QUARTERLY REPORT ON INFLATION
September 2011

MAGYAR NEMZETI BANK

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Published by the Magyar Nemzeti Bank

Publisher in charge: dr. András Simon, Head of Communications

8-9 Szabadság tér, H-1850 Budapest

www.mnb.hu

ISSN 1418-8716 (online)

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

In the inflation targeting system, since August 2005 the Bank has sought to attain price stability by ensuring an inflation rate near the 3% 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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Other contributors to the analyses and forecasts in this *Report* include various staff members of the Monetary Strategy and Economic Analysis and the Financial Analysis Departments.

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 13 September 2011.

Contents

Summary

The global slowdown and protracted balance sheet adjustment are dragging on the Hungarian economic recovery

Developments in global activity and financial markets are adversely affecting the Hungarian economy. Decelerating external demand and tighter credit conditions are acting as significant brakes on the recovery. The inflationary effects of the recent cost shocks to the economy and the announced increase in excise taxes are wearing off quickly, due to the persistently weak domestic demand and the loose labour market. The interest rate path is determined by the duality of a rising risk premium and a diminishing demand-side inflationary pressure. An interest rate cut may be implemented only in the mid-term, after the decline of the risk premium.

As regards the present issue of the *Quarterly Report on Inflation*, we would like to emphasise that our forecast is based on the information available on 13 September 2011. The extremely consequential economic policy measures announced by the Government in the context of the draft budget bill for 2012 were disclosed after our cut-off date. Although our baseline forecast does not reflect the effects of these measures, the macroeconomic impact of the measures announced heretofore is summarised in Box 1-2 and Box 5-1 of this *Quarterly Report on Inflation*.

From the viewpoint of monetary policy, the announced measures may further increase the tension between the weak growth prospects and the above-target inflation rate. As a result of the indirect tax hike, the CPI may remain above the target for a slightly longer period and more excessively, while the pick-up in employment and growth may be slower than expected in the baseline scenario. The announced elevation of minimum wages may increase the natural rate of unemployment among low-skilled workers, which in turn may strengthen the risk of evolving second-round effects of tax-hikes relevant to inflation.

Outlook for the global economy has deteriorated and risk version has increased

Signs of slowing activity and increasing risk aversion cast a shadow over the outlook for the global economy recently. Weak macroeconomic data and falling confidence measures contributed to heightened concerns about the fragility of the recovery in the developed economies. Problems in the euro area, Hungary's most important trading partner, escalated further. Deteriorating investor sentiment led to rapid declines in asset prices and sharp rises in risk premia. The decline in asset prices had an adverse effect on economic agents who took on debt prior to the crisis as well as on the balance sheet position of the banking sector. Consequently, strains in the European banking sector have intensified, suggesting that the process of balance sheet adjustment may take longer than previously expected.

Adverse international developments may affect the Hungarian economy significantly through a number of channels

The weakening world economy is impacting the Hungarian economy negatively through several channels. The global slowdown is likely to cause a decline in demand for Hungarian export goods. Increases in the cost of funds in European money markets are also adversely affecting the funding costs of domestic banks, and as a result, Hungarian credit conditions are likely to tighten further. Tighter credit conditions will weigh on the recovery in household consumption as well as in household and corporate sector investment. The slowdown in the Hungarian economy will require additional fiscal adjustment, which, in turn, may be a factor constraining domestic demand.

Although slowing, exports are likely to make a significant contribution to growth

Decelerating growth in Hungary's export markets was also reflected in declining export growth in Q2. Despite the slowdown in external demand, Hungarian exports are likely to remain the backbone of domestic growth, although the current projections for GDP growth in 2011 and 2012 are significantly lower than they were in the June Report. The effects of weaker global activity will be partly offset by the new, large-scale investment projects as they gradually start to produce output, as well as by the medium-term easing of monetary conditions along the baseline path. Due to these last two factors, Hungary's export market share may rise strongly in 2012.

Consumption may only grow slowly

The projection for domestic demand growth has been revised down sharply, despite the assumption in the baseline projection of a gradual easing in monetary conditions over the medium term. Household consumption has been static for quite some time, with signs that the reduction in personal income taxation this year has been insufficient to provide significant stimulus. Households are likely to remain cautious about their spending habits and continue to adjust their balance sheets in the years to come. The large degree of uncertainty about the outlook for incomes and the high level of instalment payments on debt are hindering a recovery in consumption growth. Due to the European debt crisis, the rising costs of and tighter access to external funding have led to further tightening in domestic credit conditions, with households also finding it increasingly difficult to access credit. The fiscal adjustment measures also point to lower income growth on the forecast horizon. Reflecting the deteriorating outlook for incomes and continued balance sheet adjustment, household consumption growth is likely to be subdued at around 0.5% in both 2011 and 2012.

Corporate investment is only picking up slowly, despite some large individual investment projects

The outlook for corporate investment has been revised down relative to the June projection. Apart from a couple of large individual investment projects in manufacturing, overall investment activity is likely to be extremely subdued, due to tightening credit conditions and more uncertainty about economic prospects. Service sector investment activity is also unlikely to recover in the near term, given that capacity utilisation remains well below pre-crisis levels.

The output gap remains negative over the entire forecast period

Although GDP growth is likely to be above potential in the coming years, the output gap will close only gradually despite the easing in monetary conditions and will remain negative over the entire forecast period. Slow capital accumulation and declining production capacity reflecting slack domestic demand and high costs will weigh on potential output growth. By contrast, the expansion of labour supply due to the Government's measures is likely to improve the longer-term outlook for growth.

Private sector earnings growth may remain persistently below productivity growth, due to loose labour market conditions

Labour market conditions are marked by a combination of a sluggish recovery in labour demand, due to the deteriorating outlook for economic activity, and the Government's measures to stimulate the supply of labour. The participation rate is likely to rise further in line with the trends of the past few years, reflecting the effects of the Government's measures. However, labour demand is unlikely to be able to absorb the pool of available labour, due partly to skill shortages and the uncertain outlook for economic activity. Consequently, the unemployment rate may remain above 10% over the entire forecast period.

Labour market conditions are likely to remain loose over the forecast period. Consequently, the pick-up in private sector earnings growth in H1 was probably only temporary, and the labour market is unlikely to put upward pressure on prices from the cost side. Real earnings growth may remain persistently below productivity growth.

The disinflationary impact of weak demand is likely to become the main factor influencing inflation

The data since the June Report and the deteriorating outlook for activity point to stronger-than-expected disinflationary pressure from both the demand and cost sides over the forecast period. Falling commodity prices may cushion the effects of last year's cost shocks even over the short term. Core inflation will increasingly reflect the downward effect on prices of the global slowdown, weak domestic demand and the loose labour market. As a result, core inflation is likely to drop below 2% by the middle of 2013. Slowing global activity and flat consumption growth will mainly put significant downward pressure on traded goods inflation and services inflation, respectively. In the coming months, the lifting of the gas and district heating price subsidy scheme and, in 2012, the increase in excise taxes will contribute to inflation remaining above the Bank's 3% target. Inflation adjusted for taxes will then gradually fall back to target in 2012 H2, despite the anticipated easing in monetary policy.

The increase in the risk perception associated with the Hungarian economy has been driven by international factors

There has recently been a significant increase in perceptions of the risks associated with Hungary, mainly driven by heightened global risk aversion. The Hungarian FX swap market was affected the most by the strains in the international financial markets, with spreads remaining high at longer maturities. The EUR/HUF exchange rate was relatively stable during the period of turbulence, while the sharp appreciation of the Swiss franc against the forint during the period until the announcement of a minimum exchange rate target by the Swiss National Bank was mainly due to the safe haven status of the franc. Non-resident investors increased their holdings of Hungarian government securities and reduced their exposure to equities. Yields on Hungarian government securities largely remained at their June level, but the picture is more complex, considering the rise in the spread over German Bunds of comparable maturity.

The unfavourable cyclical position of the economy is very detrimental to the fiscal position

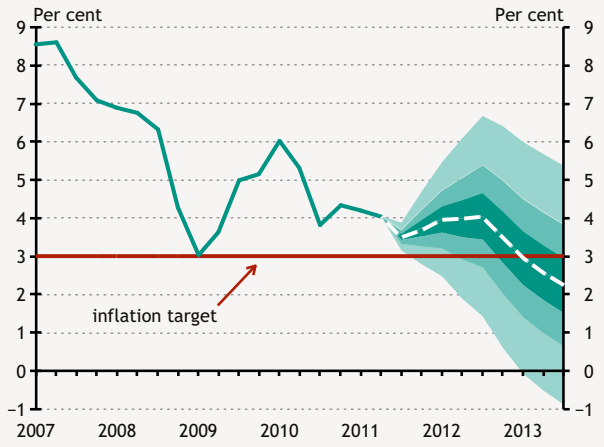
In 2011, underlying budgetary developments imply substantial fiscal easing close to 3,5% of GDP, mainly due to the reduction in income taxes. In 2012, the measures in the Structural Reform Programme (also known as the Kálmán Széll plan) and the Convergence Programme are likely to result in a reduction in government demand equivalent to 2.6% of GDP. The output gap will close only slowly in the period 2010-2012, and as a result the cyclical component will contribute close to 2 percentage points to the 2012 deficit. This means that, once the output gap closes, i.e. after revenue returns to trend, the

government deficit may fall below 2,5% over the longer term, due to the measures taken into account in the projection.

Hungary's external balance is likely to continue improving gradually in the coming years

Hungary's external financing capacity amounted to more than 4% of GDP in 2011 Q1, reflecting a large and persistent surplus on its balance of goods and services and strong inflows of EU transfers. In the coming years, the economy's external balance is likely to improve further. In our current projection, the external financing capacity rises from levels above 5% of GDP this year to close to 7% in 2012, and expected to rise in 2013. Capital outflows since the onset of the financial crisis continued as the external balance improved. As a result, Hungary's net external debt-to-GDP ratio fell to 51% in 2011 Q1, its lowest level since the crisis began.

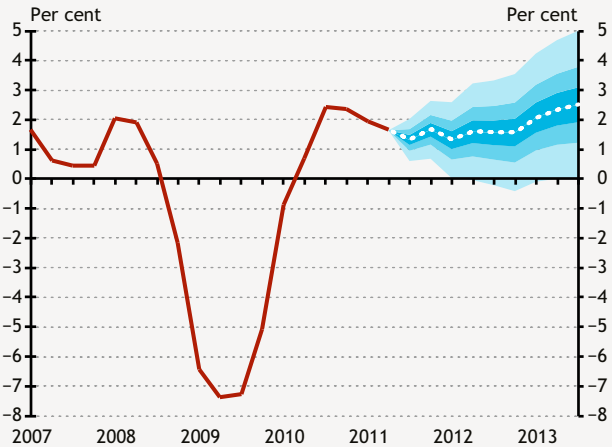
Fan chart of the inflation forecast*



** The forecast for inflation presented in the fan chart shows the expected profile of inflation over an 8-quarter horizon.*

Fan chart of the GDP forecast*

(based on seasonally adjusted and reconciled data)



** The forecast for economic growth presented in the fan chart shows the expected profile of growth over an 8-quarter horizon.*

Summary table of baseline scenario
(Our forecasts were based on assumption of endogenous monetary policy.)

	2010	2011	2012
	Fact	Forecast	
Inflation (annual average)			
Core inflation[1]	3.0	2.8	3.2
Consumer price index	4.9	3.9	3.9
Economic growth			
External demand (GDP based)[2]	2.6	2.7	1.3
Household consumption expenditure	−2.1	0.4	0.6
Gross fixed capital formation	−5.6	−3.8	1.6
Domestic absorption	−1.1	−0.5	0.0
Export	14.1	9.4	8.5
Import	12.0	7.6	7.7
GDP	1.2	1.6	1.5
External balance			
Current account balance	2.1	3.0	4.2
External financing capacity	3.9	5.4	6.8
Government balance[3]			
ESA balance	−4.3	1.9	−3.7
Labour market			
Whole-economy gross average earnings[4]	1.4	2.1	2.3
Whole-economy employment[5]	0.0	1.2	1.3
Private sector gross average earnings[6]	3.3	4.8	4.5
Private sector employment[5]	−1.0	0.9	0.6
Unit labour costs in the private sector[5,7]	−2.6	3.4	3.2
Household real income[8]	−1.2	1.5	−0.4

[1] From May 2009 on, calculated according to the joint methodology of the CSO and MNB.
[2] In line with the changes in Hungarian export structure by destination countries we revised the weights in our external demand indicator.
[3] As a percentage of GDP
[4] Calculated on a cash-flow basis.
[5] According to the CSO LFS data.
[6] According to the original CSO data for full-time employees.
[7] Private sector unit labour cost calculated with a wage index excluding the effect of whitening and the changed seasonality of bonuses.
[8] MNB estimate. The current forecast and the actual data of the household real income does not include contributions to the mandatory pension funds.

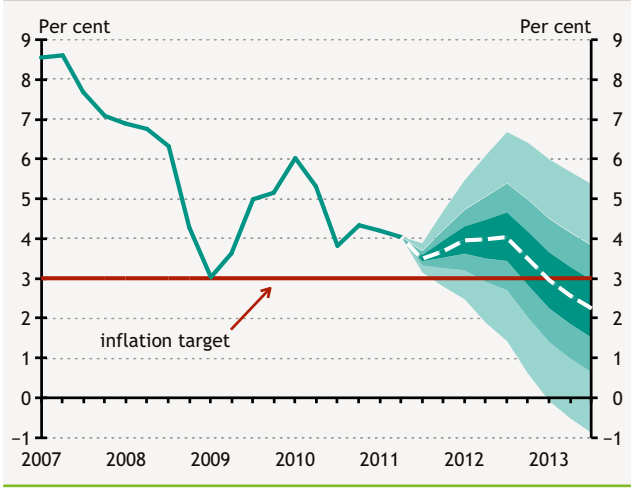
1 Inflation and real economy outlook

1.1 Inflation forecast

We would like to emphasise that our forecast is based on the information available on 13 September 2011. The extremely consequential economic policy measures announced by the Government in the context of the draft budget bill for 2012 were disclosed after our cut-off date. Although our baseline forecast does not reflect the effects of these measures, the macroeconomic impact of the measures announced heretofore is summarised in Box 1-2 and Box 5-1 of this Quarterly Report on Inflation.

Deteriorating international and domestic economic growth prospects point towards stronger disinflation than expected in June. The pass-through of high commodity prices of recent quarters to core inflation may taper off by the end of this year, and thus our longer-term forecast is determined by weak domestic demand. Stemming from more subdued consumption than in our June forecast, the disinflationary effect of the real economy may strengthen, while a persistently loose labour market may restrain wage growth and thus contain cost pressures of domestic origin. External inflationary pressures have moderated in the context of a slowing global economy. In the consumer prices index, increasing prices due to the measures affecting excise taxes announced for the coming quarters temporarily offset the strong disinflationary effect stemming from the demand side. In the coming year, inflation may remain above the 3 percent target, but in the current weak demand environment inflation may decrease rapidly, as the direct effects of cost shocks and increases in indirect taxes wear off, potentially reaching the 3 percent level consistent with price stability by the beginning of 2013, notwithstanding the medium-term forecast of monetary policy easing incorporated in the baseline scenario.

Chart 1-1
Fan chart of the inflation forecast



Both demand-side and cost-side data received since the June Report on Inflation point to higher-than-expected disinflation, but the announced increase in excise taxes may temporarily push annual inflation higher. High commodity and fuel prices during first half of this year fed through to prices of processed foods, keeping the price index at an elevated level. In the coming months, the consumer price index may temporarily rise further from its mid-summer level of near 3 percent to above 3.5 percent by the end of the year.

Owing in part to deteriorating global growth prospects, fuel prices expressed in US dollars have dropped since June, but futures prices do not indicate a substantial further decline (Chart 1-2). Looking ahead, weak domestic demand may generate an even stronger disinflationary effect once the impact of the cost shocks dissipates.

Economic output will fall short of its potential level over the entire forecast horizon (Chart 1-4). Over the short run, the gap between actual and potential output will widen, in other words the disinflationary effect of the real economy will intensify. This will be accompanied by permanently

Chart 1-2
Changes in oil price assumptions
(in euro)

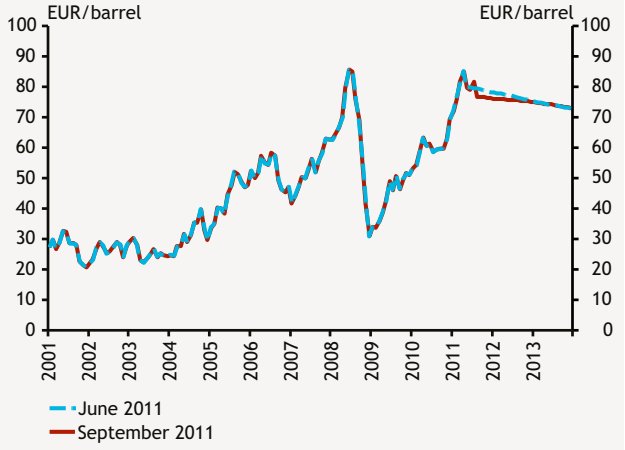


Chart 1-3
CPI with and without indirect taxes and subsidies

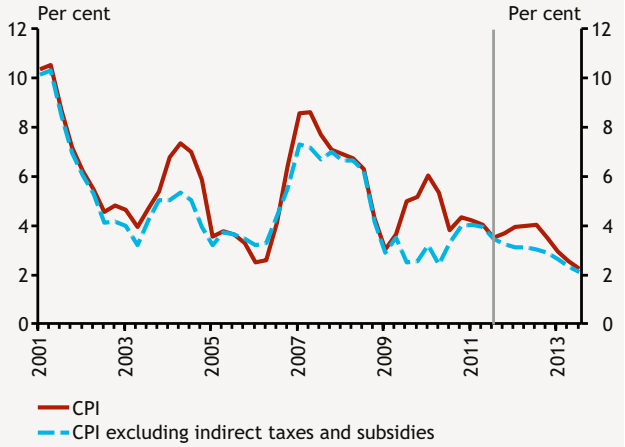
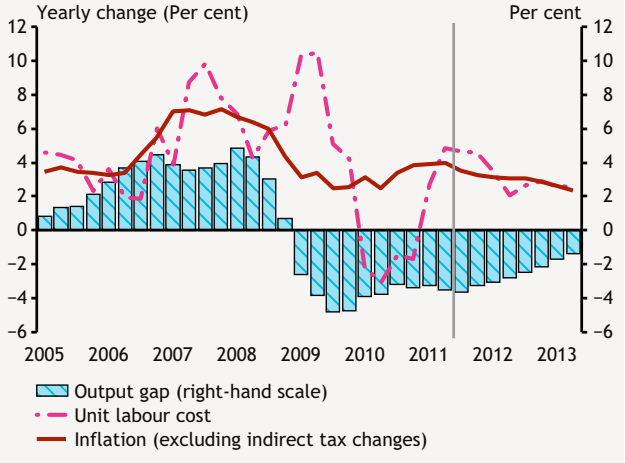


Chart 1-4
Determinants of inflation



high unemployment of over 10 percent. Loose labour market conditions and a negative output gap exert downward pressure on prices and wages.

Inflationary pressures from the real economy remain moderate over the entire forecast horizon. At the same time, the announced increase in excise taxes may keep the consumer price index above the inflation target until the end of 2012. Filtering out the effect of indirect taxes, the continuous decrease in inflation reflects the mild inflationary pressures from both the demand-side and cost-side (Chart 1-3). Inflation may decrease rapidly at the end of 2012 as the one-off effect of the increase in excise taxes wear off and may drop below the 3 percent target by the beginning of 2013 (Chart 1-1). In line with weak economic growth and inflation dropping below the target, the central bank base rate may be reduced gradually over the medium run.

Core inflation continues to be determined by the duality of cost shocks and weak domestic demand. Due to high commodity prices, core inflation may be close to 3 percent in 2011. Once again, government measures may temporarily push the inflation rate higher. In the following year, weak domestic demand and loose labour market conditions will exert a disinflationary effect and by the end of 2012 core inflation may gradually drop to around 2 percent (Chart 1-5).

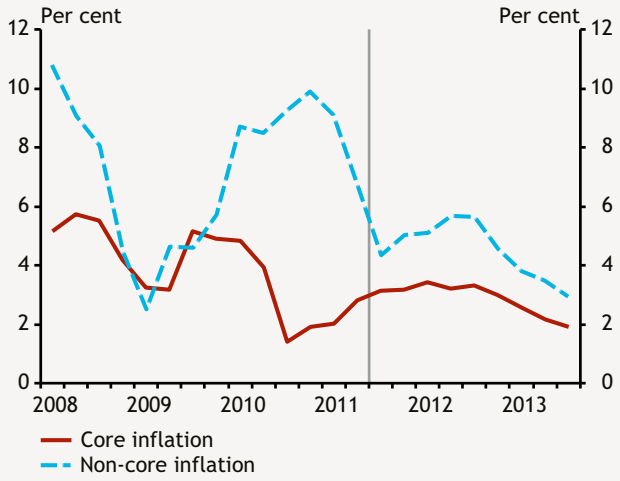
Non-core inflation may increase in the coming quarters. This can be attributed to end-of-the-year government measures increasing excise taxes as well as fuel prices which, reflecting a weaker exchange rate, have slightly surpassed those recorded in June. In our projection, we do not expect second-round effects from the increase in excise taxes. On the one hand, the increases in excise taxes affect only a narrow, and – in terms of living costs – a less relevant part of the consumption basket (alcoholic drinks and tobacco). On the other hand, the increase in excise tax on diesel fuel does not represent an effective increase in the costs of firms, because of the higher compensation to the corporate sector. Inflationary pressures from unprocessed foods may subside as a result of robust crop yields.

While the reform of the natural gas and district heating subsidy system is set to increase the consumer price index for methodological reasons, the higher commodity prices during recent quarters may raise regulated energy prices from the cost side. However, in line with the Government's efforts, the latter effect is only expected to partially feed through to retail energy prices.

