions. Lower margin requirements in response to the appreciation of the forint, higher reliance on central bank facilities and the rolling over of some of the funds from maturing FX instruments in the swap market resulted in the easing of the FX liquidity tension in the banking system (Chart 4-8).

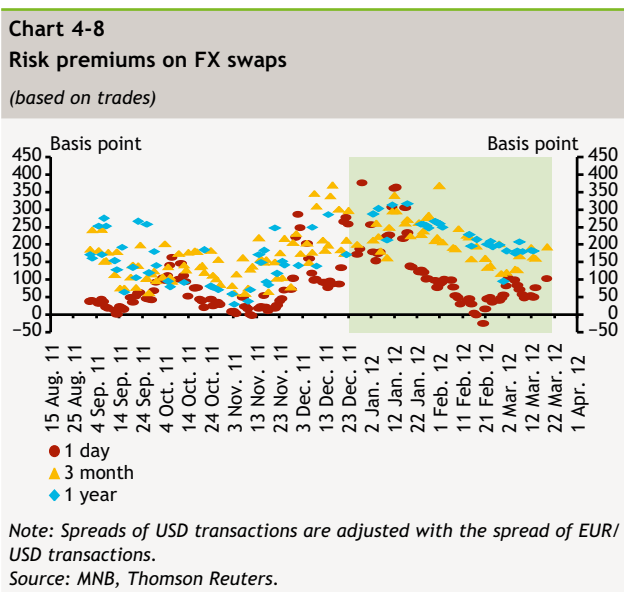
The net FX swap portfolio held by non-residents has decreased by approximately HUF 550 billion over the past period, which can be ascribed to two factors. One is that the portfolio of FX swaps linked to positions on which exchange rate gains can be realised if the forint weakens, i.e. those with a HUF purchase leg, has shrunk; the other is that due to the improved FX liquidity situation mentioned above, the portfolio of short-term FX swaps (lending in HUF/raising FX funds) has expanded.



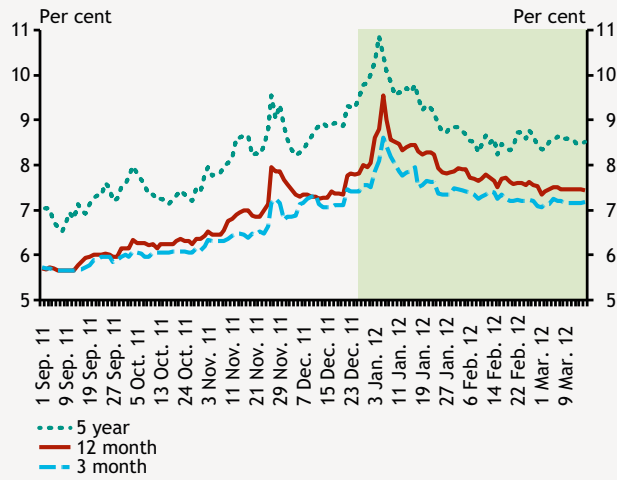
### 4.1.3 THE GOVERNMENT SECURITIES MARKET AND YIELDS

Hungary's improved risk perception was also reflected in the outcome of government securities auctions and secondary market yields (Chart 4-9). While quantities lower than announced were issued at a number of auctions in December, a higher-than-planned volume of government securities has been sold at declining average auction rates since mid-January. The Government Debt Management Centre (ÁKK) has raised funds in a gross total amount of HUF 1,500 billion in the market since 20 December (Chart 4-10).

Secondary market yields followed a path similar to that of the EUR/HUF exchange rate and CDS spreads. There had been an approximately 150-basis point rise in the segment with a maturity of up to one year before the first week of January, then yields returned gradually to a level seen at the start of the period, representing a 7.1-per cent yield on 3-month securities. There had been a 200-basis point rise



**Chart 4-9**  
Benchmark yields in the government securities market

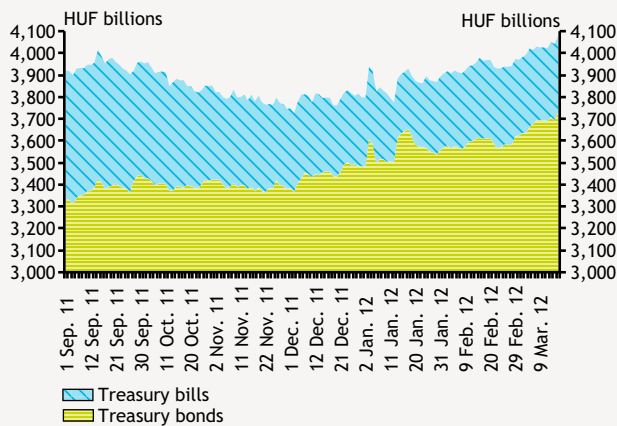


Source: ÁKK.

in the segment with a maturity of over one year before early January, with major consolidation to follow. The 5-year point of the yield curve dropped to somewhat below the starting value, i.e. 8.5 per cent.

The deterioration in Hungary's risk perception last autumn had a much smaller impact on non-residents' portfolios of government securities. In fact, such portfolios have reached a historically high level over the past period. A HUF 320 billion increase came almost entirely from the purchase of government securities.

**Chart 4-10**  
Government securities held by non-residents

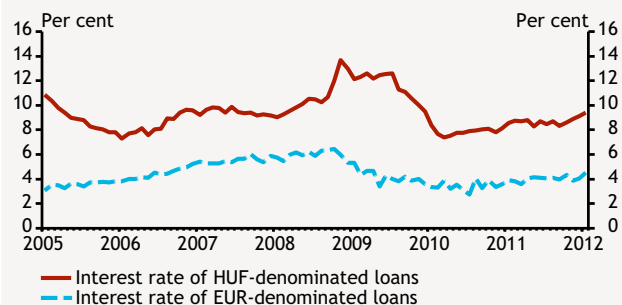


Source: MNB.

## 4.2 Credit conditions of the financial intermediaries

HUF interest spreads declined moderately, while EUR spreads increased somewhat in the corporate segment between October 2011 and January 2012. The former is attributable to the fact that the rise in the interbank interest rate (BUBOR) exceeded the rise in the interest rates on corporate loans, while the latter is due to rising foreign currency (FX) funding costs. In the Lending survey, credit conditions were reported to have tightened further in the corporate sector, and the deterioration in lending capacity, mainly banks' deteriorating FX funding, is becoming a more pronounced factor in this regard. In the household segment, interest rates on mortgage loans has increased since the last Report on Inflation, which is due to refinancing of foreign currency denominated mortgage loans related to the early final repayment scheme. By contrast, special offer hire purchase loans temporarily reduced the interest rates on unsecured consumer loans. In the household segment, credit conditions were reported to have tightened markedly in the final quarter of 2011; further tightening was anticipated in the first half of 2012. Given the current credit conditions, a major part of the banking sector is focusing primarily on the premium segment. Yet, it is still unclear whether this attitude of the banks is a temporary impact of the early final repayment scheme or will persist over the longer term. Forward-looking real interest rates were shaped mainly by the increase in yields on government securities.

**Chart 4-11**  
Interest rate on corporate loans by denomination

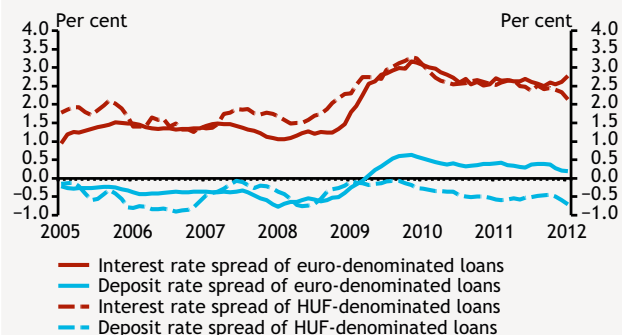


Source MNB.

### 4.2.1 CORPORATE CREDIT TERMS

HUF interest rates to corporate loans rose from 8.6 per cent to 9.4 per cent (Chart 4-11). By contrast, along with the 1.5-percentage point rise in the HUF interbank interest rate (BUBOR), the smoothed interest spread declined standing at 2.1 per cent at the end of January. Interest rates on EUR-denominated loans declined from 4.4 per cent to 4 per cent at the end of 2011, and then rose again to reach 4.5 per cent. At the same time, in the period under review, the EUR-denominated interest rate (EURIBOR) fell, as a result of which the interest spread smoothed with a 3-month moving average rose from 2.5 per cent to 2.8 per cent (Chart 4-12).

**Chart 4-12**  
Interest rate spread on corporate loans by denomination



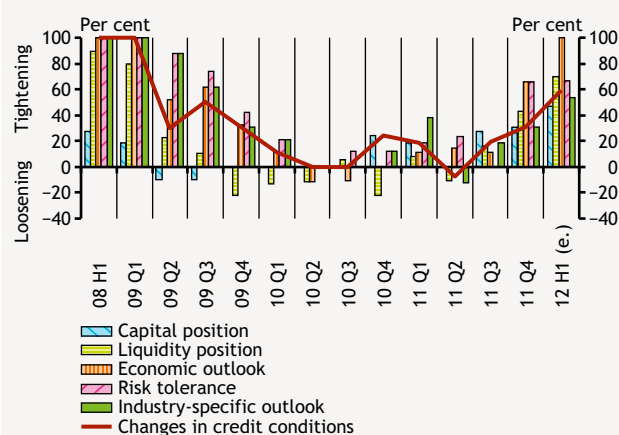
Note: The spreads are the moving average of the spreads on the 3-month BUBOR and EURIBOR, respectively.

Source: MNB.

Based on the lending survey, credit conditions were reported to have tightened again in the corporate segment, and a majority of banks expected further tightening over the six months as well (Chart 4-13). The main underlying reason for tightening has been declining willingness to lend, but in this lending survey the role of deteriorating lending capacity also increased considerably. The deterioration in funding is a very salient factor, which is attributable to shrinking external funding and rising foreign currency funding costs.