Table 1-1
Details of the inflation forecast

		2010	2011	2012
Core inflation		3.0	2.8	3.2
Non-core inflation	Unprocessed food	6.6	5.5	5.3
	Gasoline and market energy	18.1	12.1	5.6
	Regulated prices	6.5	4.1	5.1
	Total	9.1	6.3	5.2
Consumer price index		**4.9**	**3.9**	**3.9**

Chart 1-5
Our forecast for core and non-core inflation
(2008–2013)



In our baseline projection, central bank base rate remains unchanged in the short term, due to uncertainty in the financial markets. Over the medium run, the base rate gradually decreases, owing to the unfavourable economic climate and its disinflationary effects.

Box 1-1
Impact of the measures affecting indirect taxes and the effect of the transformation of the energy price subsidisation system on our forecast of the consumer price index

The announced indirect tax increases and the transformation of the energy price subsidisation system have a substantial impact on the development of our baseline inflation scenario. While overall inflation may remain above the target rate throughout the entire year in 2012, inflation filtered of the effect of indirect taxes and energy subsidies is substantially lower, and may approach the target level by the end of next year. From the perspective of monetary policy, in addition to the total consumer price index, the inflation indicator filtered of the above effects may also bear significance. This is backed by the consideration that the announced tax measures only affect a narrow range of products, pushing inflation up only temporarily, and the higher prices do not directly increase the production costs of any other products. The rise in the price index from the transformation of the subsidisation system does not translate into a higher cost of living.

Among the measures, the planned excise tax hike may exert the strongest inflationary effect. The tax increase may pass fully through to the price of diesel fuel according to our assumption, while two-thirds of it may pass through to the price of alcoholic beverages. In case of tobacco, we do not expect the price competition that emerged this year to continue, and therefore the excise tax hike is expected to be passed on to consumers in its entirety. Among the above mentioned items, the excise tax hike on tobacco – to be implemented in three steps (November 2011, May 2012, November 2012) – affected our inflation forecast to the greatest extent. A significant effect of the excise tax on the consumer price index may already materialise in December of this year, primarily because the Government has substantially tightened regulations on inventorying tobacco products. Products bearing a tax stamp dated before

the tax change can only be held for a period of 30 days. The excise tax increase for diesel fuel does not translate to transportation costs, as the Government will provide compensation for transportation companies, and therefore the increase will not feed through to other product prices.

Besides the excise tax increase, other tax measures, such as the introduction of a tax on unhealthy foods in September and the environmental product fee increase planned for January 2012 only have a minor impact on our inflation forecast.

Moreover, it might be useful to filter out the price increase from the transformation of the energy price subsidisation system from the consumer price index. Natural gas and district heating subsidisation was terminated in September and former beneficiaries have been reclassified in the new, so-called housing maintenance benefit scheme. This triggers an increase in the price index due to the fact that in the new scheme, subsidisation is difficult to link to actual energy consumption. However, as this transformation of subsidisation does not entail any decline in the welfare of those affected by it, the measure's inflationary impact can be regarded as a mere statistical accounting effect.

Table 1-2
Impact of measures affecting indirect taxes and of the transformation of the energy price subsidisation system on the consumer price index
(percentage points)

	Excise tax on alcoholic drinks	Excise tax on tobacco	Excise tax on diesel	Tax on unhealthy foods	Environmental product fee	Subsidy on gas and district heating	Total
2011	0.00	0.02	0.01	0.03	0.00	0.05	0.12
2012	0.17	0.34	0.07	0.08	0.05	0.15	0.85
2013	0.01	0.21	0.00	0.00	0.00	0.00	0.22

1.2 Real economy outlook

Our assessment of Hungarian economic growth deteriorated significantly over the last quarter. The slowdown in global growth and the persistent difficulties of the European banking system point to a gloomier external environment, which may also restrain Hungarian export dynamics. The impact of this development may be partially offset by a number of new, major manufacturing projects, the production of which will gradually commence. However, the combination of a stricter credit environment in both retail and corporate lending, the substantial appreciation of the Swiss franc recently and the protracted balance sheet adjustment in the private sector point to weaker-than-expected economic growth. Economic output will approach its potential level at a slow rate. The output gap is set to remain negative over our entire forecast horizon. Unutilised capacities in the economy will continue to generate sustained disinflationary effects.

Chart 1-6
Fan chart of the GDP forecast
(based on seasonally adjusted, reconciled data)

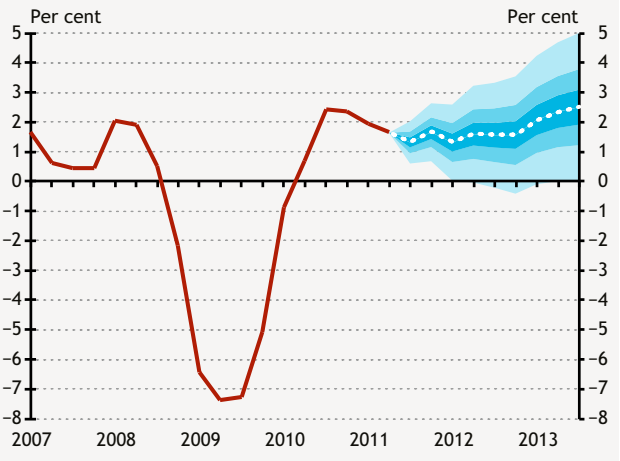
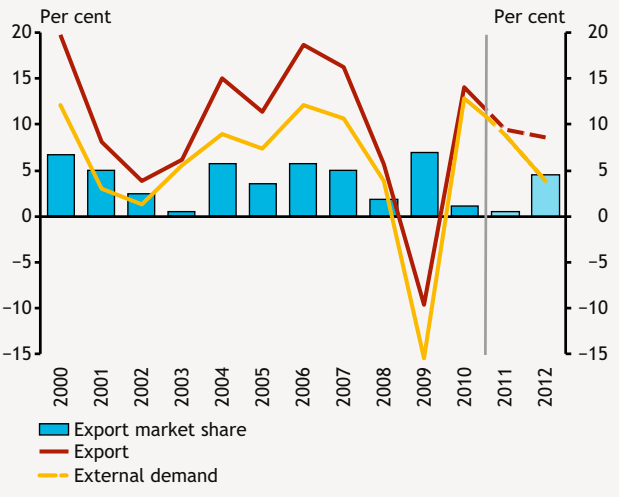


Chart 1-7
Changes in export market share



Compared to our June forecast, our assessment of the growth prospects of the real economy have deteriorated substantially. We expect a growth rate of around 1.5 percent for the current and the next year (Chart 1-6). Growth continues to be driven by net exports, and domestic demand may only effectively contribute to GDP growth in 2013. Growth may fall short of its potential level in the short term, but may return to it in 2013. For this reason, the output gap may further widen over the short run and may close somewhat slower than previously expected, remaining overall negative over the entire forecast horizon.

Global economic growth prospects deteriorated tangibly in the latest period, and accordingly, our view of external demand also became more pessimistic. The challenges facing the European banking system and fiscal austerity measures aimed at ensuring the sustainability of government debt will result in slower growth on Hungary's export markets. Growth in developing economies may offset the poor performance of their developed counterparts to some extent, but signs of overheating also exacerbate the downside growth risks affecting the developing countries. The gradual activation of large-scale investments, primarily linked to the automotive industry, may however stimulate export dynamics on the forecast horizon, and may see Hungary's market share rise (Chart 1-7). Net exports may continue to contribute positively to economic growth.

Household consumption behaviour will likely remain cautious in the years to come. The ripple effect of the financial market turmoil may affect the domestic banking system, while the difficulties facing the European banking system could increase the cost of funding and restrain lending within the Hungarian banking system. Credit supply in both the retail and corporate segments is set to remain

Chart 1-8
Our forecast for corporate lending

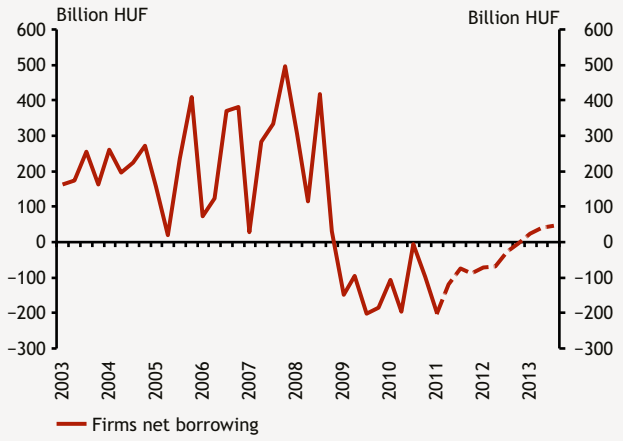


Chart 1-9
Our forecast for household lending

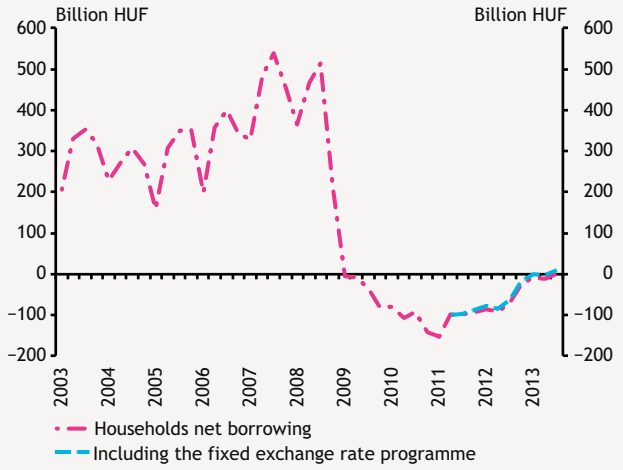
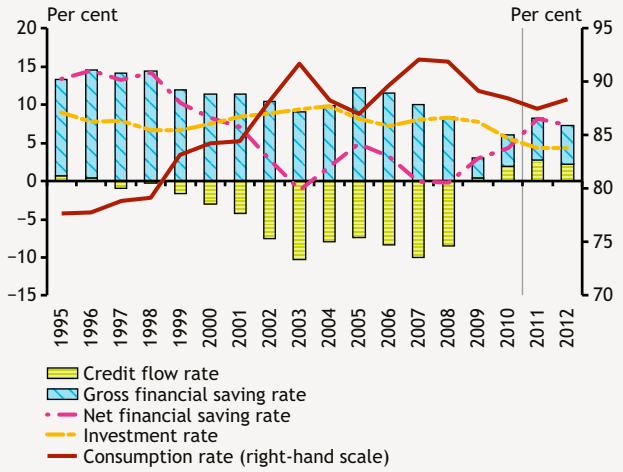


Chart 1-10
The use of household income*
(as percentage of disposable income)



** Net financial savings of households exclude mandatory contributions payable to the private pension funds.*

subdued on our forecast horizon, which may contribute to repayments exceeding new borrowing among households and firms (Charts 1-8 and 1-9). The recent appreciation of the Swiss franc may decrease household income, despite the Swiss central bank's exchange rate policy, and will further dampen household consumption. Deteriorating growth prospects and government measures aimed at increasing activity and creating more flexible labour market conditions may both contribute to increased uncertainty regarding income prospects. These impacts may substantially dampen even the positive effect of the disbursements to members of the real returns on private pension fund contributions in the second half of the year.

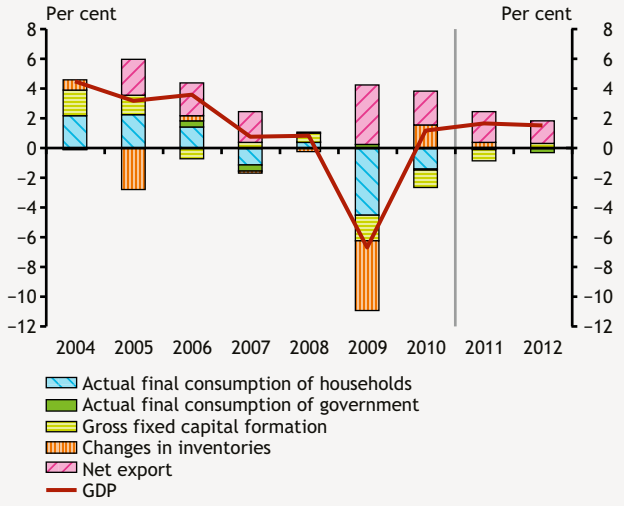
The principle of prudence, which has been amplified during the crisis, is reflected in the sustained increase in financial savings. The consumption rate, which is still on the decline, may stabilise by next year (Chart 1-10). The investment rate may stabilise at a level lower than before the crisis, indicating that households are primarily adapting to more markedly deteriorating income prospects by postponing investments.

Our assessment of private sector investment developments is also more pessimistic than in our June forecast. The slowdown in production during the crisis resulted in substantial surplus capacity, while utilisation of capacities is only inching slowly towards pre-crisis levels, in particular in the service sector. By contrast, the deteriorating growth prospects in manufacturing may lead to the postponement of corporate investments. According to the findings of bank surveys, credit conditions have tightened further in recent months, and thus over the short term the banking system is also not supporting any pick-up in investment. Weak investment activity may be partially offset by large-scale, one-off investment projects in the manufacturing industry.

Retail investment may reach its trough at the end of this year, but we do not foresee any growth even after it has bottomed out. The stagnation of construction permits at historically low levels and the continuation of subdued home price developments point to weak housing market activity. Households protracted balance sheet adjustments and tight credit conditions also contributed to this development. The housing market's low investment activity may become more permanent in the coming quarters.

As regards government expenditures, we continue to rely on pre-announced measures. Government expenditure cuts are expected for this year in the form of redundancies and wage freezes, and further cuts in operating costs are expected to take place in 2012. We continue to foresee

Chart 1-11
Changes in GDP growth



subdued government investment activity over our forecast horizon.

The deterioration of growth prospects results from a much more pessimistic view of the economy's long-term developments (determining potential growth). Based on the data received, we envisage a halt in the dynamics of potential output in the coming years, and the growth of the economy will be slow to reach a rate that is sustainable over the medium term. Potential growth is impeded on the supply side by the continued sluggish investment activity – stemming in part from tight credit conditions – which has persisted for years, while in the context of weak economic activity measures aimed at stimulating activity and labour supply will only be able to achieve a sizable increase in employment over the long term. The protracted balance sheet adjustment of households and firms points to sustained low domestic demand, which may erode the capacity of the Hungarian services sector over the long term.

1.3 Labour market forecast

Over our forecast horizon, the labour market environment is determined by the combination of a subdued pick-up in labour demand stemming from deteriorating growth prospects on the one hand, and measures adopted by the Government to stimulate labour supply on the other hand. The Government measures can only exert a positive effect on employment over the longer run. The rate of unemployment is set to remain elevated for a longer period of time. Loose labour market conditions point to weak wage growth over the entire forecast horizon, and thus the increase in real wages is likely to fall behind the acceleration of productivity.

Deteriorating economic growth prospects have had a ripple effect on employment prospects as well. Since the beginning of the year, only some more flexible forms of employment (agency work) have been able to improve private sector employment. Firms primarily fulfilled their new orders by utilising their existing workforce more intensely. Although the first half of the year saw stronger-than-expected wage dynamics, the loose labour market environment and severely deteriorating growth prospects may contribute to a substantial slowdown in private sector wage dynamics in the second half of the year. No increase in employment is expected for the remainder of the year.

Measures aimed at stimulating labour supply may succeed in increasing the labour supply substantially, but this effect may materialise later than we expected in our June forecast. The substantial deterioration in our assessment of economic growth compared to June may translate into more subdued labour growth. Consequently, the private sector may only offer realistic short-term chances of employment for highly qualified new jobseekers, while their less qualified peers may remain unemployed for a longer period. For the latter, the state public employment programmes may offer an opportunity for employment. The rate of unemployment is set to remain elevated over a protracted period, while the activity rate is set to increase continuously (Chart 1-12). Employment may gradually increase in parallel with a pick-up in economic growth.

The strong wage dynamics which have been observed cannot be maintained amid the loose labour market environment, and therefore, we expect a slowdown in wage dynamics in the second half of the year. The growth prospects of the manufacturing industry have deteriorated sharply in recent months, and consequently the sector's wage dynamics may decelerate even over the short run.

Chart 1-12
Employment and unemployment, total economy
(2002–2013)

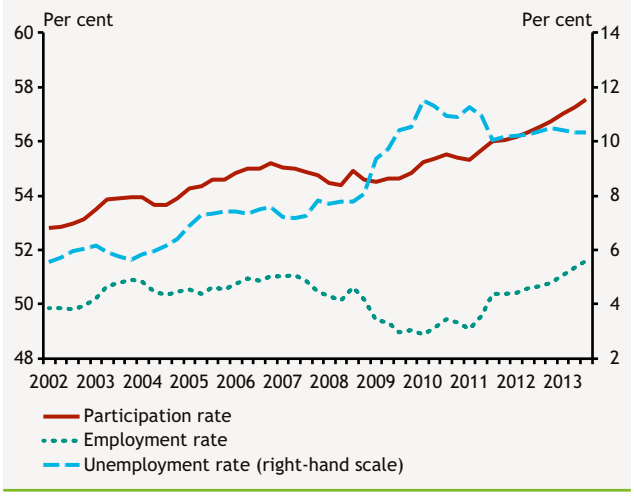
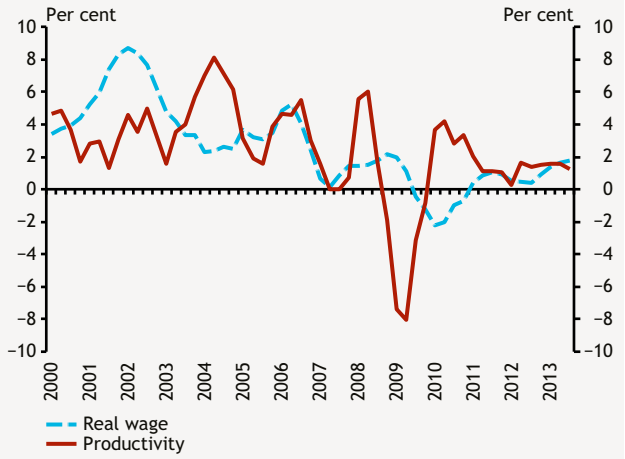


Chart 1-13
Changes of gross real wage and productivity in the private sector
(2000–2012)



Due to persistently weak domestic demand, we also expect subdued wage dynamics in market services. Based on our current information, taxes on labour will gradually decrease further, and consequently, the growth rate of real wages is not expected to surpass the increase in productivity. The wage share may remain historically low. The loose labour market environment allows the corporate sector to mitigate the falling profits due to the crisis and the cost pressure stemming from higher commodity prices by cutting wage costs (Chart 1-13). Wage dynamics may also be restrained by the postponement stemming from the compulsory wage increases among the lower income workers imposed by the Government for early 2012. Wage dynamics may pick up by next year, however, if the tax change is implemented in its current form. Overall, nominal wage growth may also assume a lower trajectory in a lower inflation environment.

Table 1-3
Changes in our forecasts compared to June 2011

	2010	2011		2012	
	Fact	Projection			
		June	Current	June	Current
Inflation (annual average)					
Core inflation[1]	**3.0**	2.8	**2.8**	2.8	**3.2**
Consumer price index	**4.9**	3.9	**3.9**	3.6	**3.9**
Economic growth					
External demand (GDP-based)[2]	**2.6**	2.5	**2.7**	2.4	**1.3**
Household consumer expenditure	**–2.1**	1.4	**0.4**	1.7	**0.6**
Government final consumption expenditure	**–1.7**	–0.1	**–1.4**	–3.0	**–1.6**
Fixed capital formation	**–5.6**	–0.1	**–3.8**	3.7	**1.6**
Domestic absorption	**–1.1**	1.7	**–0.5**	1.1	**0.0**
Export	**14.1**	12.3	**9.4**	9.9	**8.5**
Import	**12.0**	12.1	**7.6**	8.8	**7.7**
GDP	**1.2**	2.6	**1.6**	2.7	**1.5**
External balance					
Current account balance	**2.1**	1.9	**3.0**	3.2	**4.2**
External financing capacity	**3.9**	4.3	**5.4**	5.8	**6.8**
Government balance[3]					
ESA balance	**–4.3**	2.4	**1.9**	–3.2	**–3.7**
Labour market					
Whole-economy gross average earnings[4]	**1.4**	2.5	**2.1**	1.6	**2.3**
Whole-economy employment[5]	**0.0**	0.6	**1.2**	1.9	**1.3**
Private sector gross average earnings[6]	**3.3**	4.7	**4.8**	4.3	**4.5**
Private sector employment[5]	**–1.0**	0.7	**0.9**	1.1	**0.6**
Private sector unit labour cost[5,7]	**–2.6**	2.6	**3.4**	1.7	**3.2**
Household real income[8]	**–1.2**	2.1	**1.5**	1.1	**–0.4**

[1] From May 2009 on, calculated according to the joint methodology of the CSO and MNB.
[2] In line with the changes in Hungarian export structure by destination countries we revised the weights in our external demand indicator.
[3] As a percentage of GDP
[4] Calculated on a cash-flow basis.
[5] According to the CSO LFS data.
[6] According to the original CSO data for full-time employees.
[7] Private sector unit labour costs calculated with a wage indicator excluding the effect of whitening and the changed seasonality of bonuses.
[8] 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.

Table 1-4
MNB basic forecast compared to other forecasts

	2011	2012	2013
Consumer Price Index (annual average growth rate, %)			
MNB (September 2011)	3.9	3.9	–
Consensus Economics (August 2011)[1]	3.8 – 4.0 – 4.3	2.6 – 3.5 – 4.4	–
European Commission (May 2011)	4.0	3.5	–
IMF (September 2011)	3.7	3.0	3.0
OECD (May 2011)	4.0	3.3	–
Reuters survey (September 2011)[1]	3.6 – 3.9 – 4.0	2.7 – 3.2 – 4.1	2.5 – 3.1 – 3.8
GDP (annual growth rate, %)			
MNB (September 2011)	1.6	1.5	–
Consensus Economics (August 2011)[1]	2.0 – 2.5 – 3.0	2.0 – 2.8 – 3.4	–
European Commission (May 2011)	2.7	2.6	–
IMF (September 2011)	1.8	1.7	2.9
OECD (May 2011)	2.7	3.1	–
Reuters survey (September 2011)[1]	1.2 – 1.7 – 2.3	–1.0 – 1.7 – 3.9	–
Current account balance (percent of GDP)			
MNB (September 2011)	3.0	4.2	–
European Commission (November 2010)	1.6	1.9	–
IMF (September 2011)	2.0	1.5	1.3
OECD (May 2011)	2.7	1.8	–
Budget Balance (ESA-95 method, percent of GDP)			
MNB (September 2011)[4]	1.9	–3.7	–
Consensus Economics (August 2011)[1]	(–2.5)–(–4.4)–(–7.0)*	(–2.4)–(–3.0)–(–3.7)	–
European Commission (November 2010)	1.6	–3.3	–
IMF (September 2011)	2.0	–3.6	–3.2
OECD (May 2011)	2.6	–3.3	–
Reuters survey (September 2011)[1]	(–4.5) – 0.2 – 2.7	(–2.5)–(–3.1)–(–4.0)	–
Forecasts on the size of Hungary's export markets (annual growth rate, %)			
MNB (September 2011)	8.1	3.6	–
European Commission (May 2011)[2]	6.2	6.4	–
IMF (September 2011)	7.7	4.5	4.9
OECD (May 2011)[2]	7.0	6.4	–
Forecasts on the GDP growth rate of Hungary's trade partners (annual growth rate, %)			
MNB (September 2011)	2.7	1.3	–
Consensus Economics (September 2011)[1]	2.4	2.0	–
European Commission (May 2011)[2]	2.4	2.5	–
IMF (September 2011)[2]	2.2	1.8	2.2
OECD (May 2010)[2]	2.9	2.7	–
Forecasts on the GDP growth rate of euro area (annual growth rate, %)			
MNB (September 2011)[3]	2.4	0.8	–
Consensus Economics (September 2011)[1]	1.7	1.0	–
European Commission (May 2011)	1.6	1.8	–
IMF (September 2011)	1.6	1.1	–
OECD (May 2011)	1.2	2.0	–

[1] 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.
[2] 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.
[3] Aggregate based on Euro area members included in our external demand indices.
[4] As a percentage of GDP.
** Without incomes from private pension funds.*
Sources: Eastern Europe Consensus Forecasts (Consensus Economics Inc. [London], August 2011); European Commission Economic Forecasts (May 2011); IMF World Economic Outlook Database (September 2011); Reuters survey (September 2011); OECD Economic Outlook No. 89 (May 2011).

Box 1-2

Impact of the heretofore announced 2012 fiscal measures on our macroeconomic baseline scenario

Following the cut-off date for the September *Quarterly Report on Inflation* (13 September), numerous new government measures – with substantial impact on our macroeconomic baseline scenario – were announced for the 2012 budgetary planning period. While we could not incorporate these measures into the baseline scenario and text of the *Quarterly Report on Inflation,* based on partial analyses we had presented the first estimates of the expected macroeconomic effects to the Monetary Council before the interest rate decision was passed. The analysis below is intended to quantify these effects. With regard to the analysed measures, we would like to emphasise that only the measures announced in the press and presented in sufficient detail were taken into account. Accordingly, for the time being, we have refrained from quantifying the impact of numerous measures which were included in the Government's plans but lacked sufficient detail.

Measures of the draft budget bill for 2012 with the most significant macroeconomic impact

According to Government estimates, the budget plans submitted will reduce the fiscal deficit by HUF 750 billion relative to this year. The Government has presented numerous measures for which the exact parameters allow the macroeconomic measures to be quantified. The main measures, sufficiently detailed and thus taken into account, were the following.

Table 1-5
Government measures taken into account in our calculations

Revenue side	Expenditure side
VAT rate change from 25% to 27%	Reduction of net expenditures of budgetary institutions
introduction of the 16% rate personal income tax system and abolishment of tax credit	
1% increase in employee contribution	
in case of sole proprietors and small corporations payment of the employers contribution to at least 1,5 times of the minimum wage	
narrowing the possibility for carry-forward losses	

Expected impact on the consumer price index

As a direct result of the VAT increase, the consumer price index will increase by 0.8 percent in 2012. When quantifying the direct impact, we assumed that the increase would be passed on to a similar extent as was the case with the VAT increase in 2009.[1] Our assumption on the proportion of the affected goods and the extent of the pass-through are presented in the following table.

Table 1-6
Impact of the announced VAT increase on our forecast

	Weight in CPI	Weight of items under 25% VAT rate	Technical effect on the group's price index	Expected pass-through	Expected effect on the group's price index
Core inflation	68.7	54.4	1.3	50%	0.6
Non-core items	31.3	27.2	1.4	85%	1.2
CPI	100.0	81.6	1.3	62%	0.8

Contrary to the previously announced excise tax increase, the VAT increase affects a wide range of goods (82% of the consumption basket used for calculating inflation); therefore second-round effects can also be expected. Nominal wages may be 0.2 percent higher in 2012 resulting solely from the VAT increase. The resultant wage cost increase may further increase the assumed nominal wage compensation among low wage groups. Overall, this may lead to higher production costs and deteriorate firms' profit position. We

[1] For more information, see the estimates in the November 2009 issue of the *Quarterly Report on Inflation.*

expect the corporate sector, already in a tight profit position, to react to rising production costs by increasing product prices (in excess of the impact of direct tax measures), therefore inflation adjusted for taxes may also increase somewhat compared to our baseline scenario, particularly from the second half of 2012.

Expected labour market impact

Abolishing the "super gross personal income tax" concept will increase net wages in all wage categories, the effect of which will be mitigated by the one-percentage-point increase in employee contribution. The abolishment of the tax credit, however, may have an adverse effect on the wage categories under HUF 210,000, i.e. the current average wage. Based on our calculations, the tax and contribution changes affecting employees represent a tightening of HUF 50 billion, in other words, assuming gross wage remain unchanged, the population's net income will be HUF 50 billion lower. The chart below indicates the changes in net nominal wages.

Chart 1-14
Changes in net nominal wages in 2011-2012 stemming from the changes affecting the personal income tax regime and employee contributions

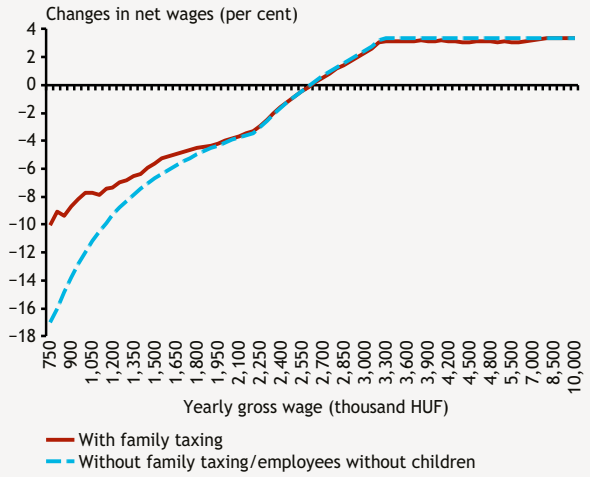
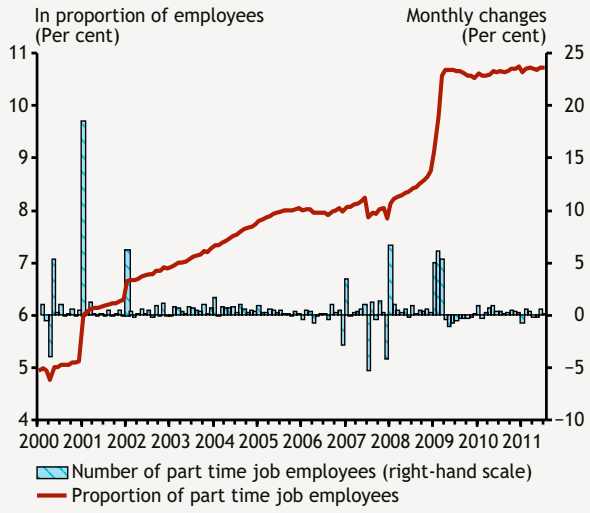


Chart 1-15
Part time employment in Hungary



As regards lower wage groups, we have added another assumption to our forecast. Based on the Government's announcements thus far, we assume that the reform of the personal income tax regime cannot lead to any decrease in the net wages of the lowest wage groups. Accordingly, in our estimate we assumed that, within this segment of the labour market, the Government may trigger mechanisms that may offset the losses resulting from the reform of the personal income tax regime by raising nominal wages. (This could be achieved by raising the minimum wage and/or by boosting wages through administrative rules.) Overall, this effect may substantially increase the wage index of the private sector. However, if the wage increases are not accompanied by improvements in productivity, they may curb the demand for unskilled labour. Such a consequence may be detrimental to the very segment of the labour market in which we expected an increase in work supply based on the measures of the Convergence Programme and the Széll Kálmán plan. Deteriorating economic prospects and the expected rise in employment costs would lead to a substantial decline in the employment opportunities of these jobseekers. Thus overall, we could not expect any improvement in private sector employment over the short term.

Summary assessment – generally expected macroeconomic effects

The measures taken into account would increase budgetary revenues and curb expenditures. The measures would lead to higher inflation and a higher wage path in 2012, while slowing down economic growth. The growth effects would partly derive from the direct demand effect of the Government measures, and partly from their impact on production costs, provided that our assumptions on wage compensation prove to be correct. The most important macroeconomic effects are summarised below:

- The announced changes to the personal income tax regime and the wage compensation included in our assumptions – i.e. those primarily affecting lower wage brackets – could result, overall,

in higher nominal wages for households compared to our baseline scenario; however, the real value of increased wages would be significantly eroded by the higher inflation. Gloomier employment prospects reflecting the increased labour costs could also dampen incomes. Real wages may decrease by 0.4-0.5 percentage points compared to our baseline scenario, pointing to a weaker consumption path than indicated in our baseline scenario.

- The expected investment path has been deteriorated by two factors: on the one hand, previous experience suggests that, based on the announced expenditure side measures Government investment will be lower than we had assumed in our baseline scenario; and on the other hand, the short-term deterioration in the income position of firms in the context of stricter rules on the writing off of accrued losses may restrain the investment dynamics of the corporate sector.

- The shift in our inflation forecast is dominated by the announced measures affecting VAT. As a result of these measures – provided that our assumptions materialise – inflation may rise by 0.8 percentage points from the beginning of the year compared to the baseline scenario in the September issue of the *Quarterly Report on Inflation*. Weaker consumption may exacerbate demand-side disinflation; however, in the lack of improvements in productivity wage increases may have a detrimental inflationary effect. The measure may increase firm's costs of production, which may translate into an increase in sales prices. Given that the VAT increase – unlike the previously announced excise tax measures – will affect a large portion of the consumption basket, a pass-through effect can also be expected in the labour market.

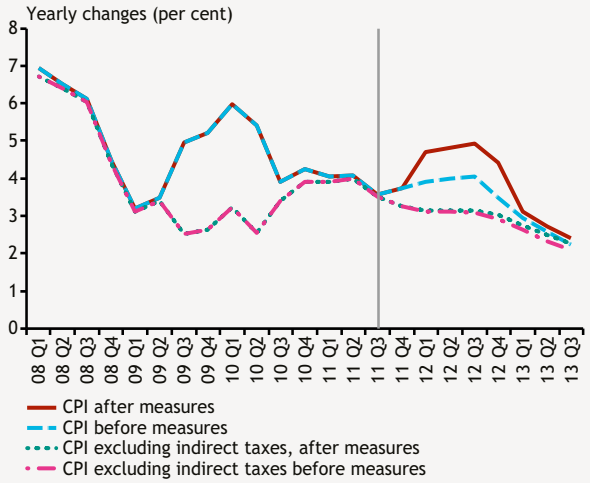
- The considerably accelerating inflationary environment may also increase the level of nominal wage contracts both in 2012 and 2013. Due to the prevailing slack labour market conditions, the impact of this may be weaker than in the case of the VAT increases introduced in previous years. Annual inflation may decline sharply in early 2013 with the fading out of the one-off effects of the VAT measures; however, due to the pass-through effects mentioned above, inflation may reach its 3 percent target value somewhat later than indicated in our previous baseline scenario, but in early 2013 nevertheless.

Overall, the quantification of the total impact of the measures in our estimates may lead to the following macroeconomic scenario.

Table 1-7
Changes in our forecast of the main macroeconomic variables
(Per cent)

	2011		2012	
	Inflation riport baseline	**Scenario with new budgetary measures**	**Inflation riport baseline**	**Scenario with new budgetary measures**
CPI	**3.9**	**3.9**	**3.9**	**4.7**
Core inflation	2.7	2.7	3.3	4.0
GDP	**1.6**	**1.6**	**1.5**	**1.0**
Household consumption expenditure	0.4	0.4	0.6	–0.1
Gross fixed capital formation	–3.8	–3.8	1.6	0.8
Export	9.4	9.4	8.5	8.5
Import	7.6	7.6	7.7	7.1
Nominal wages private sector	4.8	4.9	4.5	6.2
Private sector employment	0.9	0.9	0.6	0.1

Chart 1-16
Developments in our baseline inflation scenario



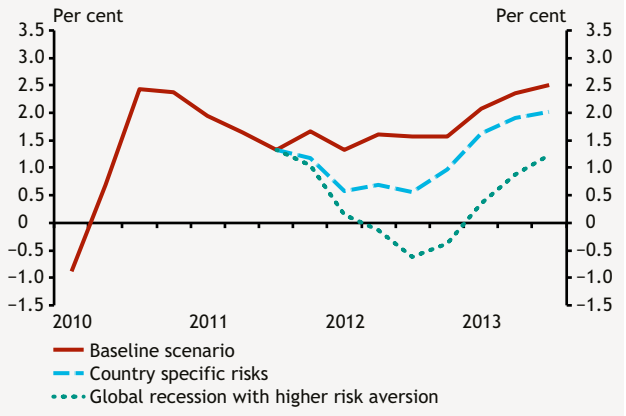
Risks to our forecast

The calculations presented in our analysis are surrounded by numerous risks. Besides the usual forecasting risks, some risks arise from the lack of detail about the announced measures. For the time being, we could not incorporate a great number of the measures into our forecast due to the lack of detail. This includes, for instance, the adoption of the gambling tax and the accident tax, or the raising of the company vehicle tax on the revenue side, or numerous cost-cutting measures on the expenditure side. Raising the basis of the contribution payment obligation to a level 1.5 times higher than the minimum wage also implies a source of risk. Following the introduction of similar measures in 2006, substantial whitening could be observed among the wages in numerous sectors. A similar phenomenon can be expected in the context of the current measures, which may raise the reported nominal wage increase well above the path we had anticipated.

2 Effects of alternative scenarios on our forecast

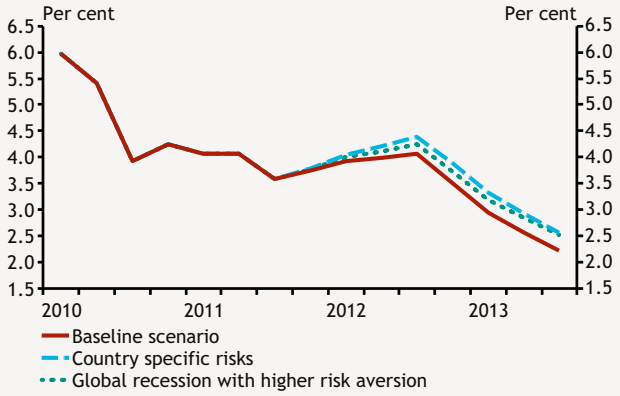
In the followings two alternative scenarios – considered as the most relevant by the Monetary Council - are presented to illustrate the risks corresponding to the baseline scenario. Both scenarios assume a significant deterioration in the risk perception of Hungary. The reason for the increase in the risk premium may be either global or country specific. In the first scenario the greater extent of the slowdown in global economic activity increases the risk premium of Hungary through declining global risk appetite. In the second scenario the uncertainty around the sustainability fiscal and private debt may reduces the demand for Hungarian financial assets, and simultaneously the increase in the cost of financing diminishes the supply of credit. In the case of both scenarios, a significant decrease of GDP growth can be expected, however despite the more sluggish demand-side inflationary pressure, the deterioration of the risk perception of the country necessitates stricter monetary conditions than the ones described in the baseline scenario.

Chart 2-1
GDP growth under the baseline and alternative scenarios



Global growth prospects have deteriorated considerably over the past period. Macroeconomic indicators considered essential for economic growth are at worse-than-expected levels, reigniting fears of recession in countries with the greatest significance for the global economy. Our baseline scenario presumes that, in terms of its extent, the slowdown in external demand will match that seen during the recession of 2001–2002. In this risk scenario, we project a more severe setback in the global economy, causing the developed countries to slip into recession during 2012 and only experience modest rates of growth in the following year. Via the decline of external demand, Hungary's lacklustre export markets also have a negative impact on the country's economic growth. The global downturn results in weaker external inflationary pressure, primarily due to lower oil prices. Additionally, inflation in Hungary is mitigated by slower economic growth. However, the changes in real economic prospects have a significant influence on trends in global risk appetite as well. A gloomier economic outlook could exacerbate risk aversion and thus lead to a rise in the risk premium on Hungarian assets, which in turn could result in a depreciation of the forint and generate stronger inflationary pressure, as import products become more expensive. The external economic slowdown itself would justify a lower interest rate trajectory, whereas the inflationary effects of a weaker exchange rate would require just the opposite. The latter effect would dominate in the event of a more acute rise in the risk premium, which features in our assumptions, thereby resulting in an inflation rate higher than that specified for the baseline scenario. Accordingly, the interest rate trajectory, too,

Chart 2-2
Inflation under the baseline and alternative scenarios



could end up at levels higher than what was assumed in the baseline scenario.

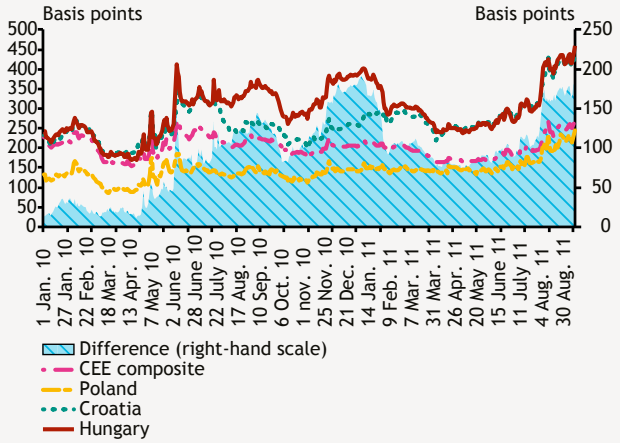
Despite measures taken in the interests of fiscal sustainability, Hungary continues to struggle with high external and sovereign debt and, due to the FX-denominated loan portfolio, it remains sensitive to the exchange rate. As a result, if domestic developments prove worse than expected, Hungary's risk perception could suffer more negative blows. Along with the deteriorating growth path, risks related to the sustainability of the fiscal debt path and the vulnerability of the banking system could again increase again. Both of these impacts could cause the risk premium on domestic assets to rise. A higher country risk also means a higher cost of funding for domestic banks, which restrains credit supply. Tighter lending conditions lead to lower rates of consumption and investment, thereby causing a slowdown in economic activity. In and of itself, the resulting lower inflationary pressure would call for looser monetary conditions. Due to the depreciation of the forint, however, a rising risk premium fuels inflation, and therefore, this scenario could also result in an interest rate path higher than that assumed in the baseline scenario.

3 Financial markets and interest rates

The risk perception of Hungary has increased notably in the last three months, driven primarily by heightened global risk aversion. The perception of the region's other countries also deteriorated overall, but, as a result of certain country-specific factors and the strong sensitivity of Hungarian assets to global shocks, our position relative to the region's benchmark countries deteriorated. International money market tensions fed through most intensely to the Hungarian FX-swap market, and premia remain high for longer maturities. The EUR/HUF exchange rate remained relatively stable throughout the turmoil; the critical CHF/HUF appreciation prior to the announcement of the Swiss central bank's exchange rate target was driven by the role of the Swiss franc as a safe haven currency. Non-residents increased their holdings of Hungarian government securities while decreasing their equity exposure. Hungarian government security yields remain close to their end-of-June level, but the picture looks more complex when one take into account the increase in spreads compared to the German benchmark securities.

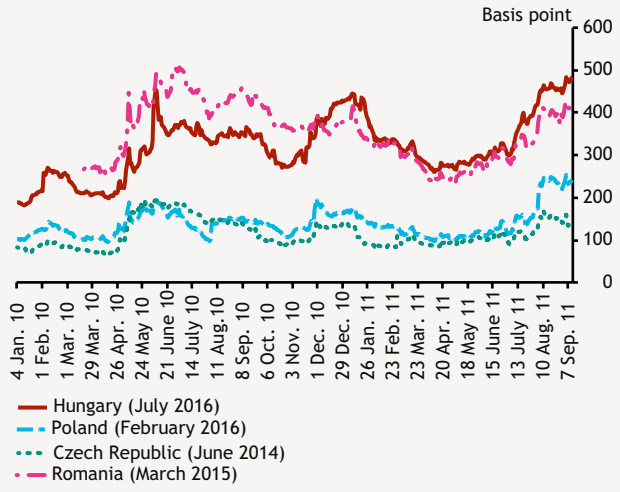
3.1 Risk perception of Hungary

Chart 3-1
Development of the Hungarian, Polish, Croatian 5-year CDS and the CEE composite



Source: Thomson Datastream.