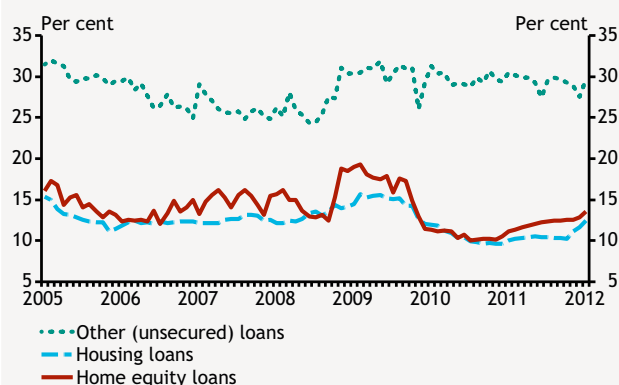
Current interest spreads reflect the interest rate conditions applied to corporate clientele which have tightened significantly since the onset of the crisis, due to banks' non-

**Chart 4-13**  
Changes in credit conditions and factors contributing to the changes to corporate loans



Note: Net percentage balance of respondents tightening/easing credit conditions weighted by market share.  
Source: MNB based on banks' responses.

**Chart 4-14**  
The annual percentage rate of charge (APRC) of housing and consumer loans



Note: Prior to 2009 HUF denominated mortgage lending was marginal.  
Source: MNB.

price supply constraints. Risk-based pricing allows clients with a prime credit rating to access credit on more favourable terms. This composition effect is further strengthened by the current tightening in non-price credit conditions, in response to which aggregate interest spreads may even decline. However, rising foreign currency funding costs represent upward pressure on spreads on EUR-denominated loans. Parent bank CDS spreads and the Hungarian sovereign CDS spread, an important component in intra-group funding, have risen with 1.5-2 percentage points since July 2011 compared to 2011 Q2.

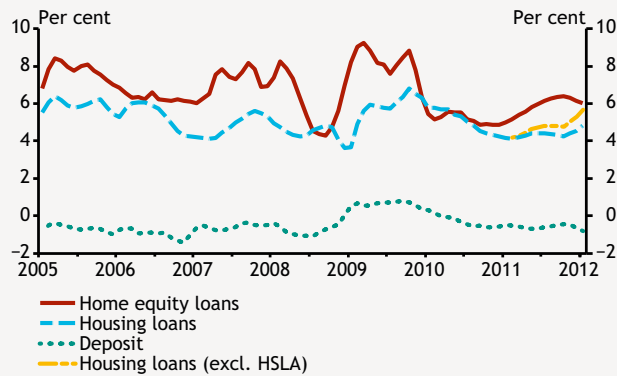
### 4.2.2 TERMS OF LENDING TO HOUSEHOLDS

Interest rates on housing and home equity loans have been shaped by the refinancing of foreign currency denominated mortgage loans related to the early repayment scheme over the past few months. Annual percentage rate of charge (APRC) on housing loans grew from 10.3 per cent to 12.5 per cent between October 2011 and January 2012 (Chart 4-14), i.e. rising by more than 0.5 percentage point over the 1.5-percentage point rise in the BUBOR. As a result, the interest spread was 5 percentage points over the 7.5 per cent BUBOR in January. Excluding Home Savings and Loan Associations, which have recently been representing a significant weight in new lending and offer products on favourable interest rates, the rise in the interest spread would be even more marked, approximating 6 percentage points (Chart 4-15). The APRC on home equity loans rose from 12.5 per cent in October 2011 to 13.5 per cent in January 2012, resulting in 6 per cent interest spread.

The APRC on unsecured consumer loans declined from around 30 per cent to 27 per cent at the end of 2011, and then returned to 30 per cent (Chart 4-14) in January 2012. This temporary decline was caused by special offer hire purchases loans, with a higher weight within new unsecured lending.

Based on the lending survey, credit conditions for households were reported to have tightened materially in 2011 Q4 (Chart 4-16). In the case of mortgage loans, the stricter conditions are reflected in the lower loan-to-value and payment-to-income ratios, and in a stricter required credit score. Banks expected further tightening of the payment-to-income ratio and required credit score over the next six months. As regards unsecured consumer loans, the required credit score and the payment-to-income ratio were reported to have tightened. Furthermore, in the case of vehicle financing, some tightening banks and leasing companies reported that they had ceased EUR-denominated financing, which accounted for 15-20 per cent of new financing in 2011.

**Chart 4-15**  
Interest spread over the 3-month BUBOR



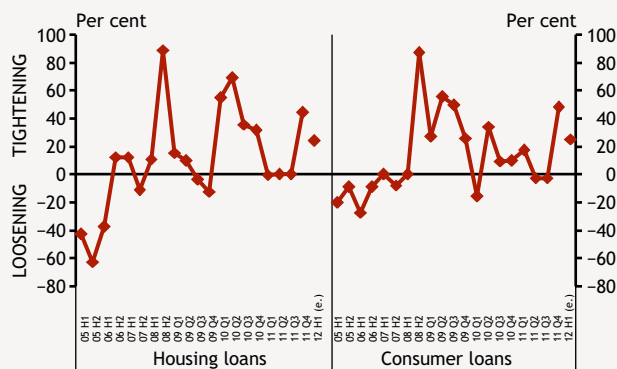
Note: 3-month moving average. HSLA is the abbreviation of Home Savings and Loan Associations. Prior to 2009 HUF denominated mortgage lending was marginal.  
Source: MNB.

Given the current credit conditions, a major part of the banking sector is focusing primarily on the premium segment, i.e. on higher-income clientele with significant down-payment capacity and high-quality collateral. Hence, the high interest rates dampen demand for mortgage loans. As a result, the number of households that can afford housing investments may decrease significantly. Yet, it is still unclear whether this attitude of the banks is a temporary impact of the early final repayment scheme or will persist over longer term.

### 4.2.3 TRENDS IN REAL INTEREST RATES

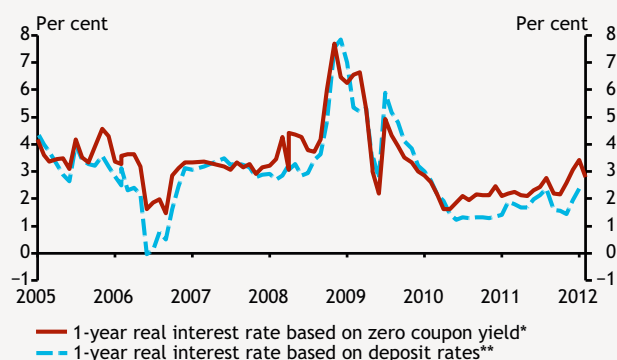
The 1-year real interest rate rose from 2.6 per cent in November 2011 to 3.4 per cent in January, and then dropped to 2.8 per cent (Chart 4-17). Trends in real interest rates were mainly shaped by a sharp rise in and a subsequent adjustment of the yields on government securities, while 1-year forward-looking inflation expectations calculated on the basis of a Reuters poll stood at around 4.3 per cent. The real interest rate calculated from the deposit rates<sup>2</sup> applied to deposits with a maturity of up to and 1 year reflected a similar trend before January, at a level lower by 1 percentage point though. We have no available data on February yet.

**Chart 4-16**  
Changes in credit conditions to the household sector



Note: Net percentage balance of respondents tightening/easing credit conditions weighted by market share.  
Source: MNB lending survey, based on the answers of respondent banks.

**Chart 4-17**  
Trends in forward-looking real interest rates



\* Based on the one-year forward-looking inflation expectations of analysts calculated by the MNB using the 1-year zero coupon yield and the Reuters poll.  
\*\* Based on the one-year forward-looking inflation expectations of analysts calculated by the MNB using deposit rates with maturity up to 1 year and the Reuters poll.  
Source: Thomson-Reuters, MNB.

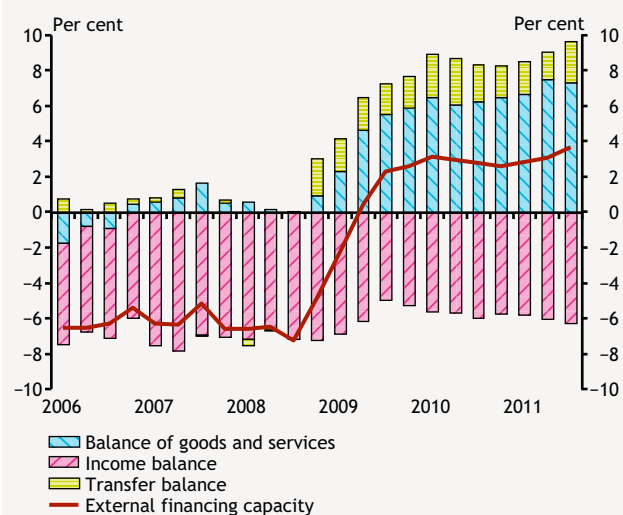
<sup>2</sup> Calculated from deposit interest rates of corporations and households.

# 5 The balance position of Hungarian economy

## 5.1 External balance and financing

The external financing capacity of the Hungarian economy increased further in 2011 Q3. The structure of the improving balance differed from trends observed in earlier periods. The improvement of the external position is principally attributed to the rise in the transfer balance surplus. At the same time, the surplus in net exports declined moderately in parallel with the slowdown in external economic activity, while the income balance deficit increased moderately as a result of rising interest expenditures. Developments on the financing side showed financial savings lower than indicated by the real economy. The level of the external financing capacity calculated on the basis of the financial account ("from below") was lower than the value calculated from real economic developments ("from above"). The outflow of debt generating funds increased over the previous quarter, while the net inflow of non-debt generating funds was again at a higher rate following the outflows of previous quarters. The latter, however, only reflects the sale of pension funds' foreign instruments; net FDI reflected an outflow in Q3 as well, due to the government purchase of the MOL capital share. The steady decline in foreign debt indicators, as observed since the middle of 2010, did not continue in Q3: with the roughly 10 per cent depreciation of the exchange rate, gross external debt increased, despite the net lending position, and GDP-proportionate net external debt also increased at a moderate rate.