Chart 3-2
Spreads of 5-year Eastern European foreign currency bond yields over benchmarks



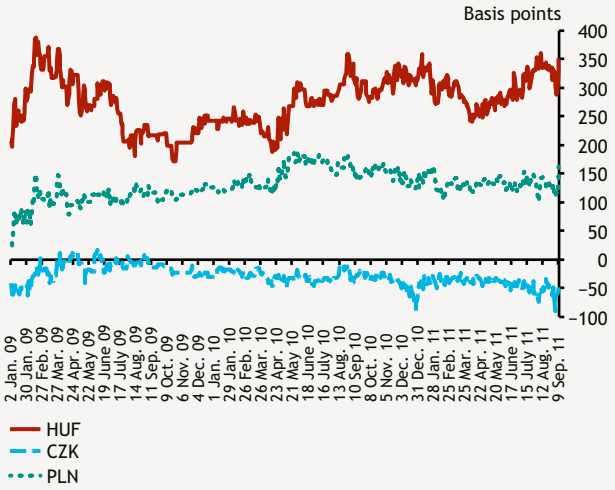
Source: Thomson Reuters.

The risk perception of Hungary has deteriorated notably over the past three months. This deterioration stems primarily from the stronger global risk aversion which affected the entire region in the same manner. In addition, a number of country-specific factors and the high sensitivity of Hungarian assets to global shocks contributed to weakening Hungary's relative regional position. (Chart 3-1). Forint assets reacted to the stronger risk aversion resulting from the escalating international financial turmoil in the first half of August similarly to the region's other money market assets.

The CHF-linked household loan portfolio, which is high in proportion to GDP, is the main country-specific factor. The extreme appreciation of the safe haven currency over the past period entails a risk of even more severe balance sheet adjustment by households, further restraining any upturn in domestic demand. The announcement of the CHF/EUR target exchange rate may considerably mitigate the ensuing indirect risks, although this effect has not yet materialised in market prices. Another factor is the low growth trajectory forecast for Hungary in the context of a deteriorating external environment, which calls for the stricter implementation of both newly and already announced adjustment measures in order to secure the deficit targets defined for the budget. This factor has only been reflected in market prices to a minimal degree and the fact that the Government is apparently committed to adhering to the target figures is certainly a positive aspect.

Developments in risk indicators for Hungary reflect the above mentioned negative developments, as a result of which the indicators were at substantially higher levels in early September than they were during the last week of June. Hungary's 5-year CDS spread rose to around 460 basis points following the spike in early August, corresponding to a 180 basis point deterioration. Hungary's 5-year FX bond premium stands at 480 basis points, corresponding to an increase of 170 basis points (Chart 3-2). The premium on the 5-year forward HUF rate 5 years ahead over the EUR rate is also on the rise, but the adjustment towards the end of the

Chart 3-3
Five-year implied spreads over euro rates in 5 year's time



Source: Thomson Reuters.

period mitigated the deterioration (Chart 3-3). Other CEE (Central and Eastern Europe) indicators have seen similar increases; co-variance with the Croatian indicators is remarkable, primarily due to the country's high FX-denominated retail debt ratio, as is the case in Hungary. The increase in Hungarian spreads compared to benchmark country averages suggest a deterioration of Hungary's relative position in the region.

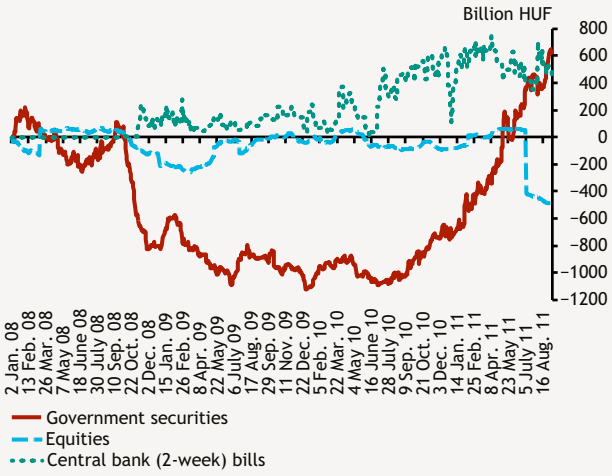
3.2 Non-resident demand for HUF assets

Non-residents' holdings of HUF assets have been determined by two main developments. On the one hand, their portfolio increased over the past quarter, which may indicate that – despite Hungary's deteriorating risk perception, which is mainly the result of global factors – it remains an attractive investment target based on return per unit of risk. On the other hand, changes in the structure of non-resident portfolio investments reflect that purchases of HUF assets have also been characterised by an overweighting of less risky assets, as a general trend. In other words, besides their government security purchasing activity non-residents were most active on the seller side on the equities market.

As a consequence, non-resident government security holdings increased at the dynamic rate observed over the last six months. Nearly two-thirds of the government security purchases amounting to HUF 440 billion affected Treasury Bonds, while the remaining one-third affected discount Treasury Bills. Half of the purchases took place in the secondary market, the other half were sold at auctions. In parallel with this, a slight downsizing of the equity portfolio was seen. Over and above the settlement of Surgut's MOL stake, non-residents sold equities worth HUF 70 billion (Chart 3-4). The MNB bond portfolio of non-residents stands at around HUF 500 billion, as was the case at the end of June. Some of the minor fluctuations during the period were linked to liquidity management transactions between parent banks and subsidiary banks.

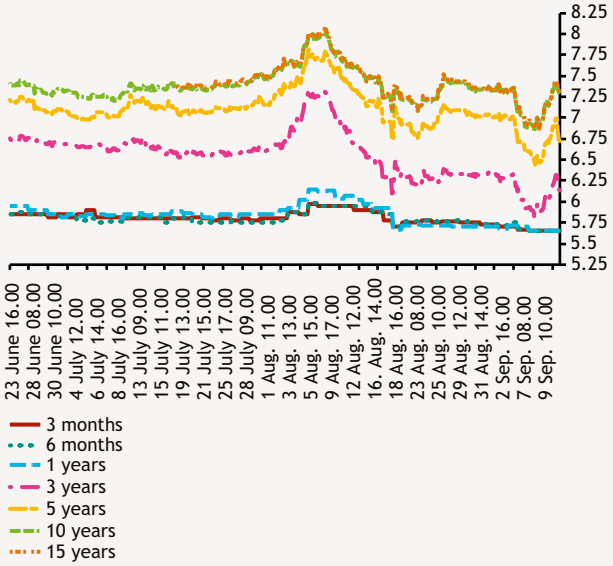
During the previous quarter, auctions were characterised by sound demand, with the bid-to-cover ratio at around 2.66 and 4-fold over-subscription at times. The duality characterising demand was also reflected in the exchange rate developments affecting forint instruments. While the Budapest Stock Exchange (BUX) Index fell somewhat short of regional indices, dropping by almost 25 percent, Hungarian government securities were more resilient to the risk aversion prevalent among investors in the previous period. Owing to the adjustment following the yield increase resulting from the turmoil in early August, yields

Chart 3-4
Forint financial assets held by non-residents



Source: MNB.

Chart 3-5
Yields of benchmark government securities

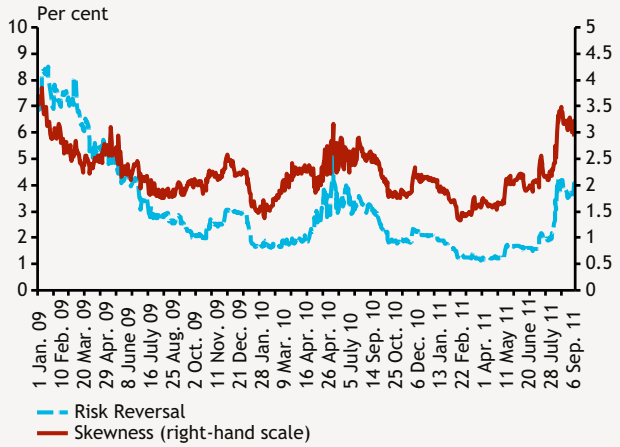


Source: Thomson Reuters.

now stand at or slightly below the levels observed at the beginning of the period (Chart 3-5). However, this picture is more complex in light of the fact that German yields fell by 100–125 basis points in the meantime, and therefore the yield spread relative to Bunds increased. The increase in premium corresponds to the widening of the Hungarian-German CDS spread.

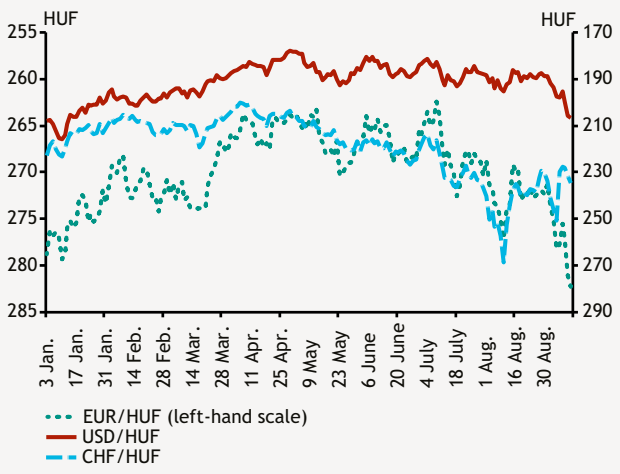
3.3 Developments in the foreign exchange markets

Chart 3-6
Risk reversal and skewness of exchange rate expectations



Source: Bloomberg.

Chart 3-7
HUF vis-à-vis developed market exchange rate



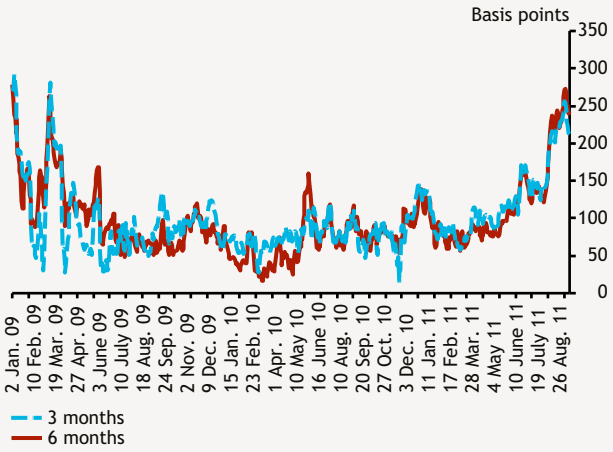
Source: Thomson Reuters.

The deteriorating international investor sentiment was only mildly reflected in the developments of the forint's exchange rate vis-à-vis the currencies of developed countries, with the exception of the CHF/HUF cross rate. Although exchange rate expectation indicators shifted markedly towards weakening (the risk reversal value adjusted for volatility approached levels last seen in the autumn of 2008), the spot FX market experienced only a minor depreciation early in the period. In the second week of September, the weakening was stronger (Chart 3-6). Global tensions affected the swap market far more severely, in particular for longer maturities.

The forint exchange rate proved relatively resilient vis-à-vis the euro, the US dollar and the British pound, but the depreciation of 3-5 percent was followed another weakening of 3-6 percent in early autumn. In a regional comparison, the performance of the Hungarian currency is rated in the middle of the field, while the zloty showed the most spectacular deviation among the benchmark countries. Developments in the CHF/HUF exchange rate were essentially driven by the EUR/CHF depreciation, in which the role of the Swiss franc as a safe haven currency was almost the only factor. Before the announcement of the target rate and the Swiss central bank's measures aimed at containing the exchange rate, the CHF/HUF exchange rate rose sharply to 270, corresponding to a nearly 22-percent depreciation of the forint. The exchange rate then returned to around 230 following the announcement of the exchange rate ceiling (Chart 3-7).

International money market tensions perceivably fed through to the Hungarian FX-swap market, where premia increased across all maturities. During the most turbulent weeks, spreads on USD/HUF swaps widened to around 150 basis points for shorter maturities, and to 200-250 basis points for maturities of 3-6 months or over one year (Chart 3-8). High swap spreads vis-à-vis the US dollar partly reflected the EUR/USD swap market tensions, with basis swaps widening to 80-100 basis points, which resulted in a EUR/HUF spread of 120-180 points. A material adjustment occurred at the end of the period among overnight

Chart 3-8
Difference between interbank yields and implied yields based on FX-swap markets



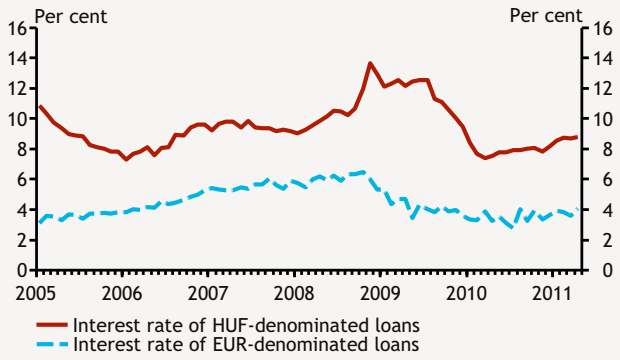
Source: MNB, Thomson Reuters.

transactions, where the implied forint yields approached the bottom of the interest margin. By contrast, higher premia of around 200-250 basis points still prevail for quotes on longer maturities, which represents a risk to longer-term FX funding.

3.4 Credit conditions in the financial intermediary system

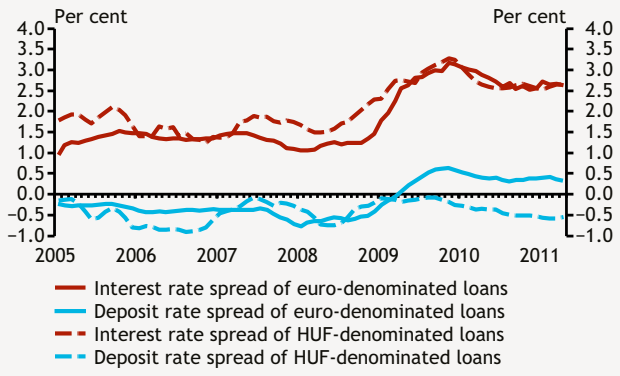
In the corporate segment, interest rate premia have stagnated at around 2.5 percent since 2010 H2, while contrary to expectations, non-price credit conditions did not tighten any further in 2011 Q2. At the same time, the banking sector is still focusing on more creditworthy corporate clients, with strong price competition for such clients. As a result, interest rate premia primarily reflect the credit conditions granted to this clientele. In the household segment, interest rates on housing loans remained largely unchanged on average in 2011 Q2. Interest rates on home equity loans rose even higher, while those on unsecured consumer loans, after a temporary steep decline, remained at a high level,. Overall, non-price credit conditions did not change in the household segment. Developments in forward-looking real interest rates were shaped by declining inflationary expectations.

Chart 3-9
Interest rate on corporate loans by denomination



Source: MNB.

Chart 3-10
Interest rate spread on corporate loans by denomination



Note: The spread on the moving average of the 3-month BUBOR and EURIBOR, respectively.
Source: MNB.

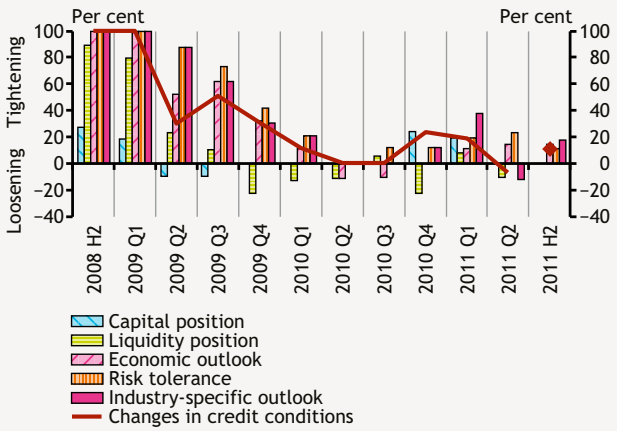
3.4.1 CREDIT CONDITIONS OF CORPORATE LOANS

Nominal HUF interest rates remained largely unchanged, while euro interest rates on corporate loans rose slightly, by 30 basis points on average in Q2. Corporate credit spreads over interbank rates remained unchanged at 2.4 and 2.7 percentage points for both HUF- and EUR-denominated loans (Chart 3-9). At the same time, the banking sector is focusing on more creditworthy corporate clients, with strong price competition for such clients and accordingly, interest premia primarily reflect the credit conditions granted to this clientele.

On the whole, the resulting interest rate premia can be considered low. Loan losses rose sharply at the onset of the crisis, which in and of itself would warrant interest rate premia in the range of 230-250 basis points. Moreover, external funding, essential for the banking sector, has become much more expensive, even if parent bank funding does not entirely follow the CDS premia. Furthermore, banks must still pay a premium on domestic foreign currency denominated funds as well, over the interbank interest rate (Chart 3-9).

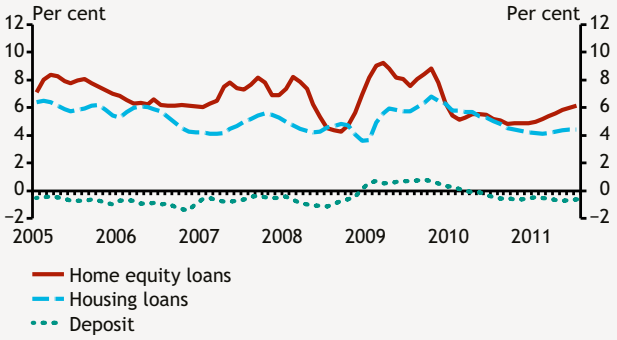
Since the onset of the crisis, banks have resorted to a broad-based tightening of non-price credit conditions from quarter to quarter, i.e. the number of creditworthy firms has considerably decreased. At the same time, contrary to banks' earlier expectations, non-price credit conditions were not affected by substantial changes in 2011 Q2 (Chart 3-10). The collateral requirements and maximum loan size eased somewhat for medium and large enterprises, from

Chart 3-11
Changes in credit conditions and factors contributing to the changes to corporate loans



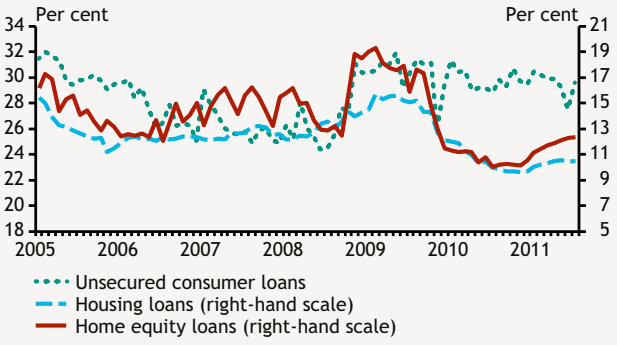
Note: Net percentage balance of respondents tightening/easing credit conditions weighted by market share).
Source: MNB based on banks' responses.

Chart 3-12
Premia over the 3-month BUBOR interest



Note: 3-month moving average.
Source: MNB.

Chart 3-13
The annual percentage rate of charge (APRC) of housing and consumer loans



Source: MNB.

which predominantly still creditworthy clients benefited. At the same time, some tightening is expected overall in the upcoming six months, which can once again be attributed to banks' risk aversion (Chart 3-11).

3.4.2 HOUSEHOLD CREDIT CONDITIONS

Interest rates on housing loans did not change considerably on average in 2011 Q2; the annual percentage rate charged (APRC) remained around 10.5 percent (90 basis points higher than at end-2010, while central bank interest rate hikes amounted to 75 basis points). Interest rates on home equity loans tightened further similarly to Q1 up to July (Chart 3-13). The premium over the benchmark interbank interest rate increased by almost one percentage point, thus the APRC on home equity loans approached 12.5 percent compared to 10.5 percent on average in 2010 (Chart 3-12). With this trend, the pre-crisis period phenomenon has returned, where interest rates on home equity loans were more expensive than on housing loans given their higher riskiness. Before the crisis, this phenomenon was seen among FX-denominated mortgage loans, but with the lack of FX lending it is currently affecting HUF-denominated mortgage loans.

At the same time, the present HUF-denominated APRC level is much higher than the 6-8 percent available on FX-denominated mortgage loans prior to the crisis. Consequently, the number of households that can afford housing projects may have decreased, as the around 13 percent decline in housing prices since the onset of the crisis[2] does not fully offset for the increased monthly instalments resulting from the higher interest rates, while there has been no material increase in household incomes either.

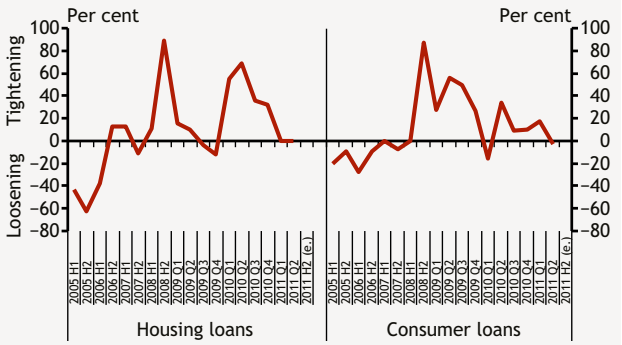
The APRC on unsecured consumer loans decreased significantly, from 30 to 27.5 percent, in 2011 Q2 (Chart 3-13). The APRC fell most sharply in the month of June, driven primarily by the spike in the weight of discounted products within new loan volume. With the end of these special offers, the APRC on unsecured loans went back to the 30 percent level in July.

Based on the lending survey, there have been no material changes in the non-price credit conditions on housing loans, nor do banks expect any significant changes by the end of the year (Chart 3-14).[3] Overall, banks would be willing to increase lending to the household segment, but without easing the current non-price credit conditions.

[2] Nominal decrease based on the FHB Housing Price Index.

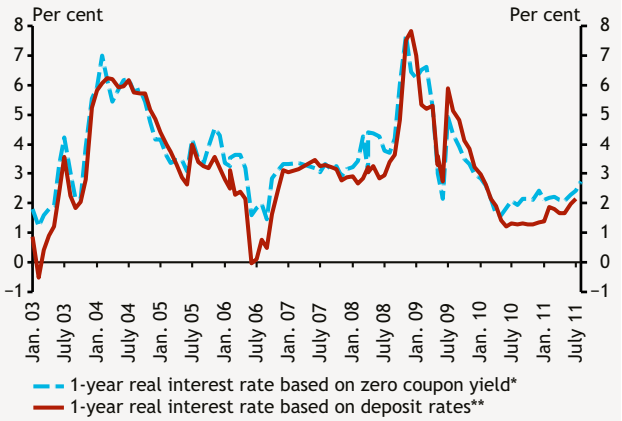
[3] It should nevertheless be taken into account that the replies in the lending survey for Q2 were submitted by banks in early June, and therefore the waning global risk appetite observed in July and August and the strong appreciation of the Swiss franc were not reflected in them.

Chart 3-14
Changes in credit conditions to the household sector



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

Chart 3-15
Evolution of the 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.

3.4.3. DEVELOPMENTS IN REAL INTEREST RATES

Over the three months since the previous Report on Inflation, the 1-year real interest rate increased slightly, breaking out of the 2.15-2.44 percent band of the previous year. The increase in the real interest rate (which is derived from expert forecast of expected inflation based on the 1-year benchmark government security market yield, and from the Reuters analyst survey generally conducted at the beginning of the month) can be attributed primarily to the moderation of inflation expectations. The temporary slight increase affecting government security market yields during the first two weeks of August pushed the indicator, calculated to 2.7 percent at the beginning of August, somewhat higher (Chart 3-15). The real interest rate calculated on the basis of deposit interest rates with a maximum maturity of one year[4] points to a similar trend, although in this case, there is not an actual figure for August available as yet.

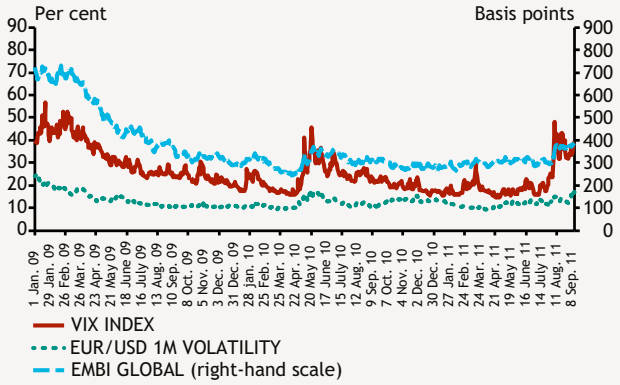
[4] Obtained by weighting corporate and retail deposit interest rates together.

4 Macroeconomic overview

4.1 The international environment

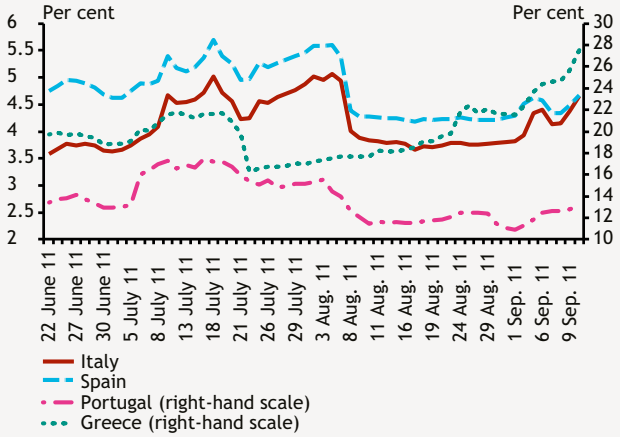
Developments in international money and capital markets over the past few months have been characterised by decreasing risk appetite and a pronounced price adjustment of money market instruments. Risk aversion increased as uncertainties built up about the sustainability of the national debt of certain developed countries, the future of the euro area and the overheated state of some Asian economies. Data on the sluggish macroeconomic performance of recent months have also confirmed the deterioration of economic prospects, the overall effects of which were already apparent in the deteriorating forecasts on the global economy as well. In line with the fading growth prospects, the rise in commodity prices observed during previous quarters came to a halt, while futures prices have not undergone a significant correction yet.

Chart 4-1
Major risk aversion indicators



Source: Thomson Reuters.

Chart 4-2
Development of 5-year government bond yields in the PIGS countries



Source: Bloomberg.

4.1.1 INTERNATIONAL FINANCIAL MARKETS

Global risk appetite has fallen drastically since the last publication of the Report on Inflation in June (Chart 4-1). In addition to extremely high volatility, risky assets suffered severe losses during the period in question. The general sense of pessimism among investors induced financial market participants to strongly overweight safe assets in their portfolios. The extent of the market turbulence that unfolded in early August is clearly illustrated by the fact that the prices of certain safe-haven assets rose to historical highs.

Behind this increase in general aversion to risk, three clearly distinguishable factors appear to be emerging. The poor macroeconomic data published in recent months have made an ever larger group of market participants aware of the global economic slowdown, which was subsequently confirmed by the downward adjustment of real economic forecasts by the central banks of developed countries and leading investment banks. In addition to the slowdown in the US and European economies, the sustainability of China's robust expansion was called into question, which turned the grim prospects even gloomier.

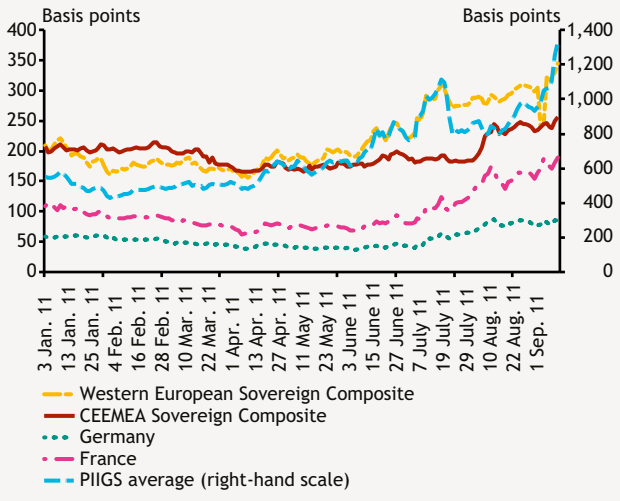
The other two factors are related, on the one hand, to the realisation that there are indeed limits to fiscal stimulus for a global economic slowdown and, on the other hand, to the sustainability concerns raised by the debt thereby accumulated. Despite its longstanding reputation of being the most reliable debtor, the United States lost its AAA status by S&P, as the rating agency did not see the spending

Table 4-1
Souverign rating changes in the US and in the EU since end of June

Moody's	USA	Cyprus			Greece			Portugal	Ireland	Czech Republic	Romania	Bulgaria	Estonia		S&P; Fitch
	SP	M	SP	F	M	SP	F	M	M	SP	F	M	SP	F	
Aaa	–														AAA
Aa1	~														AA+
Aa2															AA
Aa3										~			~		AA–
A1														~	A+
A2		–								+			~	~	A
A3			–	–											A–
Baa1		–	~					–							BBB+
Baa2				–								~			BBB
Baa3									–		~	+			BBB–
Ba1									–		~				BB+
Ba2								–							BB
Ba3															BB–
B1							–								B+
B2															B
B3															B–
Caa1					–		~								CCC+/ CCC
Caa2						–									CCC/ CC
Caa3															CCC–/ C
Ca					~	–									CC
C															C/RD
D															D/D

Note: The dark and the bright background mark the current and the previous long-term issuer rating respectively. The – (negative), ~ (stable), and + (positive) show the outlook.
Source: Thomson Reuters.

Chart 4-3
5 year sovereign CDS spreads in the western and eastern European region

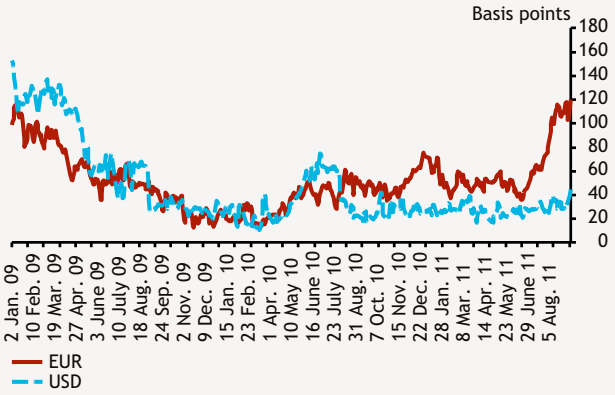


Source: Bloomberg.

cut package, which had been approved in a political compromise that paved the way for raising the debt ceiling, as being sufficient to tackle the nation's long-term debt (Chart 4-1). While the lengthy negotiation process preceding the reform plan that helped to avoid a technical default raised some uncertainty among investors in itself, S&P's statement sparked rather intense, negative reactions in the market.

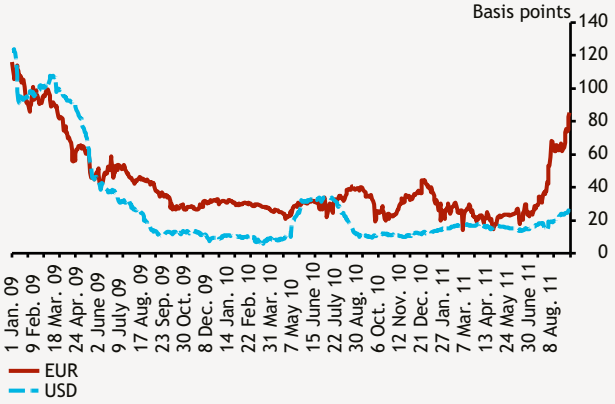
The third factor determining risk appetite is the sovereign debt crisis of the peripheral euro area countries, which has been an item on the agenda for nearly a year. Events in the region have recently been dominated by Greece's second rescue package and the uncertainties about passing an austerity deal, an inescapable challenge for the country's government. Although beside the Greek rescue package, further progress has been made in relation to improving the efficiency of the euro area's tools for crisis management, the lengthy approval period of preventive institutional solutions deemed necessary by the market, as well as the

Chart 4-4
3 month interbank and treasury yield spreads



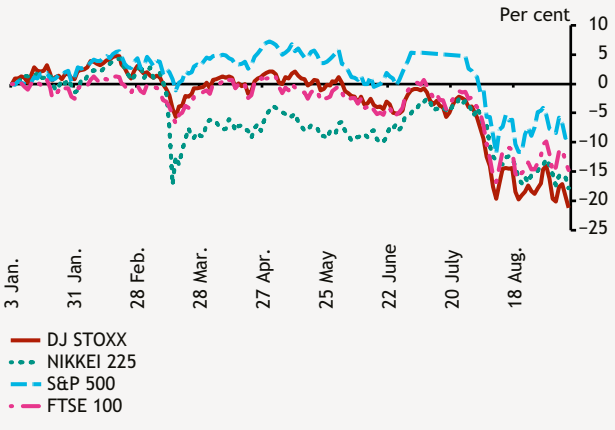
Note: 3-day averages.
Source: Thomson Reuters.

Chart 4-5
3 month LIBOR - OIS spreads



Source: Thomson Reuters.

Chart 4-6
Developed market stock indices



Note: 3 January 2011 = 0; cumulative change.
Source: Thomson Reuters.

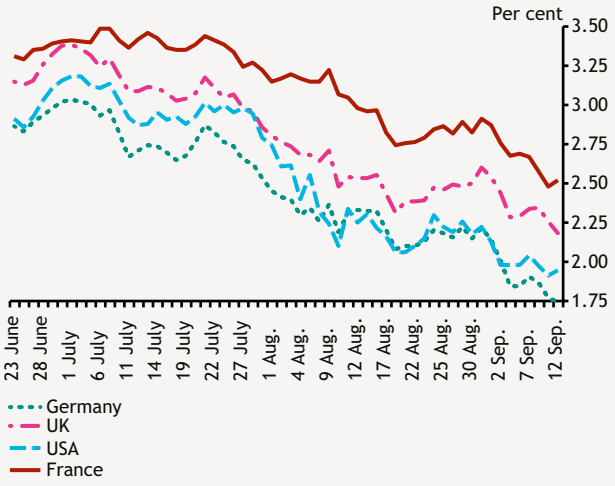
constant political ambiguity associated with the ratification of finalised regulations, represent permanent risk sources. Investors' risk sensitivity is well illustrated by the fact that, albeit only for a brief period, the long-term yields of Italy and Spain – countries with somewhat more favourable fundamental developments – also rose close to the critical 6 percent mark (Chart 4-2). This adverse process was ended by the ECB's secondary-market purchases of bonds.

Developments in the PIIGS countries also highlight the potential channels of contagion. This time, troubled countries and the stable Western European nations securing the rescue package both saw their risk perception deteriorating. This is clearly demonstrated by the fact that the Western European composite sovereign CDS index has surpassed that of the CEEMEA region, despite the region's longstanding reputation of being riskier (Chart 4-3). The same is reflected in recent credit rating decisions: while PIIGS countries were being downgraded, countries of Eastern Europe saw their ratings improve (Table 4-1). Another focal point coming into the spotlight is the risk perception of Western Europe's banking system with its considerable exposure to Greece. Growing risk perception is not only confirmed by surging bank CDS spreads, but also by the TED and Libor-OIS spreads, which both reached their highest levels since early 2009 (Charts 4-4 and 4-5). Further aggravating the situation of the European banking system, US dollar financing has become more expensive, as reflected in rising EUR/USD basis swap spreads as well.

Against this background, capital markets plunged sharply. Leading US and Japanese indices fell by nearly 6-11 percent, while those of top European markets plummeted by as much as 20-30 percent (Chart 4-6). The days surrounding the US credit rating downgrade generated hectic intra-day volatilities, evoking the turbulences that ensued after September 2008. Commodity markets experienced similar blows in early August but due to the end-of-period adjustment, indicators only suffered a somewhat slighter drop of a few percent. Market sentiment was mirrored by particularly hectic fluctuations in prices, as was the case whenever the publication of a leading indicator gave rise to disappointment.

In parallel with this, intense demand emerged for safe haven assets. In the sovereign bond market, where US government bonds continue to be listed among the least risky instruments despite the downgrade, yields on the highest-rated securities with 5- to 10-year maturities dropped by 75 to 125 basis points (Chart 4-7). Investor uncertainties also propelled gold prices to historical highs. During the period under review, the spot price of this precious metal rose by almost 18 percent. In the foreign

Chart 4-7
10-year government bond yields in developed countries



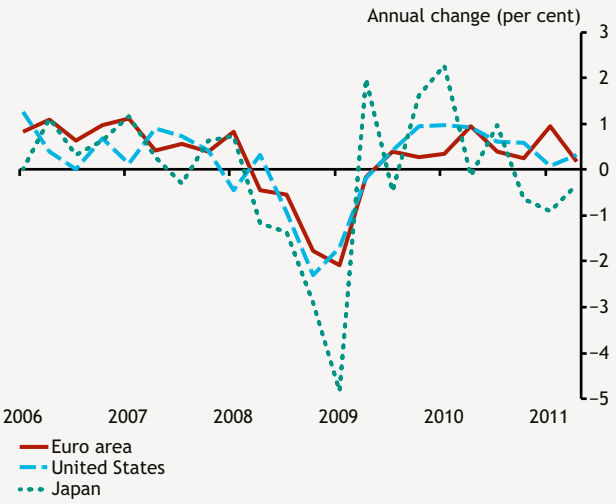
Source: Bloomberg.

currency markets, the Swiss franc maintained its near-exclusive role as a safe haven currency. One month after the publication of the previous report, the franc traded 16 to 17 percent stronger against other key currencies. Attempts by the Swiss central bank to weaken the franc only temporarily interrupted the appreciation process. However, a more permanent effect can be expected from the EUR/CHF minimum exchange rate, in line with the announcement in early September.

Even the monetary policy instruments of major developed economies prove to be insufficient to counteract the deterioration of real economic developments. China's central bank continues to face high inflationary pressures and is thus forced to pursue a tight monetary policy. As key policy rates both in the USA and Japan have been practically reduced to the lowest possible level, sustaining a permanently low interest rate environment, as recently suggested by the FED, could have a stimulating effect. As for quantitative easing, the third stage of the FED's asset purchase programme, anticipated by an ever larger group of market participants, remains unfulfilled for the time being. The first easening steps are expected from the ECB. Although with the 25 basis point tightening in July, the ECB continued the raising cycle of the interest rate which started in April, slower growth in the euro area and fading inflationary pressure mean it is likely that rates will remain on hold or start to be lowered again.

4.1.2 EXTERNAL DEMAND

Chart 4-8
GDP growth in advanced economies
(quarterly change, 2006–2011)



Global economic activity deteriorated significantly in Q2. GDP growth fell short of analyst expectations in most developed economies. In Q2, the US and the euro area economy grew almost imperceptibly, while the Japanese economy continued to shrink due to the repercussions of the natural disaster in March (Chart 4-8).

Several factors may have contributed to the slowing growth in the developed economies. Following the crisis, improvement in the labour market has been slow and protracted, while the increase in real wages was restrained by rising inflation reflecting the steep increase in global commodity prices. These impacts were increasingly accompanied by government measures taken to ensure the sustainability of public debt, which curbed demand, while the plunge in the price of assets on global money and capital markets experienced in recent months further restrained growth in demand through its wealth effect. Besides these general factors, one-off impacts also deteriorated the global economy. The Japanese disaster caused temporary disturbances in international production chains, which led to a perceptible slowdown in global trade.

Chart 4-9
Changes in the relevant eurozone confidence indicators
(2005–2011)

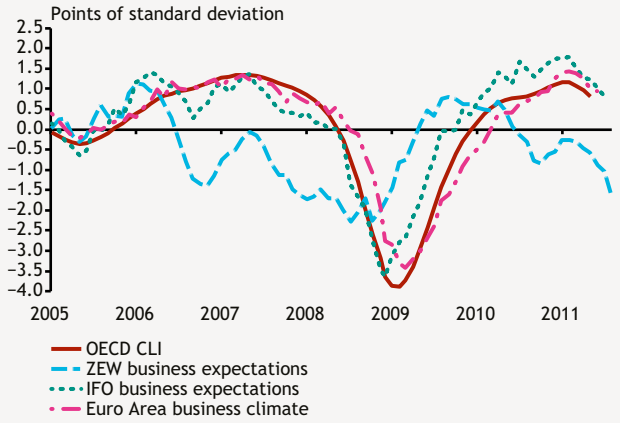


Chart 4-10
Economic growth in the region

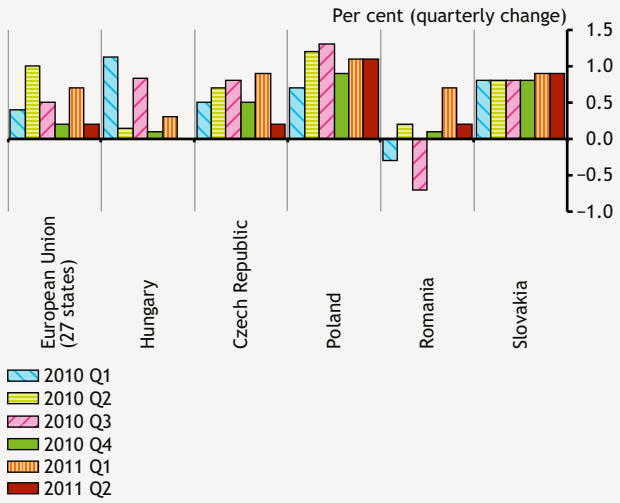
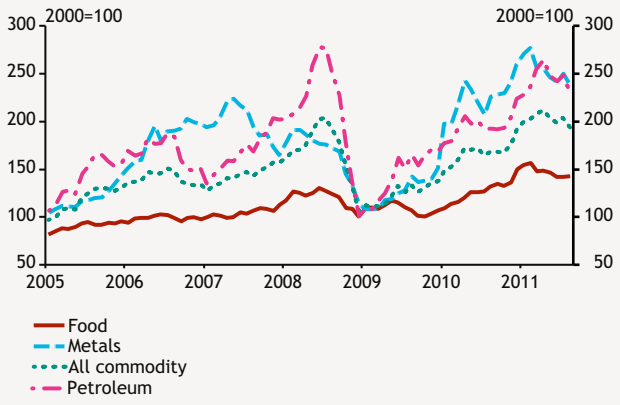


Chart 4-11
Development of global commodity prices in euro



Source: IMF.

Over the short term, resolving these disturbances may lead to some adjustment in the external demand environment.

The effect of deteriorating economic prospects is clearly reflected in the main international confidence indicators. Most indices have been characterised by a deteriorating trend since the beginning of the year, while some have again breached the threshold values indicative of a looming recession. It is worth highlighting the ZEW Indicator of European Economic Sentiment, which is based on the responses of financial analysts: in the past, when the global economy was experiencing financial troubles, this indicator signalled deteriorating business confidence earlier than those based on corporate surveys (such as the IFO business expectations). The value of the ZEW indicator has been decreasing, except for one small interruption, since the beginning of 2010, while other indicators have been reflecting deteriorating business confidence since the beginning of 2011 (Chart 4-9).

Expansion in the emerging economies may partially offset the poor performance of the developed economies. China and other emerging countries, however, show signs of overheating, reflected in increasing inflation rates over the previous quarters. Over the medium term, this exacerbates the downward risks to growth in developing countries as well.

Based on the available data, economic growth slowed in the Central and Eastern European region in Q2, with the exception of Slovakia (Chart 4-10). Increasing export sales remained the main factor of growth in the region over the period. The contribution of domestic demand to growth remains subdued: following the fading out of inventory replenishment, domestic demand items could not notably support growth in the region – except in Poland.

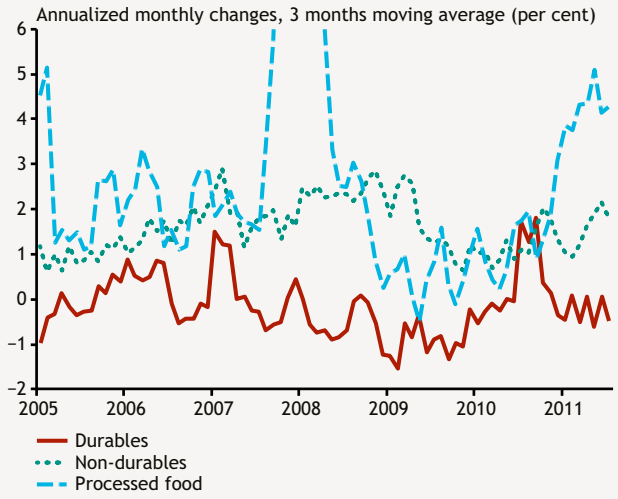
Additional budgetary adjustments expected in the upcoming quarters may restrict the growth in developed and regional economies – i.e. Hungary's main export markets – even further.