**Chart 5-1**  
External financing capacity  
(GDP-proportionate seasonally adjusted values)



Note: Time series are adjusted directly for seasonal effects, thus the sum total of external financing capacity does not necessarily correspond to the adjusted values of the external financing capacity.

### 5.1.1 CHANGES IN THE EXTERNAL POSITION

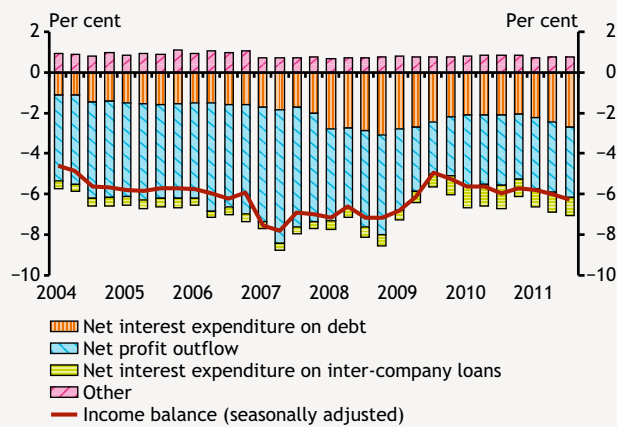
The external financing capacity of the Hungarian economy increased to 3.7 per cent of GDP in 2011 Q3 (Chart 5-1). The value of the external financing position continues to reflect the significant surplus in foreign trade, while the quarterly increase is attributable to the rise in the transfer balance surplus. The value of EU transfers, namely, exceeded 1 billion euro in Q3. The balance improving effect of the transfer surplus was moderately impeded by the minor decline in the balance of goods and services in parallel with the slowdown in external economic activity and the moderate rise in the income balance deficit.

Net exports remained above 7 per cent of GDP, although the value declined slightly compared to the previous quarter. The balance of goods and services shifted in opposite directions: while the surplus in the balance of services, which showed a marked increase in Q2, adjusted in Q3, the surplus in the balance of goods moderately increased. Both exports and imports of goods increased somewhat over the previous quarter, presumably attributable to the wind-up of the one-off effect – related to the earthquake in Japan – in Q2. On an annual basis, however, compared to the similar period of the previous year, this suggests a further slowdown in the dynamics, and data available for Q4



**Chart 5-2**  
Income balance components

(GDP-proportionate values)

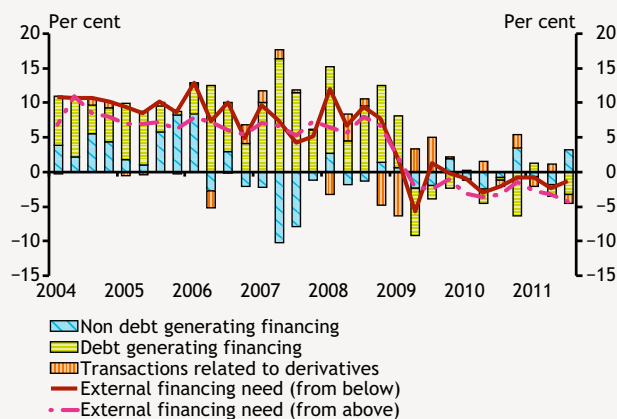


indicate a further slowdown in the growth of foreign trade and a continued decrease in the surplus.

The slight increase in the income balance deficit is attributable to the continuing rise in net interest expenditures (Chart 5-2). The deterioration of the interest balance since end-2010 is principally attributable to increasingly high government interest expenditures, which was observed in relation to both HUF and FX government bonds. This is mainly due to the rising stock of government bonds held by non-residents and gradual repricing in parallel with a risk premium that is higher than before the crisis. The interest balance of banks and companies remained stable in the first three quarters.

**Chart 5-3**  
Structure of external financing

(GDP-proportionate values)



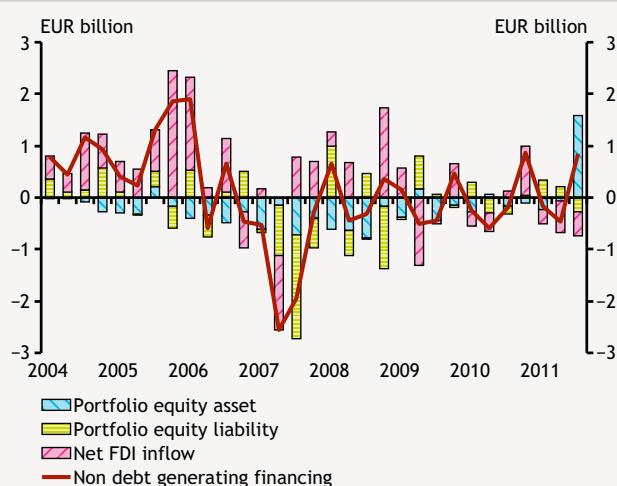
Note: The financing requirement calculated by a bottom-up method corresponds to the total of the external financing requirement and the BOP balance of statistical errors and residuals.

The relatively low transfer balance observed earlier in the year improved, reflecting the growing use of EU transfers. Combined with the use of the EU transfer in excess of net 1 billion euro in Q3, a total of 2.4 billion euro EU funds were used by resident participants in the first three quarters of the year.

### 5.1.2 DEVELOPMENTS IN FINANCING

While the external balance surplus of the economy calculated from above increased further in Q3 according to the indicator based on real economic data, financing data show declining financing capacity (calculated from below) over the previous quarter. In terms of the structure of the external financing capacity calculated from below, the net debt type outflow increased in parallel with the rise in non-debt generating funds (FDI and portfolio shares) (Chart 5-3).

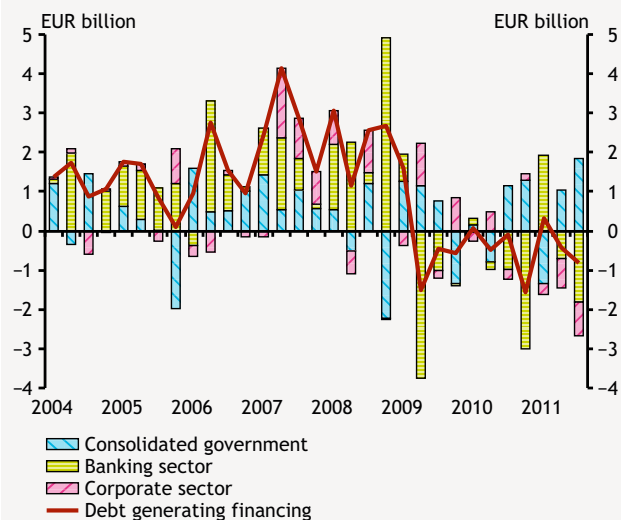
**Chart 5-4**  
Non-debt generating financing



The outflow of non-debt type liabilities observed in previous quarters was followed by substantial inflows in Q3. This reversal, however, is attributable only to the inflow of net portfolio shares, but in this case, this is related to the decrease in foreign assets and not to the inflow of new funds. The substantial inflow of funds, namely, is linked to the sale of foreign investment units and shares related to the sale of pension fund assets, while the decline in the portfolio shares of non-resident investors meant an outflow of funds (Chart 5-4).

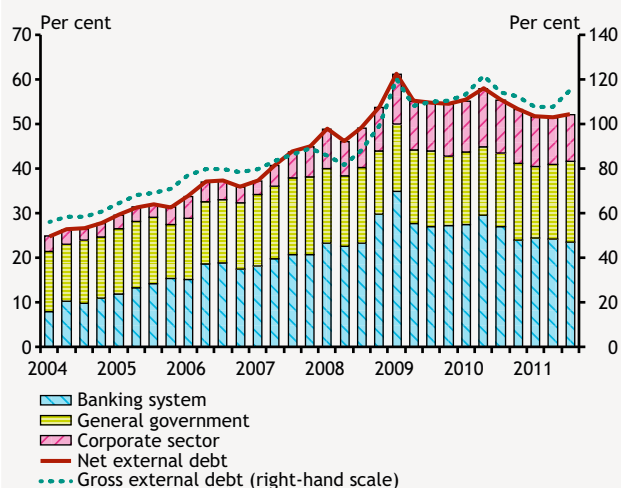
On the whole, net foreign direct investment did not increase in Q3 either, but this is attributed to a one-off factor. The government purchase of the foreign MOL stake was carried out in July (approximately EUR 2 billion), leading to the decrease in shares held by foreign investors, i.e. corresponding to a non-debt type outflow. The transaction, however, did not reduce the total (net) quantity of foreign funds in the economy, as the central bank foreign exchange reserve (as a foreign asset) declined

**Chart 5-5**  
Debt generating financing



**Chart 5-6**  
External debt indicators

(GDP-proportionate values)



Note: Excluding intercompany loans and transactions related to financial derivatives, calculated in HUF.

by a similar amount. Apart from the MOL transaction, net foreign direct investment increased, attributable to (estimated) reinvested earnings in addition to the rise in foreign shares.<sup>3</sup>

The debt type outflow in the third quarter also exhibited a trend which covered the different external debt trends of the private sector and general government. In parallel with the net outflow of the debt generating funds of the private sector (primarily of banks) approximating EUR 2.5 billion, net external funds of consolidated general government increased by roughly EUR 2 billion (Chart 5-5). The external financing trends of the government on the debt side were determined by the non-resident held, significantly rising stock of government securities and the decreasing FX reserve related to the purchase of the MOL stake. External funds in the banking sector declined further in Q4, partly as a result of the early repayment of FX loans and partly in connection with the capital withdrawals of European banks in the Central Eastern European region (for further details see Box 1.1), while the external debt of the general government increased further in relation to non-resident demand for government securities and MNB bonds.

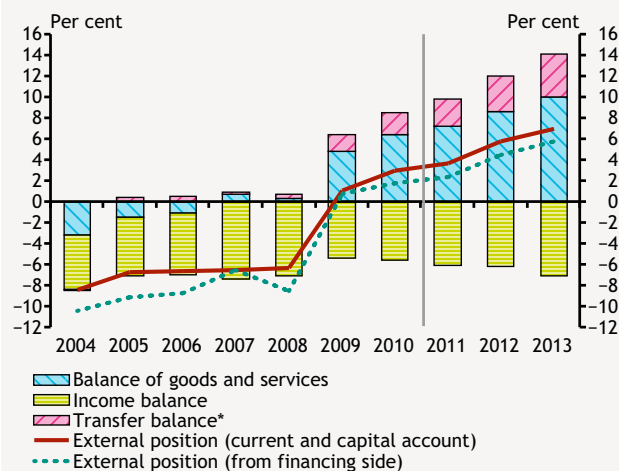
External debt indicators, which had declined or stabilised in the past quarters, increased again in Q3: GDP-proportionate gross external debt rose to 115 per cent and net external debt increased to 52 per cent (Chart 5-6). Although a minor volume of (gross) debt type inflow was recorded in Q3, this only explains a fraction of the change in debt. The increase is attributed to the roughly 10 per cent weakening of the forint exchange rate, which resulted in marked revaluation. The rise in the net external debt rate was not as high. There has been an outflow of funds on a net basis, where debt generating assets (principally the foreign exchange reserve) were also revaluated. And this had a decreasing effect on net external debt.

<sup>3</sup> Reinvested earnings in 2011 are based on estimates in the balance of payments until the annual reports of companies are available, to be replaced with actual data in September 2012.

## 5.2 Forecast for the external balance

The net lending position of the Hungarian economy may continue to strengthen until 2013, supported mainly by the impact of the start of automobile manufacturing which will improve net exports and external economic activity which is anticipated to pick up from end-2012. Increasing use of EU transfers may also contribute to an improved net lending position. Due to weak external demand, the deficit in the income balance is expected to stabilise this year, while the rising profits of foreign corporations may result in an increasing deficit in the income balance. The expected significant net lending position in the coming years may be accompanied by further decrease in banks' foreign liabilities, causing low lending capacity of the banking sector and thus weak domestic demand. The underlying reason for a significant improvement in the net lending position in 2012 is an anticipated decline in the general government's financing requirement, while households' financial savings may shrink in the years ahead, as one-off impacts encouraging savings (e.g. disbursement of real return and early final repayment) come to an end.

**Chart 5-7**  
Developments in the net lending position  
(as a proportion of GDP)



\* Amount of the balance of current transfers and the capital account.

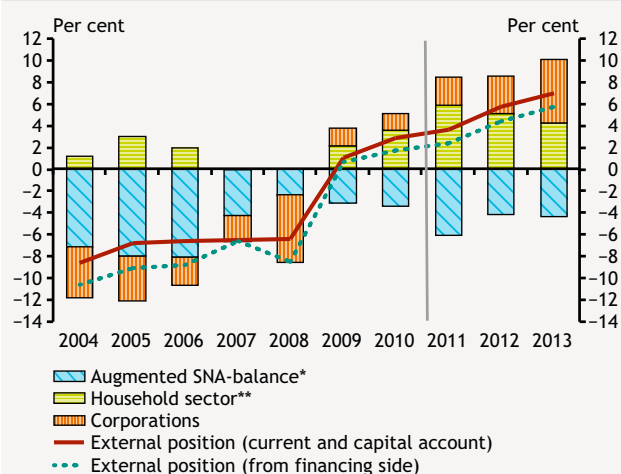
Growth in net lending may accelerate in 2012. The indicator, which is calculated from above reflecting real economy processes and is generated from the combined balance of the current account and the capital account, is likely to rise from a GDP-proportionate value of close to 4 per cent in 2011 to 6 per cent in 2012, and close to 7 per cent in 2013 (Chart 5-7). This also means that net lending calculated from below – reflecting trends on the financing side – may strengthen significantly in the years to come; it will, however, lag behind net savings from above.

The improved net lending position is mainly due to expected trends in foreign trade. Deteriorating domestic and external economic activity will restrain foreign trade, but net exports are likely to outpace imports in the coming years as well. The expected improvement in the terms of trade – mainly due to decrease in oil prices based on futures prices – may also contribute to the increasing surplus in goods and services balance. Furthermore, the automobile industry boosts exports and global economic activity is expected to pick up from end-2012; these factors are likely to contribute to a sizeable surplus on the balance of goods and services.

Assuming that EU transfers at the end of the year was as strong as experienced in Q3, the use of EU transfers in 2011 may reach the amount of the previous year. According to our forecast, an increasingly large amount of EU financing is likely to be used, due in part to a decrease in own funds required for investments. As a result, the balance of transfers may exceed 3 per cent of GDP this year and 4 per cent in 2013, contributing to a stronger net lending position.

**Chart 5-8**  
Developments in the net lending position of the individual sectors

(as a proportion of GDP)



\* Extended general government includes the central budget, local governments, ÁPV Rt., quasi-fiscal entities (MÁV and BKV), the MNB and entities implementing investments which are formally PPP's, which are, however, initiated by the government. The broader SNA indicator also takes private pension fund savings into account.

\*\* Households' net financing position consistent with the SNA indicator, excluding the private pension fund savings of those returning to the state pension scheme. The official net lending position (i.e. recorded on the financial accounts) differs from the one indicated in the chart.

The beneficial impact of net exports and transfers on net lending is partly mitigated by an increase in the deficit on the income balance. One likely major contributor to this is a rise in interest income transferred abroad, triggered by repricing of debt and the weaker HUF exchange rate. In addition, this may be enhanced by the rising profit outflow of foreign-owned companies from 2013. A halt in economic growth may slow down the rise in profits transferred to foreign owners this year, partly counterbalancing the increase in the interest income balance. Next year, however, the anticipated pick-up in economic activity, discontinuation of the sectoral separate tax payment liability and the halving of the bank tax may lead to higher profits for foreign corporations and, hence, a higher deficit on the income account.

Trends in savings in the domestic sectors in 2011 were determined by the further balance sheet adjustment and the general government easing, accounting for approximately 2.7 per cent of GDP (Chart 5-8). A significant part of this translated into a rise in the financial savings of the private sector. VAT was refunded to corporations pursuant to the ruling of the European Court. The disbursement of pension fund real returns and the transformation of the tax regime benefiting mainly higher income groups with a higher saving rate resulted in higher savings in the household sector.

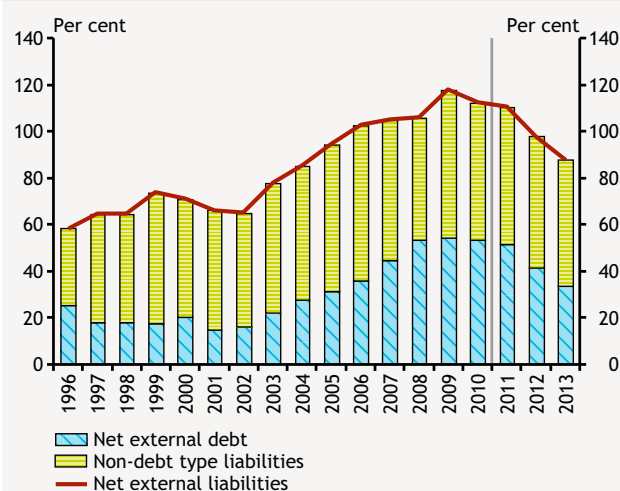
The main underlying reason for a stronger net lending position in 2012 is the projected decline in the general government's net borrowing. This year, a fiscal impulse similar in size to last year's easing, but in the opposite direction will be exerted on the private sector. Part of this is the discontinuation of the one-off impacts in 2011 (e.g. disbursement of pension fund real returns and VAT refunds), which will reduce both household and corporate savings. Further government measures, the other component of the fiscal impulse (discontinuation of income tax credits, tightening of disability support benefits and reductions in some items of social expenditure, etc.), will hit mainly lower income groups hard, and thus it is only likely to exert a moderate impact on household savings. Meanwhile, the decreasing lending willingness due to higher risk and weakening lending ability caused by the withdrawal of funds by foreign banks point to a slower-than-projected pick-up in lending to the private sector.

Under our forecast, financial savings capturing underlying processes in the household sector will not change significantly in the years to come. The discontinuation of one-off items boosting savings (e.g. real returns and early final repayment) projects decline in the SNA-deficit consistent net lending in the years to come (Table 5-1).

**Table 5-1**  
Anticipated trends in the various indicators of household savings  
(as percentage of GDP)

	2009	2010	2011	2012	2013
<b>I. Net financial saving consistent with augmented SNA deficit</b>	<b>2.1</b>	<b>3.6</b>	<b>5.9</b>	<b>5.1</b>	<b>4.2</b>
a) Impact of the early repayment on net savings			0.6	0.6	
b) Savings attributed to the disbursement of real yields			0.6		
<b>II. Net lending capturing basic trends (I.-a-b)</b>	<b>2.1</b>	<b>3.6</b>	<b>4.7</b>	<b>4.5</b>	<b>4.2</b>
c) Accrual basis accounting of the second pillar	1.7	1.3			
d) Impact of the early repayment on net savings			0.6	0.6	
e) Wealth effect due to leaving the second pillar	-0.1	-0.2	-9.5		
f) Consumption attributed to the disbursement of real yields			-0.3		
<b>III. Net financial saving in the financial accounts (II.+c+d+e)</b>	<b>3.7</b>	<b>4.6</b>	<b>-4.5</b>	<b>5.1</b>	<b>4.2</b>

**Chart 5-9**  
Net external debt and liability indicators  
(in proportion to GDP)



Note: In our calculations we suppose the HUF exchange rate to remain unchanged (fixed at the average exchange rate of the past 3 months).

The net lending of the corporate sector is expected to continue to contribute to the net lending of the economy considerably. Main contributors to growth in financial savings are a faster flow of EU transfers and improved profitability ensuing economic activity anticipated to recover from 2013 onwards.