4.1.3. IMPORT PRICES

The shaken confidence in a global recovery had an impact on commodity markets. Fears of a another recession affecting developed economies and of slower growth in emerging countries combined with the mitigation of geopolitical risks have pushed down commodity prices in recent months, in particular, energy prices (Chart 4-11).

The tensions affecting food supply in 2010 and early 2011 worldwide were largely alleviated once this year's crop

Chart 4-12
Traded goods and processed food prices in the euro area



yields – substantially better than last year's – came to the market, simultaneously reducing global market prices as well.

The increase in euro area inflation in the first half of the year resulted primarily from the price pressure exerted by rising commodity prices, while the rise observed in core inflation in recent months can be largely attributed to the price increase of products with longer production chains, such as processed foods. Manufactured goods have contributed only slightly to higher inflation: although the prices of non-durable manufactured goods have displayed stronger dynamics over the past few months compared to the beginning of the crisis, the effect of cost shocks did not feed through to durable goods, which are sensitive to demand factors (Chart 4-12).

4.2 Aggregate demand

In Q2, the slow recovery process that had characterised the Hungarian economy for the past year came to a halt. The faltering dynamics of GDP stemmed primarily from the deteriorating external environment, while domestic demand also fell short of our expectations somewhat. Deteriorating economic prospects combined with increasing money market tensions may continue to slow down the balance sheet adjustment process of domestic agents. As a result of government behaviour geared primarily towards managing budget deficit objectives, direct central government demand remained restrained.

Chart 4-13
Change in the Hungarian GDP
(2005–2011)

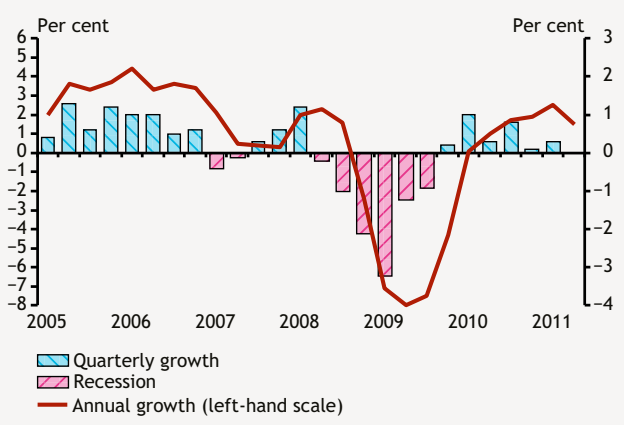
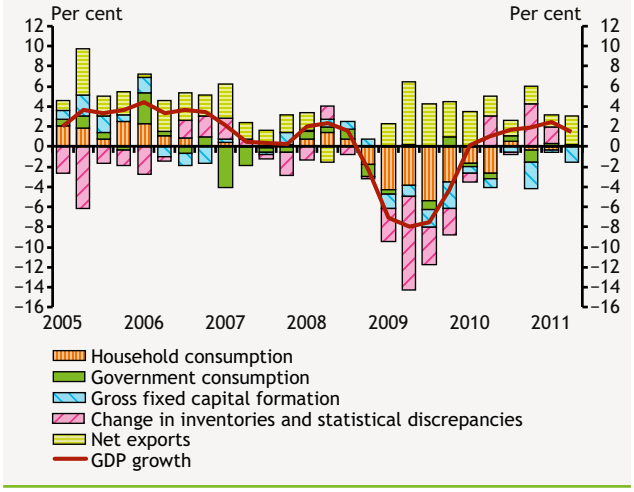


Chart 4-14
Structure of annual GDP changes in Hungary
(2005–2011)



Following the upswing at the beginning of the year, domestic economic growth ground to a halt in Q2. GDP increased at an annual rate of 1.5 percent in 2011 Q2 (Chart 4-13). Deterioration in the external environment played a pivotal role in the slowdown of Hungarian economic activity, while domestic demand remains detrimental to growth.

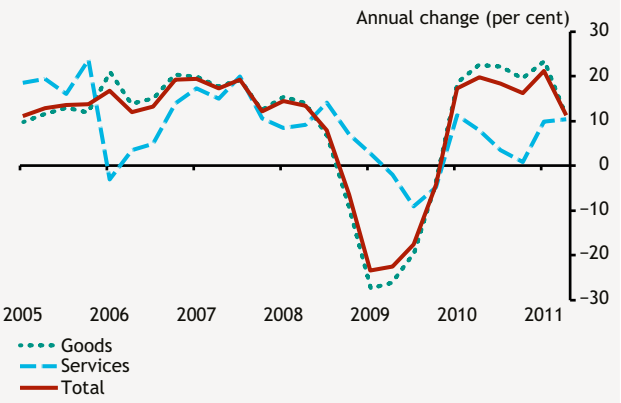
The structure of growth was characterised by the duality observed since 2009. Although the dynamics of export sales slowed in parallel with the slowdown in external economic activity, the contribution of net exports to growth is still decisive, as import demand remains weak.

Domestic demand continued to contribute negatively to GDP in Q2 (Chart 4-14). Given the sluggish improvement in labour market conditions and the increasing uncertainty about economic prospects, domestic owners of income tend to display prudent consumption and investment behaviour. As a result of weak growth and the money market turmoil the HUF exchange rate weakened again, especially against the CHF, which may slow the balance sheet adjustment of households further and combined with tight credit conditions, may also prompt firms to postpone their investment decisions.

4.2.1 HUNGARIAN FOREIGN TRADE

The slowdown in the growth of Hungary's target markets in Q2 was also reflected in slowing export dynamics. The export of goods decelerated substantially, while the export of services, representing a smaller share, posted double-digit growth, similar to the previous quarter (Chart 4-15). In the case of the export of services, the temporary effect of conference tourism linked to the EU Presidency contributed to the dynamic growth.

Chart 4-15
Developments in the export of goods and services
(2005–2011, EUR-based)



Source: Balance of payments statistics.

Chart 4-16
Annual change of terms of trade

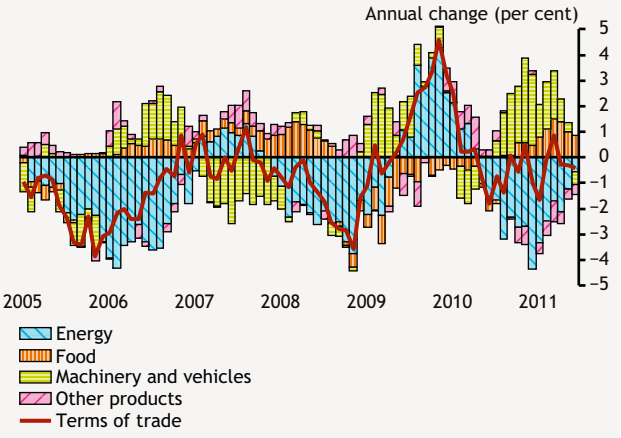
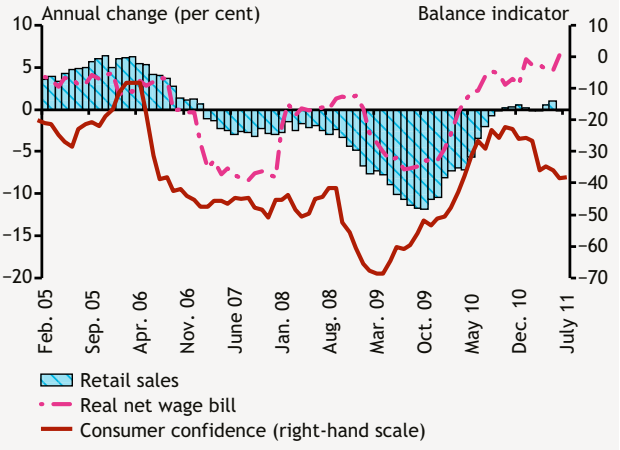


Chart 4-17
Developments in retail sales, income and the consumer confidence index



In parallel with exports, import demand also contracted in the last quarter. As a result of lower exports, the import demand of firms producing for export declined as well, while the import of domestic sectors remains subdued given the persistently weak domestic demand. Although the few, large volume manufacturing investment projects – which generate high import demand through machinery investment – are progressing according to plan, in general investment activity has been so weak that imports geared towards investment have not been able to boost import figures.

Despite the deceleration in export dynamics, the contribution of net exports to growth is still positive, and may remain the same in quarters to come, as a result of the continuously weak domestic demand.

Developments in the world market price of fuels continue to exert a dampening effect on the terms of trade. This effect, however, is offset by the positive developments in the terms of trade of foods, due to high commodity prices (Chart 4-16).

4.2.2 HOUSEHOLD CONSUMPTION

There was no perceptible change in household consumption expenditures in Q2 (Chart 4-17). The real net income of households increased substantially following the personal income tax cut and the nominal wage acceleration of the past months, but consumption decisions remain cautious. Due to deteriorating economic prospects, households' income expectations are surrounded by uncertainty, while the further tightening of credit conditions restrains consumption and investment decisions for an increasing number of households. The deteriorating assessment of growth prospects by households is also reflected in the declining trend of the retail confidence indicator observed since the end of last year.

The sharp decline in global risk appetite in recent months was also reflected in the appreciation trend of the CHF/EUR exchange rate. Appreciation of the Swiss franc directly and immediately decreases the disposable income of households available for consumption and investment, while slowing the downsizing of households' stock of foreign currency denominated loans through re-pricing of the portfolio (Chart 4-18). This effect has been evident in recent quarters as well: despite the fact that in the last two years households have repaid more loans than they newly contracted, their total debt-to-income ratio still surpasses the elevated pre-crisis levels.

The net loan repaying behaviour of households is prevalent for all loan types. Thus, overall, household lending

Chart 4-18
Stock of liabilities and net credit flows proportionate to disposable income
(2000–2011)

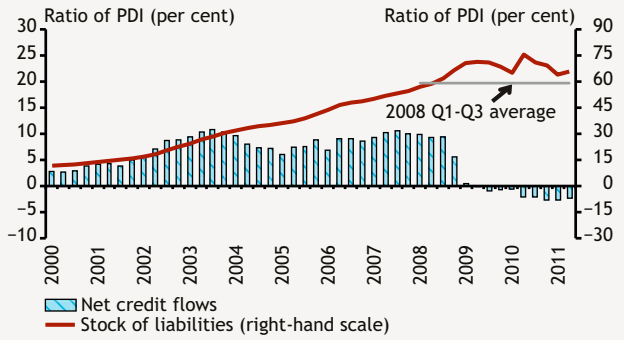
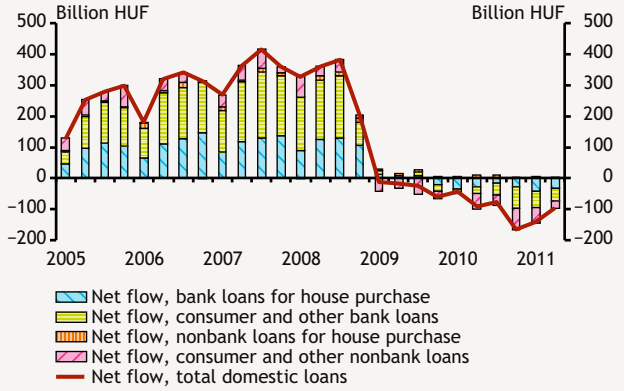
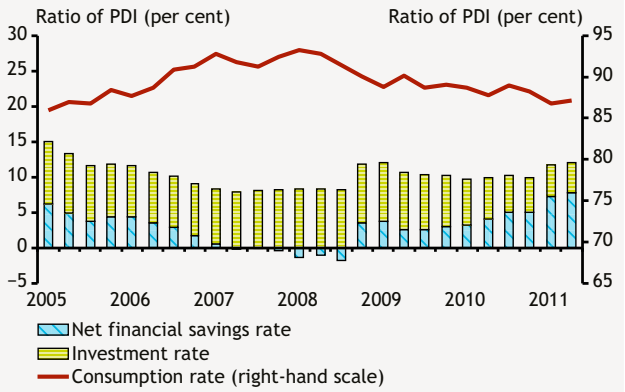


Chart 4-19
Quarterly net increase in loans to households from domestic financial intermediaries by credit purpose
(2005–2011)



Source: MNB.

Chart 4-20
Use of household income*
(2005–2011)



** The balancesheet identity holds for annual averages.*
Source: MNB estimate.

contracted further in 2011 Q2: the transaction-driven decline in the household loan portfolio reached HUF 95 billion. The cumulative decline in the household loan portfolio since end-2010 amounts to 2.3 percent.

On the credit supply side, the tight credit conditions prevailing in the household segment in the previous period remained in place. Regarding demand effects, the slow improvement in labour market conditions, the protracted balance sheet adjustment and increasing risks to economic growth all justify caution. While the Government's exchange rate fixing programme may slow down the shrinking of the household loan portfolio, albeit slightly (Chart 4-19), overall, extremely weak retail lending activity is expected in the upcoming quarters.[5]

Prudent household behaviour was also reflected in an additional decline in the consumption rate and the increasing propensity to save (Chart 4-20). Besides precautionary considerations, this latter shift may have been supported by the reduction of personal income tax rates at the beginning of the year, which primarily benefited households with higher income and a lower consumption rate.

The increase in the savings and the balance sheet adjustment of households is manifested not only in waning consumption, but also in declining investment demand. Households' investment to income ratio has been on the decline since the beginning of the crisis, also reflected in the strongly deteriorating housing market figures.

Taking into account the deteriorating economic prospects, no improvement can be expected either in the labour market or in lending activity in the short term. Given a persistently strong exchange rate of the Swiss franc, consumption may retain its restrained dynamics. These impacts may substantially dampen even the positive effect of the expected disbursement of private pension fund real yields in the second half of the year.

4.2.3 PRIVATE INVESTMENT

The average investment performance of firms in Q2 remained weak, only partially offset by the ongoing large-scale investment projects in manufacturing (Chart 4-21).

Deteriorating external demand and economic prospects, coupled with the tightening credit environment, jointly restrain the investment activity of domestic firms. As a result, the effect of the corporate income tax cut for SMEs has not yet been reflected in investment figures.

[5] For lack of the details on the exchange rate fixing scheme for mortgage repayments, its potential effects could not be taken into account.

Chart 4-21
Investment in machinery and manufacturing
(2001–2011, year on year)

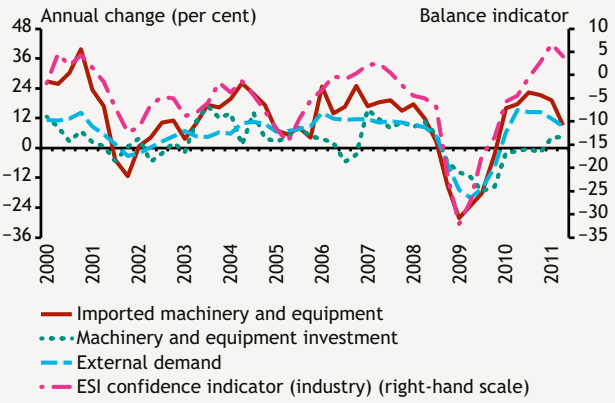
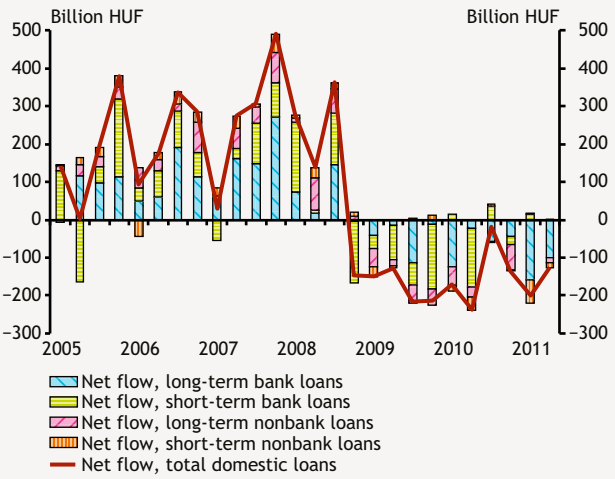
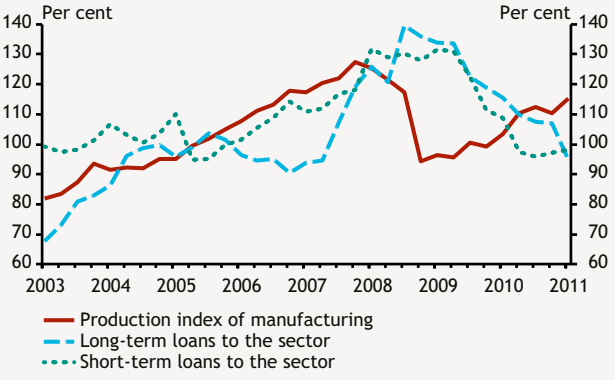


Chart 4-22
Quarterly net increase in loans to non-financial corporations from domestic financial intermediaries



Source: MNB.

Chart 4-23
Changes in the production and loans outstanding of the manufacturing sector
(2005=100 per cent)



Source: CSO, MNB.

Corporate lending continued to decline in the last quarter (Chart 4-22). Cyclical uncertainty and excess capacity may have contributed to the further postponement of investment projects, which had a negative effect on the demand side of corporate lending. However, besides subdued demand, credit supply remained stringent in the credit market. Tight credit supply may be the most prominent in the SME sector: even access to short-term financing may be limited for SMEs. As a result, adjusted for exchange rate movements, corporate lending by domestic financial intermediaries fell by HUF 120 billion over the quarter, with the decline adding up to 3.6 percent since end-2010.

Slower external demand and the economic downturn are also reflected in the production and lending of the domestic manufacturing sector (Chart 4-23). There has been no clear sign of long-term lending due to excess capacity, while the stagnation of short-term lending may also reflect a low current assets or inventory financing requirement. Based on the above, without any cyclical improvement in the economy, lending cannot be expected to pick up substantially in the manufacturing sector.

The decline in household investment projects continued in Q2 (Chart 4-24). The number of new homes occupied reached another low point, while the number of new construction permits issued continued to stagnate at a low level after the sharp decline observed in 2010. Based on the deteriorating demand conditions and the low number of construction permits issued, the declining trend characterising household investments cannot be expected to turn around in the quarters to come.

4.2.4 INVENTORY ACCUMULATION

Adjusting to economic uncertainties, inventory levels were reduced substantially during the crisis, and started to rise again during the recovery. The renewed deterioration in growth prospects may generate a temporary increase in inventories. Further increases in inventories are restricted by tight credit conditions on working capital financing, leading to firms' tight inventory management over the short term. The composition of inventories reflects the duality of growth observed in recent quarters: while inventory levels in the manufacturing sector may gradually return to their historical average, amidst weak domestic demand, commercial inventories could remain below their pre-crisis level on a long-term basis (Chart 4-25).

Chart 4-24
New dwelling construction permits, dwellings put to use

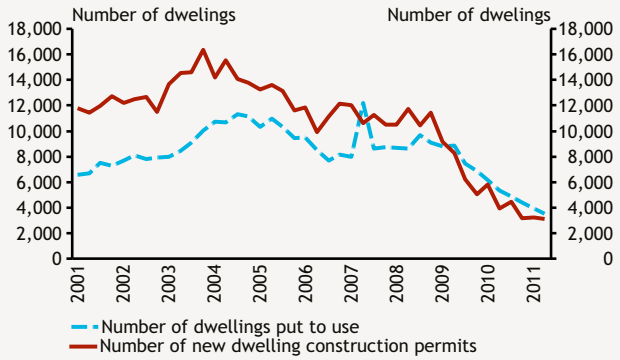


Chart 4-25
Changes in inventory based on current prices and GDP; the inventory nominal GDP ratio

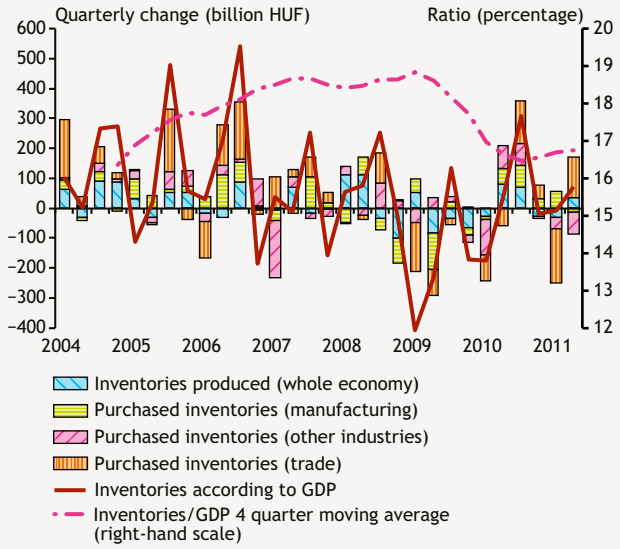
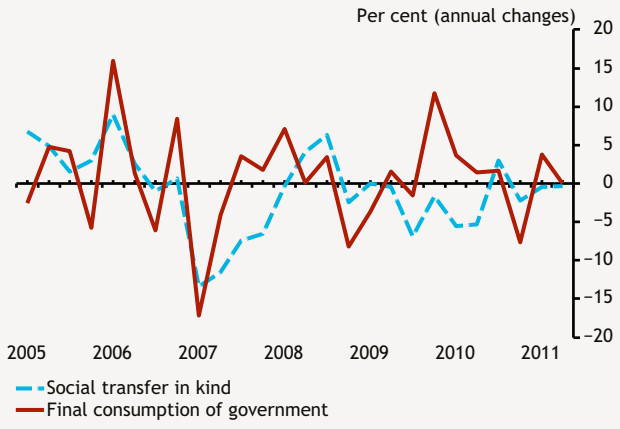


Chart 4-26
Changes in government consumption

(2005–2011)



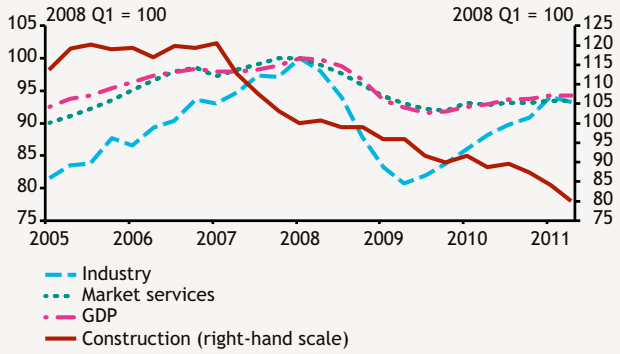
4.2.5 DIRECT CENTRAL GOVERNMENT DEMAND

In recent quarters, direct central government demand has been subdued as a result of the Government's focus on achieving the public deficit targets as a top priority (Chart 4-26). In Q2, further government spending cuts were implemented (such as narrowing the range of price subsidies on medication). Overall, government measures aimed at curbing budgetary expenditures are expected to further decrease direct central government demand. EU-financed projects fell short of the budgetary allocation in Q2, thus failing to support additional demand as planned.