In the forecast horizon, the persistently high external balance may result in a considerable reduction of the external debt and liability indicators. Calculating with relatively stable HUF exchange rate, net external liabilities in proportion to GDP may decline by 20 percentage points by the end of 2013 (Chart 5-9).

## 5.3 Fiscal developments

*Our views on fiscal policy have not changed significantly since the forecast in December 2011. The augmented SNA balance, which reflects fiscal trends comprehensively and assesses the effect of fiscal demand, remained nearly unchanged over the forecast horizon. By contrast, the ESA deficit rose slightly, by somewhat more than 0.3 percentage point as a proportion of GDP. This shift has mainly methodological and accounting-related causes and is interconnected with items that we already incorporated into the SNA-type indicator on earlier occasions.*

*According to our forecast, the 2011 demand-side stimulus of approximately 2.7 per cent of GD is likely to be followed by a fiscal demand contraction of at least 2.2 percentage points in 2012. This negative fiscal impulse may, through the cancellation of all unallocated fiscal reserves, reach 3.1 percentage points. The fiscal demand effect is likely to be neutral in 2013. Nevertheless, meeting the government's deficit targets and the criteria of the Excessive Deficit Procedure will require further adjustments.*

*In 2012, a negative fiscal impulse exerting its impact through aggregate demand will curb household consumption and thus cushion the feed-through of higher production costs into consumer prices. On the other hand, on the supply side, certain components of fiscal tightening – VAT and excise tax increases – will raise the 2012 consumer price index directly and materially. As regards regulated energy prices, we continue to expect a price increase this year that falls behind the rise in raw material prices and is close to average inflation.*

### 5.3.1 BUDGETARY SITUATION AND OUTLOOK

Based on preliminary data, the 2011 ESA balance may, in line with our earlier forecast, close with a surplus of 4.2 per cent as a proportion of GDP, which is attributable to a 9.5 asset transfer due to exists from private pension schemes. In 2012, we expect a 4 per cent deficit, without the cancellation of unallocated fiscal reserves, as a result of the combined impact of deteriorating macro-economic conditions and the measures aimed at improving the fiscal balance. Under our rule-based projection, deficit may grow to 4.3 percentage points in 2013, because further reduction in expenditures will not be able to offset the revenue loss due, in part, to tax cuts, and the increasing net interest expenses (Table 5-2).<sup>4</sup>

It follows from our ESA deficit projection that we do not consider a deficit target of below 3 per cent attainable in the 2012–2013 period even if disposable unallocated fiscal

<sup>4</sup> In our projection for 2013 we assumed that special sectoral taxes would be discontinued, the special tax on financial institutions would be halved, personal income tax base would no longer include employer contributions ('half super gross'), simplified corporate tax would be phased out, employers would be eligible for new tax breaks on their low-skilled employees and there would be fewer tax breaks related to social security contributions due to wage compensation. Excluding the impact of tax refunds related to the agreement with the Banking Association, as a result of lower taxes and other fiscal trends, tax and contribution revenues may decrease by close to 1.4 per cent of GDP in 2013.

**Table 5-2**  
**General government balance indicators**  
*(as a percentage of GDP)*

	2011	2012	2013
ESA balance	4.2	-4.0	-4.3
ESA balance with cancelling free central reserves*	-	-3.1	-3.4
ESA balance with cancelling frozen appropriations in chapters**	-	-2.9	-
Augmented SNA balance***	-6.1	-4.2	-4.3
Cyclical component	-0.6	-0.7	-0.5
Cyclically-adjusted augmented SNA balance***	-5.5	-3.5	-3.9

\* Based on the assumption of the cancellation of the Country Protection Fund and Interest Risk Reserve in full. The government has unallocated central reserves in a total amount of HUF 268 billion which, if the need arises, can be spent on the improvement of the fiscal balance. In respect of 2013, in the absence of the relevant Bill, we relied on a technical assumption under which the amount of unallocated central reserves is identical with the previous year's.

\*\* Based on the assumption of the full cancellation of chapter specific reserves. Our baseline scenario did not consider the positive impact which the cancellation of the reserves may have on the fiscal balance. The cancellation of frozen allocations will also affect macro-economic developments.

\*\*\* Excluding the cancellation of unallocated central budget reserves.

reserves are cancelled in full. Although the 2012 deficit can be reduced to 2.9 percentage points by cancelling the HUF 52 billion chapter specific balancing reserves, it will still be above the original 2.5 per cent deficit target of the government. Therefore, based on our projected deficit trajectory, meeting the government's deficit target and exit from the Excess Deficit Procedure will require further steps improving the fiscal balance. Although the government announced its intention of initiating further measures, the absence of quantifiable details, we did not incorporate further adjustment to the baseline scenario.

The deterioration in the ESA balance relative to our December forecast stems from *individual items* related mainly to methodological corrections; they raise the deficit by approximately 0.3 percent of GDP over the forecast horizon (Table 5-3). Within this, the direct fiscal impact of the agreement concluded with the Banking Association will be 0.1 to 0.05 percentage point higher relative to our earlier assumption. This is due, mainly, to the fact that the

**Table 5-3**  
**Components of the shift in the ESA balance relative to our December 2011 projection**  
*(as a proportion of GDP)*

	2012	2013
<b>1. Individual items total</b>	<b>-0.30</b>	<b>-0.29</b>
1.1 Effect of the agreement with the Banking Association	-0.12	-0.05
1.2 Public transport companies (MÁV, BKV)	-0.19	-0.18
1.3 Road maintenance	0.00	-0.07
<b>2. Change in the primary balance (without specific items)</b>	<b>-0.08</b>	<b>-0.03</b>
2.1 Change in central primary revenues	-0.10	-0.21
2.2 Change in central primary expenditures	-0.03	0.08
2.3 Additional fiscal adjustment by local governments	0.05	0.10
<b>3. Net interest payments</b>	<b>0.05</b>	<b>-0.05</b>
<b>Total change of ESA balance (1+2+3)*</b>	<b>-0.33</b>	<b>-0.37</b>

\* Adjusted for the denominator impact related to changes in the nominal GDP.

expected real asset purchases of the National Asset Manager – which is part of the government sector – will have to be accounted for as expenditures. The incorporation of the operating loss of the MÁV (Hungarian Rail) and BKV will deteriorate the deficit by close to 0.2 percentage point.<sup>5</sup> Furthermore, we have also incorporated the continuing revenue losses that will continue still be incurred in public road management in 2013, similarly to the treatment of such losses in 2012.

Overall, *base-year effects, macro-economic trends* and corrections to our estimates have only led to minor changes compared to our projections in December. Tax and contribution revenues may be 0.1 and 0.2 percentage point lower this year and in 2013, respectively. Revenue losses will be offset, in 2013, by additional adjustments in municipal finance and further reductions of primary expenditures of the central budget. Compared to our projections in December, interest payments are expected to be lower in 2012 and higher in 2013.

Contrary to deterioration of the fiscal balance – mostly attributable to accounting issues – the possible return to the public pension scheme of the remaining private pension scheme members and the ensuing transfer of assets pose an upside risk to the central budget in 2012. If all current fund members decide to return, the balance is likely to improve by 0.7 per cent of GDP. This is, however, only a one-off effect rather than a structural one.

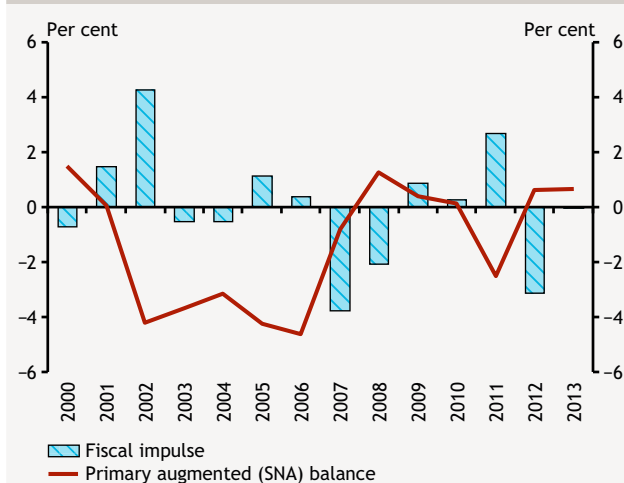
The unfavourable shift in the ESA deficit due to one-off items is not reflected in the *augmented SNA balance*, which better captures fiscal trends from a macro-economic perspective. (Table 5-2) This indicator used by the MNB recognises budgetary revenues and outlays on the basis of their actual economic impact and incorporates quasi-fiscal activities such as the operating losses of the MÁV and the BKV as well as transactions of the National Asset Manager. As the assets transferred from private pension fund do not qualify as revenues under this approach while the disbursement of real returns to pension scheme members is accounted for as qualifies as an expenditure, we expect the SNA deficit to reach 6.1 per cent of GDP in 2011. With fiscal reserves included, the deficit may drop to 4.2 percentage points this year and increase slightly in 2013. As a result of the changes in accounting for the ESA deficit, the gap between the MNB's analytical indicator the official ESA balance will narrow considerably in 2012 and 2013.

<sup>5</sup> We relied on the 2011 EDP Report and the methodology applicable to the financial accounts in the case of the MÁV. Under the methodology, that part of the borrowing needs of the company that materialises due to the performance of its public service contract is recognised as government expenditure. BKV's operating losses can no longer be recorded outside the government's books because the company has practically lost its creditworthiness and can only renew (extend) its maturing loans with government guarantees. We have incorporated BKV's financing needs into the balance of the local governments, which is already partially reflected in the Metropolitan Council's 2012 budget.



**Chart 5-10**  
**Historical trends in fiscal impulses and the primary SNA balance**

(as a percentage of GDP)



Note: The fiscal impulse is equal to a change in the primary SNA balance. Assuming that disposable fiscal reserves are released.

While there has been no material change in the SNA balance, the *cyclically adjusted augmented balance* has deteriorated tangibly. The underlying reason for this is that the level of potential GDP is lower than estimated earlier. Thus, tax revenues picking up after the closing of the output gap will improve the fiscal position to a lesser extent than assumed earlier. Based on the assumption that the unallocated reserves of the budget will be cancelled in full, the cyclically adjusted medium-term balance will record a deficit of close to 3 percentage point by the end of our forecast horizon. To conclude, although a deficit target of less than 3 per cent may be met even if no measures are taken, that still exceeds the 1.5-percent threshold value of the medium term objective (MTO) prescribed by the European Commission.

### 5.3.2 IMPACT OF FISCAL DEMAND

*Fiscal impulses*, i.e. demand generated by the budget, reflect the way in which fiscal measures, trends and automatic stabilizers affect the income position of other sectors. In order to quantify fiscal impulses, we use changes in the primary SNA balance.

On the basis of this impulse indicator, after the significant fiscal easing – accounting for 2.7 per cent of GDP – in 2011, a contraction of a similar magnitude may materialise this year. In 2013, fiscal impact on demand will be practically neutral (Table 5-4, Chart 5-10)<sup>6</sup>. One-off items account for 1.5 percentage points of the baseline GDP-proportionate fiscal tightening which, in 2012, is 2.2 per cent or 3.1 per

**Table 5-4**  
**Changes in fiscal impulses in the context of CSO's accounting structure**  
 (as a percentage of GDP)

	2011	2012	2013
<b>I. Fiscal impulse total (1+2+3)</b>	<b>2.7</b>	<b>-2.2</b>	<b>-0.1</b>
<b>1. Impulse towards households</b>	<b>1.7</b>	<b>-1.2</b>	<b>-1.1</b>
1.1 Transfer of private pension yields	0.8	-0.8	0.0
1.2 Other measures and impulse effects	1.0	-0.4	-1.1
<b>2. Net indirect taxes*</b>	<b>0.2</b>	<b>-0.7</b>	<b>1.2</b>
<b>3. Other (corporate and external sectors, government purchases)</b>	<b>0.7</b>	<b>-0.3</b>	<b>-0.2</b>
3.1 VAT refund to companies	0.7	-0.7	0.0
3.2 Free central reserves	0.0	0.9	0.0
3.3 Other unallocable items	0.0	-0.5	-0.2
<b>II. One-off effects total (1.+3.1)</b>	<b>1.5</b>	<b>-1.5</b>	<b>0.0</b>
<b>III. Impulse with cancelling free reserves (I.-3.1)</b>	<b>2.7</b>	<b>-3.1</b>	<b>0.0</b>

\* Net indirect taxes comprise factors that shape the GDP deflator through the difference between market prices and basic prices, and can significantly affect inflation in economic sense as well. The revenue loss stemming from the elimination of specific sectoral taxes in 2013 is accounted for within this category.

<sup>6</sup> We present trends in fiscal impulses in a structure that corresponds to that of the national accounts compiled by the National Statistical Office. Nevertheless, our figures may be different from the data published by the CSO due to the adjustments to the augmented SNA balance.

cent depending on whether unallocated reserves are cancelled. Therefore, measures related to the 2012 budget have an actual role to play in the remaining 0.7 to 1.6-percentage point contraction. Within the one-off items, the absence of the payout of real returns to private pension scheme members account for 0.8 of GDP. A further 0.7-percentage point impulse impact stems from the fact that VAT refunds that had to be paid to corporations last year under the applicable ruling of the European Court of Justice will no longer have to be paid this year.

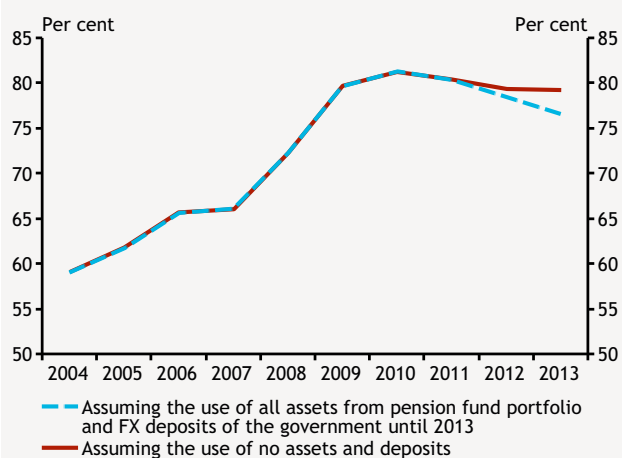
After the disbursement of real returns to private pension scheme members and the adoption of lower personal income tax rates, both of which increased household income, fiscal policy will impose severe tightening on *households* in 2012 and 2013. A major component of the tightening is the reduction in cash transfers (pensions, social benefits) and public sector wages. Within 2 years, cumulatively, the former will result in a 0.9 percentage point, the latter in a 0.3 percentage point contraction in demand. The impact of curbing household income growth will, however, be cushioned by a mandatory wage increase and related tax breaks making up for the phase-out of tax credits and a capital transfer under the agreement with the Banking Association (early final repayment on favourable terms).

### 5.3.3 DEVELOPMENTS IN GOVERNMENT DEBT

Based on the preliminary financial accounts, *GDP-proportionate* debt decreased by approximately 1 percentage point in 2011 relative to 2010. Although debt decreased by 5 percentage points due to the cancellation of government securities taken over from private pension funds, the year-end depreciation of the forint led to an increase of a similar size through the revaluation of FX-denominated debt.

Our projection for debt assumes the cancellation of unallocated reserves of the budget and, in line with the debt rules laid down in the Act on Financial Stability, a technical assumption of a constant exchange rate). Based on this, debt may decrease gradually, but at a moderate pace in the next 2 years. Debt may decrease to a larger extent if the government uses up the financial assets (e.g. FX deposits, the remaining portion of the private pension fund portfolio) at its disposal gradually and, in parallel with the release of safety reserves, spend them on reducing debt (Chart 5-11).

**Chart 5-11**  
Trends in debts at a fixed exchange rate  
(as a percentage of GDP)

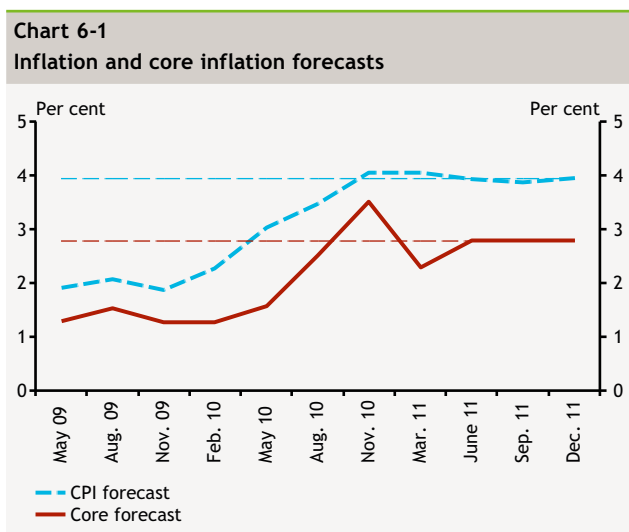


## 6 Special topics

### 6.1 Evaluation of the central bank's forecasts for 2011

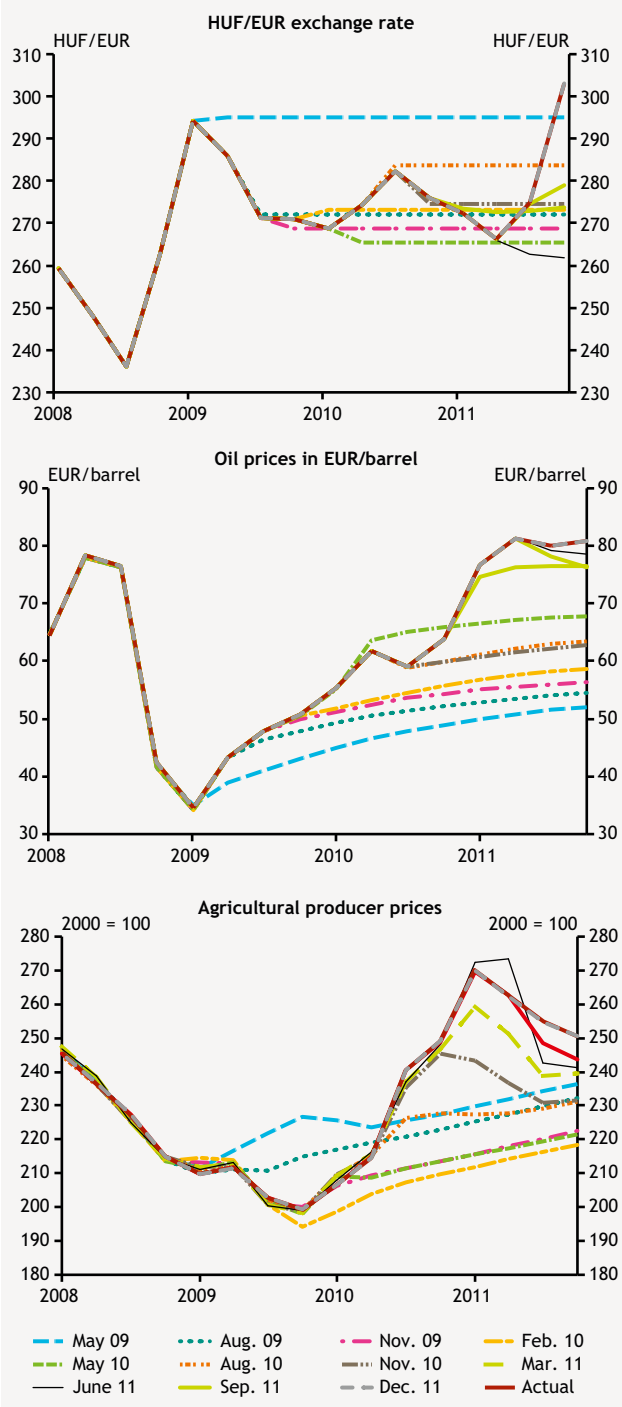
In keeping with earlier years' practice, we will provide an overview of our forecasting performance in respect of the previous year. The objective of our analysis is to map the shocks that influence forecast errors the most and, by identifying them, obtain information on the underlying operation of our forecasting system. Our analysis is of two types: one is an *absolute* analysis focusing on the errors of central bank analyses and the other is a *relative* analysis comparing the forecasting performance of the central bank with market analyst forecasts.