4.3 Production and potential output

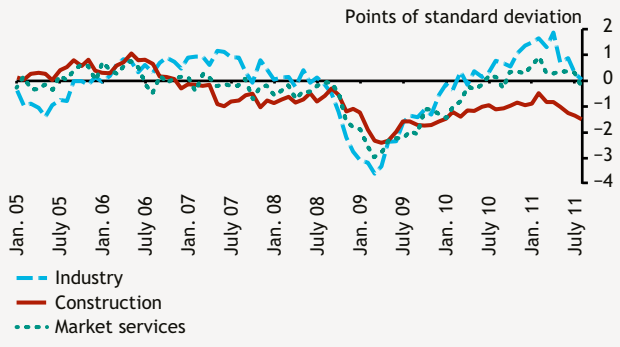
The deceleration of value added in production processes is primarily related to the poor performance of industrial production, while weak domestic demand continues to restrain the performance of sectors serving the domestic market. Compared to last year's low base, higher yields can be expected this year in the agricultural sector; however, due to the small weight of the sector, its contribution to value added is likely to remain minor. Our assessment of potential output over the short term is somewhat gloomier than it was in June. Persistently tight credit conditions, lower investment activity and slower normalisation of the labour market may restrain a pick-up in potential domestic growth in the upcoming years, similarly to most of the developed economies.

Chart 4-27
GDP and the value added of main private sectors*
(2005–2011)



** Chain-linked volumes. GDP is measured at market prices, sectoral value added is measured at basic prices.*

Chart 4-28
ESI confidence indicators of the private sector*
(2005–2011)



** The series are normalized. The series of market services is the average of indicators for retail and other services, weighted with value added shares.*

Deteriorating economic conditions have reduced the output of most sectors (Chart 4-27). Along with the general fall in external demand, the direct effects of the Japanese disaster (such as lower production at the Suzuki plant) also played a role in the deterioration of industrial production.

Within industrial production, exports saw the greatest deceleration, while domestic sales continued to shrink. The output of sectors producing cyclically sensitive investment goods and intermediate goods decreased in Q2 following a positive Q1, while the production of sectors producing consumer goods was restrained by weak household demand.

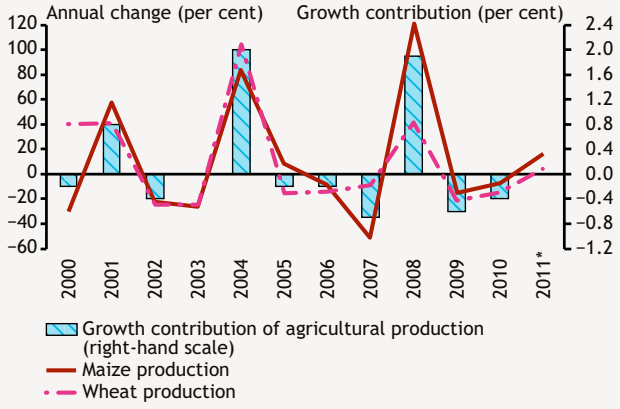
Based on forward-looking confidence indicators, industrial growth may slow even further in the months ahead (Chart 4-28). It is a warning sign that the number of new Hungarian industrial orders has fallen short of German industrial orders over the past few months. This phenomenon may indicate that, although the German industry was a driving force behind Hungarian exports in the past few years, over the short run, Hungarian export performance may fall short of the level justified by German industrial growth (Chart 4-29).

The performance of sectors dependent on domestic demand remained subdued. Market services stagnated after a brief pickup at the beginning of the year. The value added of the financial intermediation and real estate services sectors have decreased significantly, a slight increase could have been observed in the case of wholesale and hospitality sectors.

With the exception of a few large-scale, one-off projects, the declining trend in the production of the construction

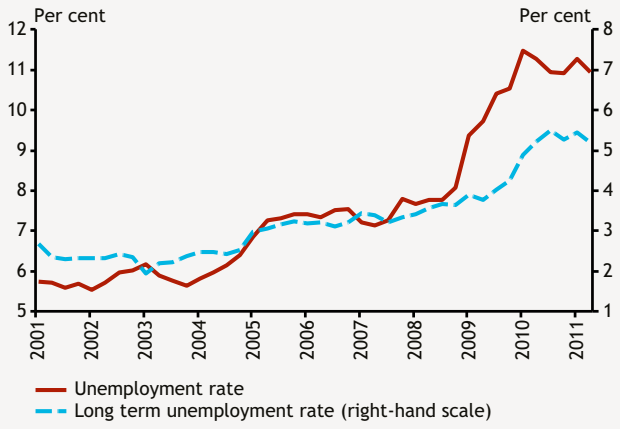
Chart 4-29
German new orders and Hungarian new export orders
(2005–2011)

Chart 4-30
Production and growth contribution of agriculture



** 2011 crop yields calculated from the AKI estimate.*

Chart 4-31
The evolution of long term unemployment



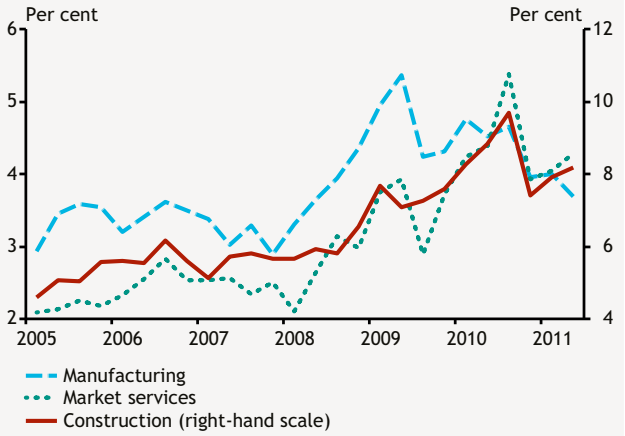
industry continued in the context of a gloomy housing market, decreasing state orders and weak industrial investment dynamics.

As regards agriculture, following the low base in 2010, somewhat better crop yields are expected for this year (Chart 4-30). Although the expectations for crop yields are better, the size of sown agricultural land is smaller this year, mainly due to the areas that temporarily cannot be cultivated as a result of the flooding that took place in 2010. Consequently, the volume of agricultural production is set to increase, albeit slightly, to adjust for the decline in 2010.

The weaker-than-expected investment activity in past quarters, the slow pick-up in employment and tightening credit conditions may have dampened potential economic growth. The supply of production factors remains subdued. With the exception of some major investment projects, the downturn in corporate capital accumulation continues. Although long-term unemployment figures decreased somewhat in Q2, they remain high, staying above pre-crisis levels. Long-term unemployment, which has remained consistently high, has led to the erosion of the skills and employment chances of the unemployed (Chart 4-31). Corporate bankruptcy rates remain high; negatively affecting potential output due to the diminishing capital stock and deteriorating productivity (Chart 4-32). The duality characterising the economy is also apparent in bankruptcy rates: in sectors dependent on domestic demand (construction, market services), bankruptcy rates have been on the rise since the crisis, while the opposite holds true for manufacturing. Another slowdown in the global economy, however, could lead to an increase in corporate bankruptcy rates as well.

Looking ahead, our overall picture of potential output over the short term is somewhat gloomier than it was in June. Persistently tight credit conditions, lower investment activity and the slower normalisation of the labour market may restrain the recovery of potential domestic growth in the upcoming years, similarly to most developed economies.

Chart 4-32
Corporate bankruptcy rates*
(2005–2011)

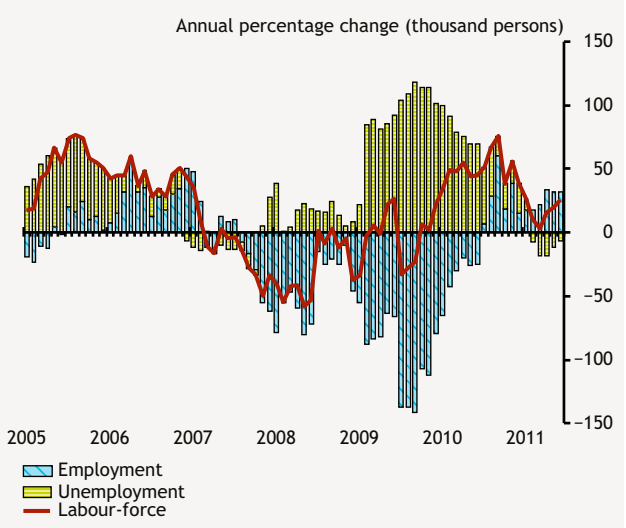


** Ratio of bankrupt companies relative to the number of companies four quarters before.*

4.4 Employment and the labour market

In 2011 Q1, domestic employment was characterised by a slow recovery. The increase in employment is primarily related to the commencement of public employment programmes, while private sector labour demand is restrained, due to the renewed deterioration of economic prospects. The heterogeneity characterising growth is still apparent in labour market developments as well. Sectors producing for and serving external markets experienced a slight increase in employment in H1, but there was no improvement in the sectors which produce for the domestic market as a result of slack domestic demand and the poor outlook. Due to the exacerbation of risks surrounding growth in the past quarter, hiring in the private sector once again shifted towards more flexible forms of work.

Chart 4-33
Dispersion of annual changes in activity
(2005–2011)



The growth observed in domestic labour market activity since the onset of the crisis continued in the previous quarter. The activity stimulating effects of the previous years' government measures (increase in the retirement age limit, tightening of disability pension) were still evident, and from 2012 will be further reinforced by the Structural Reform Programme (Kálmán Széll Plan) and the new labour market stimulating measures announced in the context of the Convergence Programme. The reform of job-seekers' and sick leave benefits, as well as the review of disability pension entitlements scheduled for 2012 may all contribute to increased growth in activity (Chart 4-33).

Greater labour supply was for the most part absorbed by the commencement of public employment programmes, while private sector labour demand slowed down again because of the uncertain demand prospects.

The macroeconomic developments of the past few months and the real economic figures outline a gloomier economic situation not only at the national level, but also at the international level. As a first step, firms adapted to the uncertain economic environment by shifting towards more flexible forms of employment (part-time and temporary agency work). The strong duality characterising growth in past years is still evident in employment developments. The slight increase in employment stems mainly from the manufacturing industry, while service sector firms are putting off employment-related decisions, and therefore there has been no change in their regard. The cautious behaviour of manufacturing industry firms is reflected by the fact that overtime rose to pre-crisis levels in the first months of the year, while the increase in staff number was much less prominent. The deteriorating prospects of the

Chart 4-34
Evolution of overtime and hours worked by part-time, manufacturing sector employees

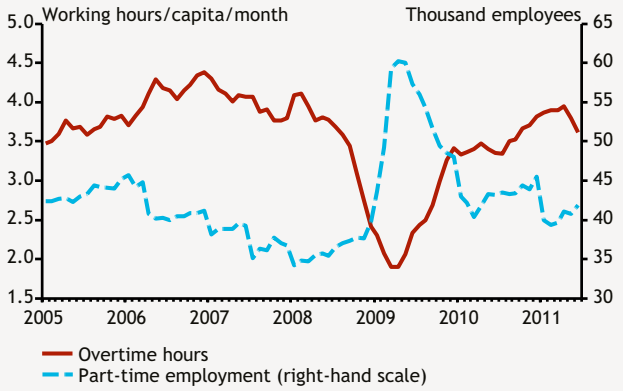
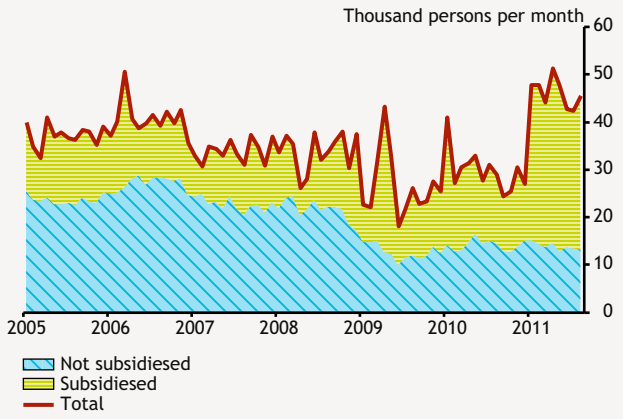


Chart 4-35
Number of new jobs posted
(2005–2011)



Source: National Employment Service.

Chart 4-36
Evolution of the Beveridge curve*
(2005–2011)

** The Beveridge curve shows the number of new (unsubsidized) private sector vacancies relative to registered unemployment.*

manufacturing industry were also reflected in the decline in overtime in May-June (Chart 4-34).

The figures of the National Employment Service also confirm the slowdown in labour demand. The number of new jobs announced in the private sector decreased slightly in recent quarters; notable new job openings were limited to the government's public employment programmes (Chart 4-35).

The renewed deterioration of economic prospects may further restrain labour demand, and accordingly private sector employment figures are not expected to improve in H2.

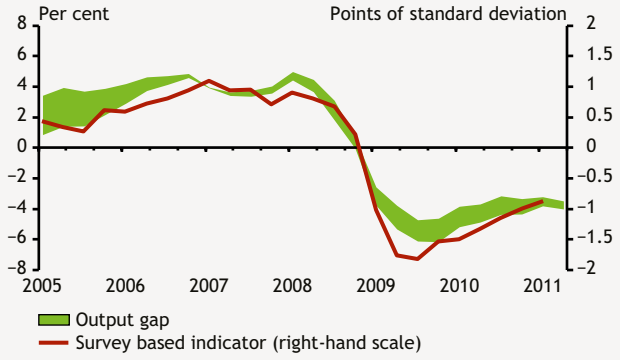
As regards the public sector, employment increased substantially in Q2, but the total staff number remains lower on a year-on-year basis. The increase is the result of the state's newly launched public employment programmes, creating – mainly part-time – jobs for nearly 20,000 workers. H2 is expected to see a further expansion of public employment programmes with a considerable potential increase in the number of public sector employees.

As a result of the growing number of active job seekers and the sluggish recovery in labour demand, unemployment remained at historically high levels. Consequently, the number of unemployed individuals per job vacancy is still high. Labour market conditions remain loose (Chart 4-36), and the Beveridge curve has not reflected any notable change over the previous quarters.

4.5 Cyclical position of the economy

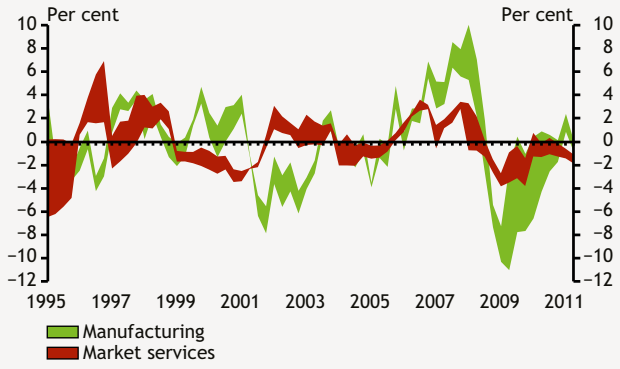
Our assessment of the output gap did not change significantly during the previous quarter; thus the worse-than-expected GDP figure primarily had a negative effect on our view of trend developments. Nevertheless, there remains substantial excess capacity in the economy, the distribution of which may be characterised by the duality corresponding to the general economic environment. Looking ahead, the deterioration of the external economic climate and credit conditions may once again dampen the cyclical position of the economy, and strengthen the resulting disinflationary effects.

Chart 4-37
Evolution of the output gap*
(2005–2011)



** 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.*

Chart 4-38
Capacity utilization in the private sector*
(1995–2011)



** Percentage deviations from the trend. The bands are derived from various methodologies capacity utilization measures.*

Our assessment of the output gap did not change significantly during the previous quarter; according to our estimates, output may be behind its potential level by around 3 percent (Chart 4-37). Exports may remain close to their potential level, and although the negative one-off effects of Q2 may readjust in Q3, the deteriorating economic prospects of target markets are expected to weaken the cyclical position of Hungary's external markets in the quarter ahead.

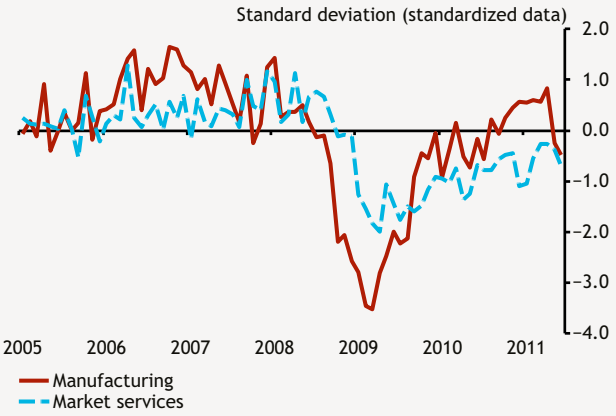
Owing to weak internal demand, the cyclical position of the domestic expenditure side variables may have remained strongly negative in Q2. The reported inflation figures correspond to our preliminary expectations, thus the downward pressure on prices stemming from subdued household demand may have been very close to our earlier estimates.

As regards investment projects, the duality characterising the economy in general remains observable, with sectors geared towards export performing better, albeit to a lesser degree, while sectors producing for domestic markets had lower output. Accordingly, corporate investment fell short of its potential level to a significantly lesser degree than household investment.

Indicators measuring the capacity utilisation of various sectors do not indicate any significant shift in the output gap; however, if the decline in the capacity utilisation of the manufacturing sector observed in Q2 becomes permanent, the shortfall of output relative to its potential may increase again (Chart 4-38).

The overtime hours data measuring the labour intensity of the two sectors also reflect a weaker cyclical position of export in Q2. Overtime hours in manufacturing approached

Chart 4-39
Overtime hours per capita in the private sector (in hours)*
(2005–2011)



** Three-month moving averages of seasonally adjusted and standardized data.*

average pre-crisis levels at the beginning of 2011, but in Q2 it deteriorated substantially once again. Overtime hours in the market services sector has significantly and persistently fallen short of pre-crisis levels since the onset of the crisis (Chart 4-39).

4.6 Costs and inflation

Inflation decreased substantially in the summer months. Developments in consumer prices continue to be determined by the dual factors of the negative demand environment and high commodity prices. Thanks to the favourable agricultural crop yields and the low dynamics of regulated developments in energy prices despite a substantial hike in global energy prices, inflation dropped to 3.1 percent in July, which was followed by correction in August. Despite the low inflation rate, core inflation continued its acceleration of the past nearly one year, primarily explained by the increase in processed food prices. Wage outflows in the private sector accelerated in the previous quarter. As it relates to manufacturing, this development may have been driven by the positive production results during the first third of the year, while the rise in regular wages in the service sector may partly stem from whitening of the economy.

Chart 4-40
Growth in the regular wages of market services
(2005–2011)

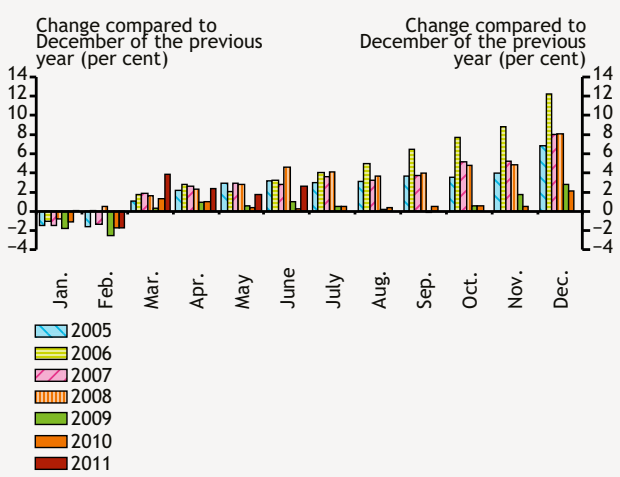
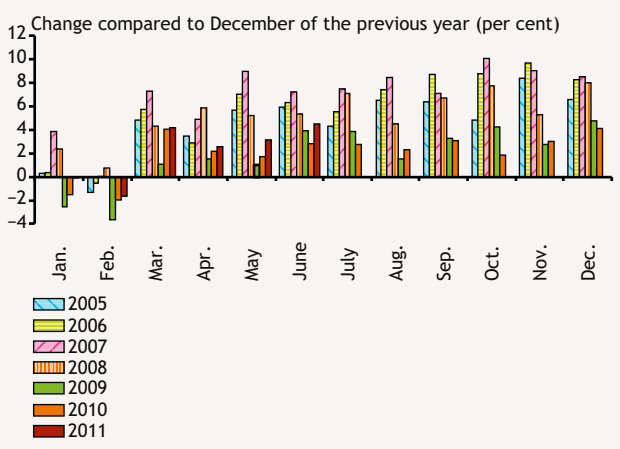


Chart 4-41
Changes in the regular wages of manufacturing sector
(2005–2011)



4.6.1 WAGES

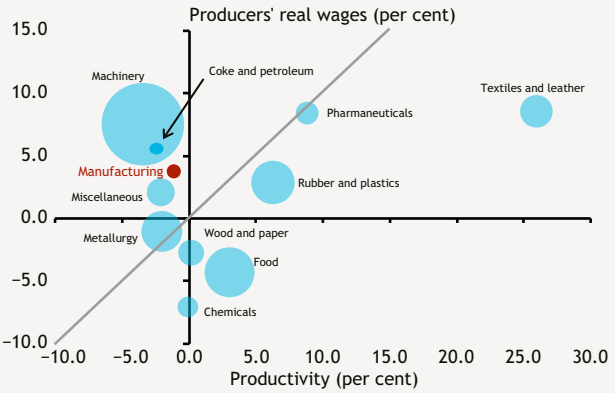
In the first two quarters of 2011, wage increases accelerated in the private sector. The spike in May was followed by an adjustment in June, which may persist in the coming months due to the deterioration in the Hungarian and global economy. In the case of regular wage components, accelerating wage outflows are primarily linked to manufacturing (Chart 4-40), but wages also increased in the sector of market services (Chart 4-41). The wage increase in manufacturing may be the result of the remarkable production results of the first third of the year, which may have been reflected in the increase in hours worked and higher wages. However, it may be a warning sign that real wages in several segments of the manufacturing sector increased at a faster pace than productivity in Q2 (Chart 4-42).