We first provided a forecast of the 2011 inflation in May 2009. Our projections made at the trough of the global economic crisis were for below-the-target inflation and historically low core inflation. The underlying reason was that – in addition to the low commodity prices – we forecasted a protracted, slow economic recovery. Furthermore, our assumption for persistently tight monetary policy also pointed in this direction. From early 2010, it became increasingly clear that – along with another increase in commodity prices – the economic climate may improve more than we expected. Accordingly, we revised our forecasts consistently upward and from mid-2010 onwards we expected the inflation target to be missed in 2011. From end-2010, our forecasts for the 2011 inflation stabilised, typically projecting historically low levels of inflation. Our projections were in accordance with the incoming actual data.



In November 2010, we forecasted a significant acceleration in core inflation. The main underlying reason was that we expected the impact of sectoral taxes on consumer prices. We had been expecting a significant pass-through, which was not, however, underpinned by January data; accordingly, we revised down our forecast in early 2011.

**Chart 6-2**  
**Changes in our projections for the EUR/HUF exchange rate, oil prices calculated in EUR and agricultural producer prices**



Our forecast errors were notably influenced by errors in our assumptions for exogenous variables.<sup>7</sup> After May 2009, the exchange rate of the forint appreciated markedly vis-à-vis the euro and remained fundamentally stable until 2011 Q4; therefore, it only affected our forecast errors to a smaller extent. In the period discussed, a rise in fuel prices and agricultural producer prices was dominant in respect of inflation. In both cases, due to a trend-like rise in global prices, we had to revise our projections significantly higher on an on-going basis up to mid-2011.

By contrast, regulated prices fared better than expected. In line with the government measures, changes in price formulae have markedly cushioned the inflationary impact of rising commodity costs over the past few years. Weaker-than-expected domestic demand also suggested lower inflation. This was offset to some extent by the fact that we also revised down our view on potential GDP. Subdued demand was only partially able to offset the increased costs triggering higher inflation.

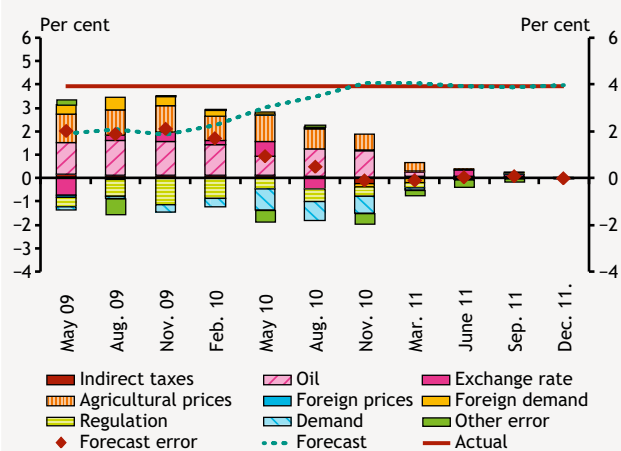
After adjustment for the errors in the exogenous variables, the errors made were close to zero, though we identified severe negative modelling errors in our projections in 2010. As the average modelling error was low, nothing suggested any structural shortcomings in our forecasting systems.

We made significant errors in our assessment of cost shocks and households' consumer demand. We anticipated a tangible rise in consumption before mid-2011 as a response to improved outlook for economic activity and significant income growth affecting households in 2011 (lower personal income tax rates and disbursement of real yields on private pension fund investments). Contrary to our expectations, despite the sizeable additional incomes, consumption remained broadly flat in 2011, restraining the feed-through of rising commodity prices into consumer prices. Weaker consumption was attributable to the lower-than-expected lending activity of the banking system, households' balance sheet adjustments, which took considerably longer than expected, and the strong appreciation of the CHF exchange rate.

Overall, most of our errors pertaining to 2011 were attributable to unforeseeable cost shocks, which were in part offset by the low administered price inflation and weaker-than-expected domestic economic activity. Our

<sup>7</sup> We undertook a major change to our projection methodology in the period reviewed (i.e. May 2009 and December 2011). Before November 2010, our projections considered monetary policy as an exogenous factor, and were, therefore, based on an assumption of an unchanged EUR/HUF rate and an unchanged central bank base rate. By contrast, from March 2011 onwards, our projections began to consider monetary policy as an endogenous factor, i.e. we assumed that monetary policy responds to changes in the economic environment on an ongoing basis. The projections reviewed for 2011 mainly concern the short-term forecasts under the new model. Over this time horizon, endogenous monetary policy is only likely to exert a minor impact, and thus we do not think that our comparisons are distorted with regard to our forecasting performance in 2011.

**Chart 6-3**  
Average inflation forecast error for 2010 and its decomposition

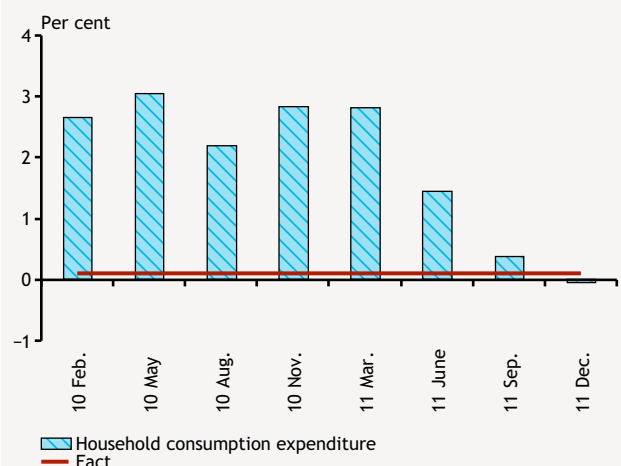


Note: Errors show deviations of the forecast from the actual data.

errors in respect of forecasts covering periods longer than one year were relatively serious, which can be mostly attributed to our technical assumptions. Over shorter horizons, our forecasts responded swiftly to changes in the macroeconomic environment, as a result of which only small forecast errors were made from end-2010 onwards.

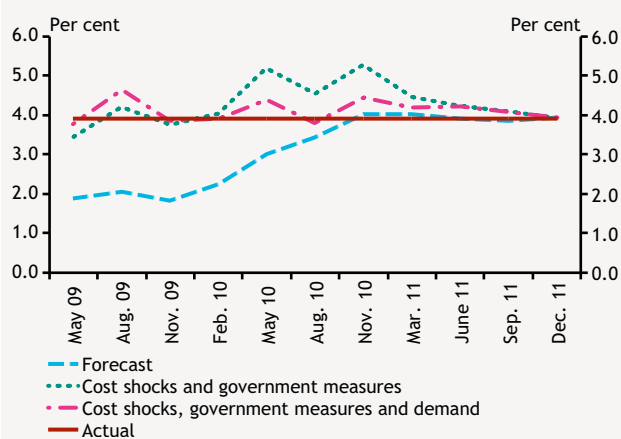
In addition to conducting an absolute analysis, we also compared our projections with market forecasts. It should be noted that the information basis used for forecasts differ materially in several aspects in the case of market and central bank forecasts. Central bank projections are so-called conditional forecasts. Unlike market analyst forecasts, which are unconditional, our forecasts contain a number of pre-determined conditions (trends in fiscal policy, global oil prices and, up to November 2010, monetary policy variables). This difference is likely to give rise to material deviations especially in the case of projections for longer horizons.

**Chart 6-4**  
Household consumption forecasts for 2011

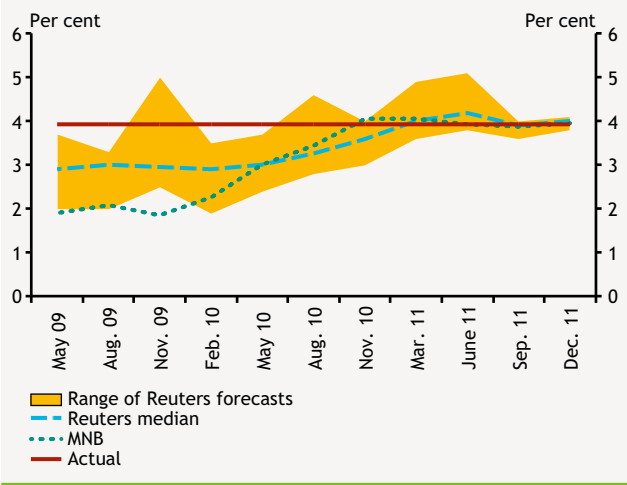


Comparing the forecasts of the analysts participating in MNB and Reuters polls, we can establish that the median of analyst expectations was closer to actual inflation over longer horizons. Since May 2010, central bank forecasts have become more accurate and had fewer errors in them until end-2011 than market projections. In the first half of this period market analyses were more optimistic than MNB's, and then started to point to higher inflation from mid-2011.

**Chart 6-5**  
Effect of the most important factors on our forecast



**Chart 6-6**  
**Forecasts of the analysts participating in the Reuters survey and the 2011 average annual inflation forecast of the MNB**



## 6.2 Evaluating the recent developments in total employment

Recently published statistics offer a rather conflicting view of employment trends in Hungary. Labour Force Survey (LFS) data reveal that employment grew steadily in 2011, and there was some halt only in January 2012. By contrast, institutional statistics suggest that there was already some moderation in staffing levels in 2011, and in January 2012 the number employed dropped to levels last seen during the trough of the crisis. The objective of this analysis is to evaluate recent employment data pertaining to the past few months in a more subtle manner.

**Chart 6-7**  
Number of employed in the national economy according to various statistics



Differences and discrepancies between statistics have been existing in the previous years. LFS data tends to follow changes in institutional statistics with a lag, and institutional statistics also reflects production trends better. Differences between the two types of statistics arise from differences in data collection: the Labour Force Survey contains businesses employing less than 5 persons, self-employed persons and those employed in the shadow ('grey') economy.

The two data sources offer rather conflicting view of the 2011 trends. According to LFS, there was a constant expansion in employment, especially in market services. Manufacturing have been also expanding for the first three quarters, but there was contraction in the final quarter. Trends in economic activity hardly explain the differences in staffing levels between the individual sectors: the performance of market services sector was rather subdued in response to weak domestic demand, while relatively favourable external demand boosted export-oriented manufacturing.

By contrast, institutional statistics shows a slight moderation of employment in 2011. In line with more favourable economic prospects in early 2011, employment in manufacturing was still expanding. Then in the second half of the year, concurrently with deterioration in growth prospects, the number employed also dropped. Concurrently, staffing levels remained unchanged in the market services sector, and there were lay-offs in sectors affected by crisis taxes.

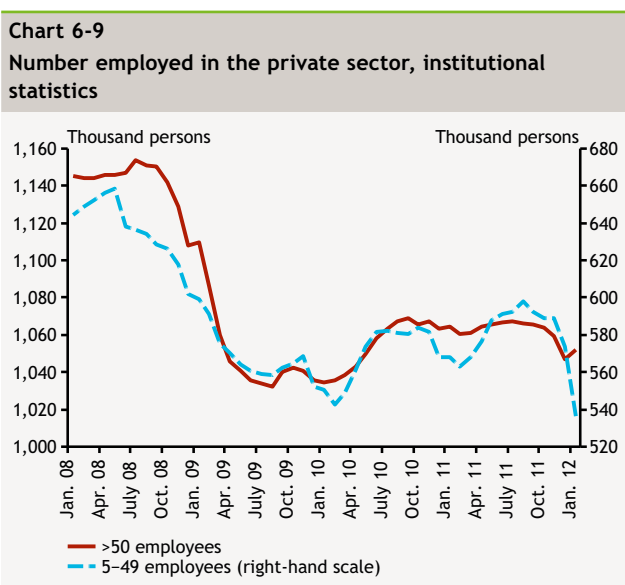
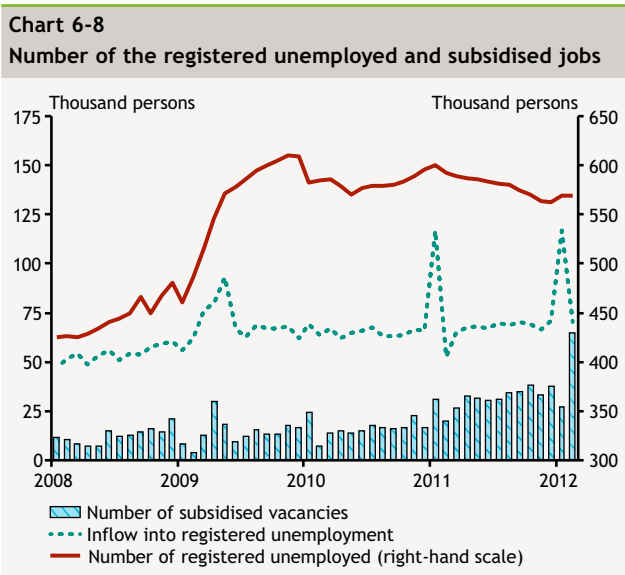
Labour supply has been increasing consistently since 2008 in response to the government measures of earlier years, and that enlarged supply might have been absorbed by small businesses or, with less likelihood, the shadow economy. According to the LFS-data, the new self-employed and micro-enterprises are mainly set up in sectors as accommodation, wholesale and retail trade and agriculture, which closed a good year in 2011. As domestic demand closely linked to these sectors is expected to remain subdued, some adjustments to higher staffing levels are anticipated in these sectors.

Institutional statistics reflected significant drop in total employment in January 2012. Reduction is due, in part, to community work schemes. As these schemes are renewed early each year, it is now safe to say that public sector employment tends to drop in January and February and reaches a peak in the second half of the year as subsidised vacancies are filled. This phenomenon can be identified in both the LFS and institutional statistics data. Data from Labour Centres confirm that the decline is likely to be temporary: the number of registered unemployed hiked in January; in February, however, as the number of subsidised jobs grew, the inflow into unemployment fell back to its trend level. Excluding fostered workers, headcount in the public sector declined gradually in 2011, reflecting the government’s increasingly stringent wage bill management.

The number of employed also declined in the private sector in January, with some 30,000 persons dismissed. Neither LFS-data nor the data of the National Employment Service on the number of registered unemployed and lay-offs confirmed the extent of the decline. In the previous years, headcount in businesses with less than 50 employees moved in close conjunction with that in businesses with over 50 employees. However, the decline in January only materialised in businesses with less than 50 employees (Chart 6-9).

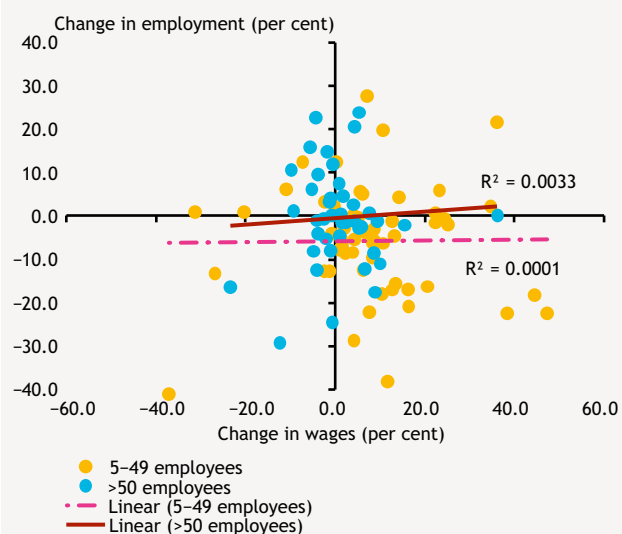
Numerous analyses established a causal link between lay-offs and the costs of the minimum wage increase. However, decline in employment materialised in both corporations with low wages that are more affected by the minimum wage increase and corporations paying higher than average wages. As no significant connection between the January change in wages and change in employment can be found, no conclusive inference can be drawn exclusively on the basis of January data as to whether or not lay-offs were triggered by the minimum wage increase (Chart 6-10).

The regular yearly change in the Central Statistical Office’s sampling of corporations with 5 to 49 employees is a more likely explanation for the decline in headcount. In previous





**Chart 6-10**  
**Number employed in the private sector, institutional statistics**



years, there were similar shifts in employment due to the change in sample, although they typically meant an increase in the number of employees. The current decline may also suggest that the employment situation of small enterprises in the private sector is likely to have been worse already in 2011 than we had thought.

Overall, we think that the number of employees in the private sector may have started to decline already at the end of 2011, concurrently with deterioration in outlook for economic recovery. Only increasingly strong labour supply is likely to have been able to trigger increase in the group of the self-employed and micro-enterprises. It is still early to draw conclusions about the impact of the minimum wage increase on staffing levels, at least the data on January do not support such a hypothesis. We anticipate lower employment levels in the private sector in response to an ailing economic environment in 2012. Relative to 2011, this is unlikely to be cushioned by community work programmes. Although the number of fostered workers employed simultaneously will be increasing, the total number of fostered workers will drop to two-thirds of the 2011 figure during the year. Accordingly, the rate of unemployment may remain at a consistently high level.

## 7 Technical annex: Decomposition of the 2012 average inflation

**Table 7-1**  
Decomposition of the inflation to overlapping and incoming effect

	Effect on CPI in 2012		
	Overlapping effect	Incoming effect	Yearly index
Administered prices	0.1	0.4	0.5
Market prices	0.7	2.0	2.7
Indirect taxes and government measures	0.6	1.8	2.3
CPI	1.4	4.2	5.6

Note: The tables show the decomposition of the yearly average change of the consumer price index. The yearly change is the sum of the so called overlapping and incoming effects. The overlapping effect is the part of the yearly index, which can be explained by the preceding year's price changes, while the incoming effect reflects the changes in the recent year. We decomposed these indices to the sub-aggregates of the consumer price index; and we calculated inflationary effects of the changes in the indirect taxes, the administered prices, and market prices (not administered prices excluding indirect tax effects). The figures have been calculated using the technical effect of the VAT hike.

**Table 7-2**  
Detailed decomposition of our inflation forecast to overlapping and incoming effects\*

	2012				Yearly index
	Average overlapping effect	Overlapping indirect tax effect	Average incoming effect	Incoming indirect tax effect	
Food	-0.4	0.1	4.8	1.2	5.8
non-processed	-3.3	0.0	5.8	1.6	4.0
processed	1.2	0.2	4.3	1.0	6.9
Traded goods	0.9	0.2	0.8	1.3	3.2
durables	-0.3	0.0	-0.1	0.8	0.3
non-durables	1.2	0.2	1.3	1.5	4.3
Market services	1.0	0.0	1.9	1.5	4.4
Market energy	3.0	0.0	3.4	1.6	8.2
Alcohol and tobacco	0.2	2.8	2.2	6.3	11.9
Fuel	5.2	1.2	3.8	1.6	12.4
Administered prices	0.6	0.7	2.0	1.2	4.6
<b>Consumer Price Index</b>	<b>0.8</b>	<b>0.6</b>	<b>2.5</b>	<b>1.8</b>	<b>5.6</b>
Core inflation	0.9	0.5	1.7	2.2	5.3

Note: The tables show the decomposition of the yearly average change of the consumer price index. The yearly change is the sum of the so called overlapping and incoming effects. The overlapping effect is the part of the yearly index, which can be explained by the preceding year's price changes, while the incoming effect reflects the changes in the recent year. We decomposed these indices to the sub-aggregates of the consumer price index; and we calculated inflationary effects of the changes in the indirect taxes, the administered prices, and market prices (not administered prices excluding indirect tax effects). The figures have been calculated using the technical effect of the VAT hike.

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