As regards sectors producing for the domestic market, despite weak domestic demand, the most dynamic wage growth has been typically observed in recent months in the service sector (catering, retail) and among firms with lower staff numbers (4-9 and 10-19 employees). In view of the available information on the economic position of the service sector and our past experience – namely, that dynamic wage increases at firms often signalled whitening in the sector in the past – the whitening of the labour market may be reflected in a rise of the current wage index (For more detailed analysis of wage developments in the private sector, see Chapter 6.1).

In 2011 H1, unit labour costs increased slightly because labour costs were increasing, while productivity growth was stagnating. However, since the increase in unit labour costs is still far below the historical average, cost-side pressures from the labour market were weak (Chart 4-43).

Chart 4-42
Developments in productivity and real wages in the sub-sectors of manufacturing*

(2011 Q2, year-on-year change)



** The bubbles show the sub-sector size according to number of employees.*

Chart 4-43
Labour cost, productivity and ULC (unit labour costs) in the private sector

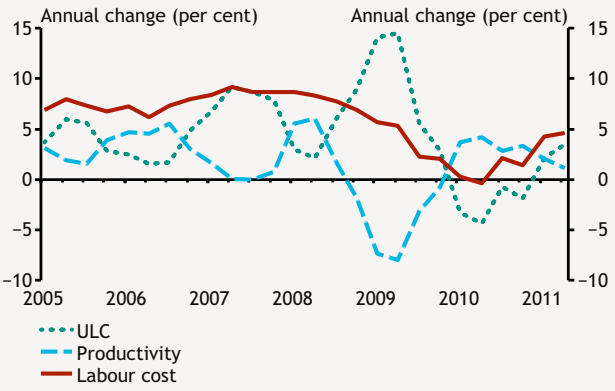
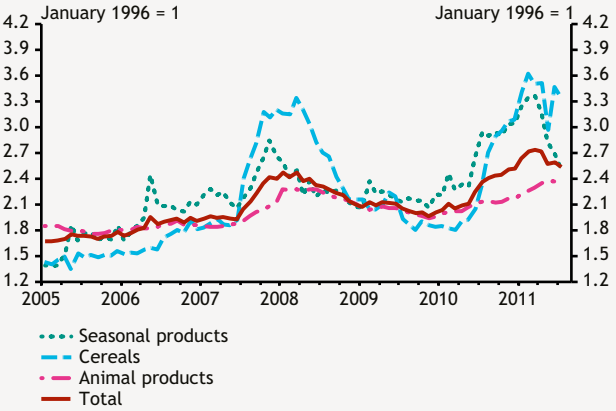


Chart 4-44
Agricultural producer prices*

(price level compared to January 1996)



** 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.*

Wage increases in the public sector can still be explained by the composition effect related to public employment; excluding this factor, the gross average wages of budgetary institutions essentially did not change compared to their June 2010 levels.

Overall, the loose labour market conditions still do not justify any wage increases; consequently, inflationary pressures from the labour market remain low.

4.6.2 PRODUCER PRICES

In line with decreasing commodity prices, the past few months have seen a gradual adjustment of producer prices. As regards unprocessed foods, similarly to the previous increase, the adjustment mainly affected the prices of fruits, vegetables and cereals. Among products of animal origin, only the price of dairy products followed the price of commodities, while high commodity prices were not yet reflected in the price of meat products in H1 (Chart 4-44).

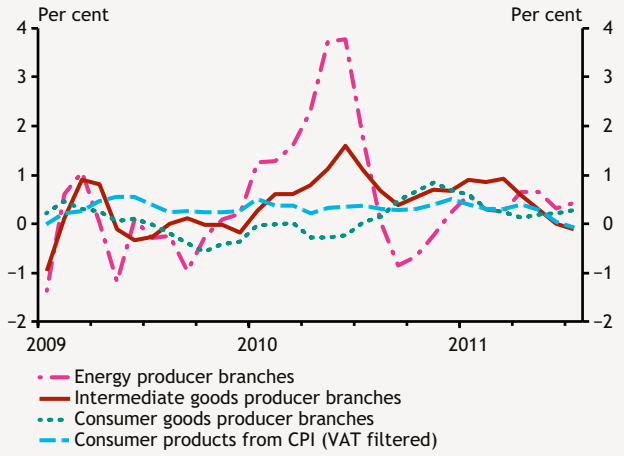
The impact of the high commodity prices of the previous year can be perceived in an ever broader spectrum of the industrial production chain. From 2010 H2, sharp rises in producer prices were also observed among companies producing for further processing and for consumption. Consumer prices have risen at a decelerating rate over the past months, despite the absence of a significant adjustment in costs (Chart 4-45).

4.6.3 CONSUMER PRICES

Inflation dropped to 3.1 percent in July and rose to 3.6 percent in August. The decline was mainly driven by falling food and fuel prices and the historically low changes among administered prices (Chart 4-46). This can be attributed to the rising fuel prices and basis effects. Similarly to European developments, the first half of the year saw Hungarian inflation remain above the target due to the first-round effects of high commodity prices. At this time, the impact of the strong cost shock was reflected in the acceleration of core inflation, but this can almost entirely be attributed to the significant increase in processed food prices. Annual core inflation rose to above 3 percent in August. With the exception of processed foods, core inflation items were again characterised by historically low price changes (Chart 4-47).

Inflation in market services remained at a historically low level, in line with the weak demand environment. In terms of price setting, typically the early months of the year play a determining role in this product category. Since this year saw lower price increases than previous years, inflation in

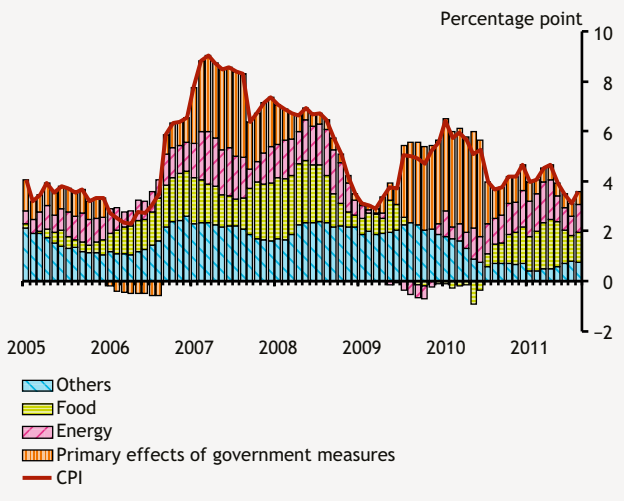
Chart 4-45
Industrial producer prices and consumer prices
(3 months rolling average)



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

Chart 4-46
Consumer price index and core inflation
(annual change)

Chart 4-47
Decomposition of consumer price index



the services sector is expected to remain low for the rest of the year.

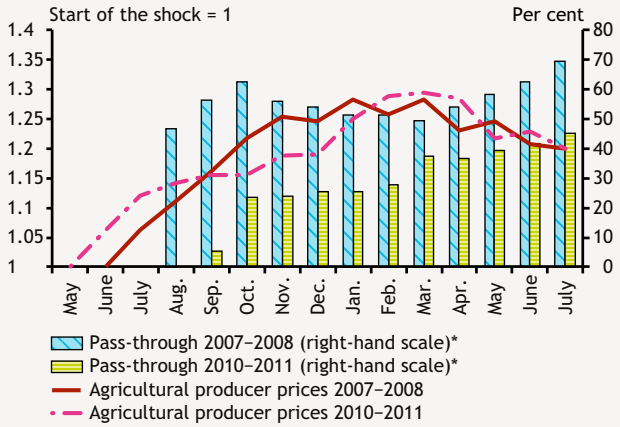
The pricing of traded goods was characterised by strong heterogeneity throughout the year. While the prices of durable goods fell, the prices of non-durables have been on the rise since January. This may indicate that in the case of non-durable goods, the cost shocks of the past six months have offset the effect of weak demand and the inflation-mitigating effect of the stable exchange rate since the beginning of the year. In a weaker-than-average demand environment, the impact of cost shocks cannot be perceived for the time being in the price developments of durable goods. However, given the magnitude and the global nature of the cost shocks, the resulting price pressure is likely to affect an increasingly broad range of traded goods over the next few months.

High commodity prices resulting from globally unfavourable weather in 2010 gradually passed through to the prices of processed foods, giving rise to accelerating inflation in this product category from the beginning of the year. In early 2011, one-off factors, such as markedly high sugar prices, also contributed to the price increases. A partial adjustment has taken place already, but a further decline is expected in the upcoming months. Although the magnitude of the current commodity price shock resembles that experienced in 2007-2008, in the context of weak demand, the upward pressure of the shock has affected processed food consumer prices only slightly and slowly for the time being. The effect of this year's producer price adjustment may mitigate the cost pressures affecting the product category, but this may only be reflected in consumer prices several months later (Chart 4-48).

The increasingly fierce price competition prevailing in the tobacco market pushed down the inflation of tobacco products -which are core inflation items – to historically low levels. Given the fierce competition, figures only slightly reflect the upward pressure of the January excise tax increase.

As regards non-core inflation items, their inflation has been temporarily reduced by lower oil prices, and significantly reduced by falling agricultural producer prices over the past few months. In line with government efforts to stabilise the cost of living for households, contrary to previous years, regulated energy prices did not reflect the global energy price increase. Mainly thanks to this, the inflation of regulated price products can be considered historically low. Having decreased in August, oil prices may have somewhat mitigated the price pressure, and thereby the necessity of future price increases.

Chart 4-48
Pass-through of agricultural producer prices to the consumer prices of processed foods*



** The pass-through shows the change in price level of processed food compared to the agricultural producer price level of 6 previous months.*

Chart 4-49
The range of underlying inflation indicators

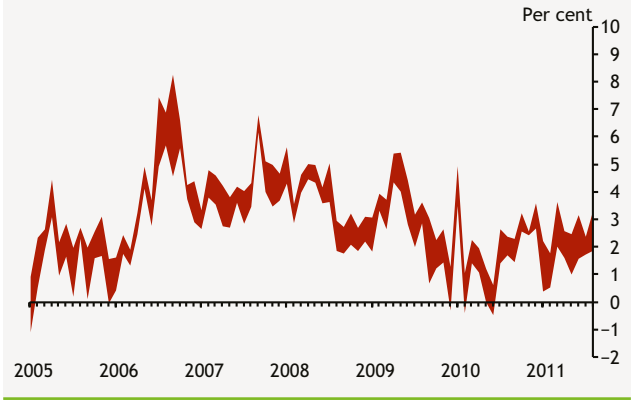
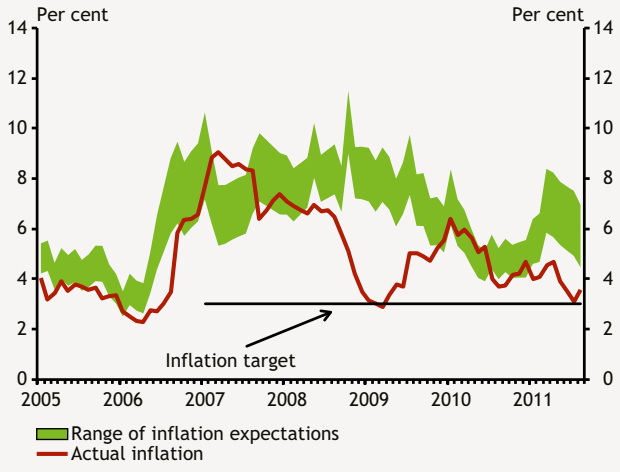


Chart 4-50
Households' inflation expectations



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

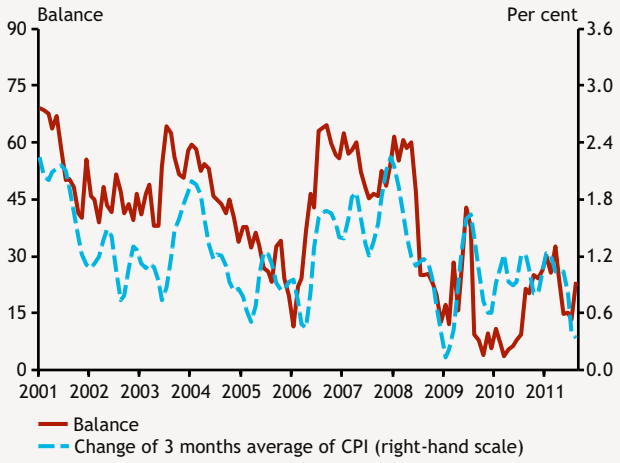
On balance, the inflation developments of recent months have been determined by cost shocks, while domestic demand pressure remained low. The latter is also confirmed by the fact that our indicators capturing inflationary trends have remained in a subdued range (Chart 4-49). Although demand-side inflationary factors are still very weak, we expect the annual rate of inflation to rise until the end of the year. Besides the base effects, the rising fuel price, the technical effect of the changes of the subsidy system of the household energy prices and the excise tax hike – in effect from the end of this year – will increase inflation. All of these factors will keep inflation markedly above the 3 percent inflation target in the months to come.

4.6.4. INFLATION EXPECTATIONS

Since the onset of the crisis, households' inflation expectations continuously decreased until mid-2010. In general, household expectations respond sensitively to rising food and energy prices, and thus the declining tendency was interrupted at the end of 2010, and the indicators measuring expectations began to rise once again. In parallel with the adjustment of food prices, they started to decrease again from mid-2011 (Chart 4-50).

The inflation expectations of the retail sector may also play a decisive role in the development of final consumer prices, as they may convey information about the opportunities of the sector to increase prices. Facing weak demand, the retail sector's expectations of future price dynamics decreased in H1. Although the index is still at a low level, the rise in the recent months may suggest that certain cost factors have not fed through fully to consumer prices that probably have a price increasing effect (Chart 4-51).

Chart 4-51
Expected changes in retail sales prices in the next 3 months* and the actual inflation



** Balance is the difference between the proportion of corporations expecting price increase and price decrease.*
Source: GKI.

5 The balance position of the Hungarian economy

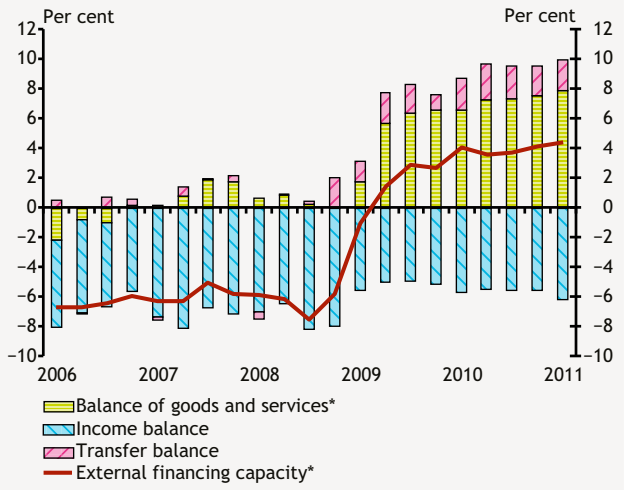
5.1 External balance and financing

As a result of the robust surplus on the balance of goods and services, and the steady inflow of EU transfers, 2011 Q1 saw an external financing capacity of over 4 percent of GDP. In parallel with this, and in addition to the inflow of debt-generating liabilities and the outflow of non-debt liabilities that characterised the first months of 2011, the capital outflow that has been taking place since the onset of the crisis continued as well. Despite minor inflows of debt-generating liabilities, the strengthening exchange rate and the economic growth caused Hungary's net debt-to-GDP ratio to drop to its lowest post-crisis level of 51 percent in Q1.

5.1.1 DEVELOPMENTS IN HUNGARY'S FINANCING CAPACITY

Chart 5-1
The change of the main components of external financing capacity

(seasonally adjusted, GDP proportionate data)



** Data adjusted for the import increasing effects of the difference caused by import prescheduled due to Hungary's accession to the EU and the customs warehouses wound up on account of the accession, as well as the Gripen fighters.*
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.

Calculated using the top-down approach, the country's external financing capacity continued to rise, albeit to a modest degree, and by 2011 Q1 its seasonally adjusted value reached 4.3 percent of GDP (Chart 5-1). Growth in the surplus on the balance of goods and services, and the improving transfer balance – the latter largely defined by EU-transfers – have contributed nearly equally to the rising external balance surplus. Meanwhile, the income balance deficit reflected a slight increase, thereby reducing the country's external financing capacity.

In 2011 Q1, with recovering external markets, exports continued to expand rapidly, with imports also following suit and showing an annual rate of growth of nearly 20 percent, despite modest internal demand. All of this caused the surplus on the balance of goods and services to surge to record highs during the period under review, peaking at around 8 percent of GDP. In Q2, however, with deteriorating external economic conditions, this upswing was also brought to a halt.

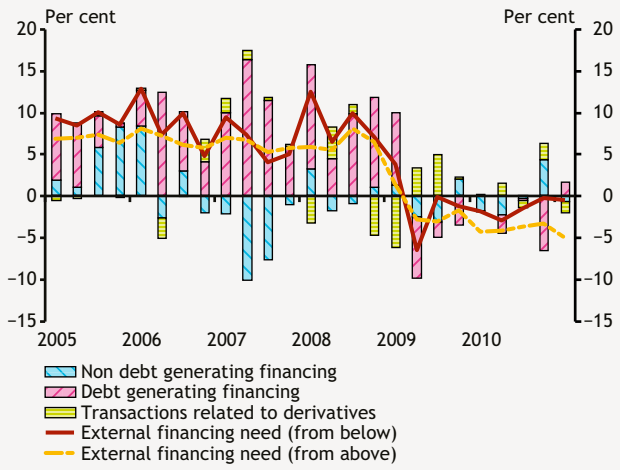
With the inflow of EU transfers having stabilised at a high level, the transfer balance surplus also showed a modest increase, reaching 2.1 percent of GDP during the first three months of 2011. However, the income balance deficit saw a relatively sharper rate of increase: seasonally adjusted figures indicate that its level for 2011 Q1 was 6 percent of GDP, nearly 0.5 percentage points above the value recorded

in previous quarters. This is mainly due to the (estimated[6]) increase in profit expenditures, even though its rate has been tempered by the sector-specific special taxes introduced last year. Moreover, following the stagnation that had characterised recent quarters, net interest income also declined, most likely as a result of the country's debt being gradually repriced at higher interest rate premia.

5.1.2 DEVELOPMENTS IN FINANCING

Contrary to the (top-down) net saving position that rose to record highs during 2011 Q1, the financing capacity calculated using the bottom-up approach failed to reach 0.5 percent of GDP, and thus financing-side developments exhibit dynamics that are substantially different from trends pertaining to the income side and the balance of goods and services (Chart 5-2). This means that the difference between the bottom-up and the top-down financing capacities, i.e. the net errors and omissions for Q1 exceeded 4 percent of quarterly GDP. However, it is important to note that, although significant, this value is far from excessive in a regional comparison. From an investor standpoint, the structure of financing followed an unfavourable trajectory: the net balance of non-debt liabilities (direct investment and shares) shows a minor outflow, with derivatives also producing similar trends, while debt-generating liabilities have increased overall.

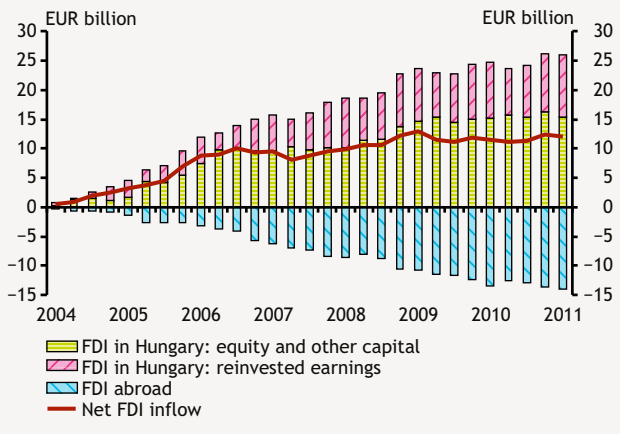
Chart 5-2
Changes in the financial account
*(GDP proportionate data)**



** 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.*

In the case of non-debt liabilities, a net outflow of 0.6 percent of quarterly GDP was observed in 2011 Q1. The two main factors – flows of direct capital and portfolios equity – showed different tendencies. The former was characterised by a net capital outflow – with investments by domestic companies abroad reaching approximately EUR 0.4 billion and FDI invested in Hungary being at near-zero (see Chart 5-3 for trends over a longer timescale), whereas the flow of portfolio equity liabilities was mainly influenced by an increase of nearly EUR 300 million in foreign capital invested in domestic assets, as growth in foreign portfolio investments was negligible. To a significant extent, this latter could be attributed to the fact that, due to monthly payments no longer being collected, Hungarian pension funds did not increase their portfolio of foreign assets during the quarter under review.

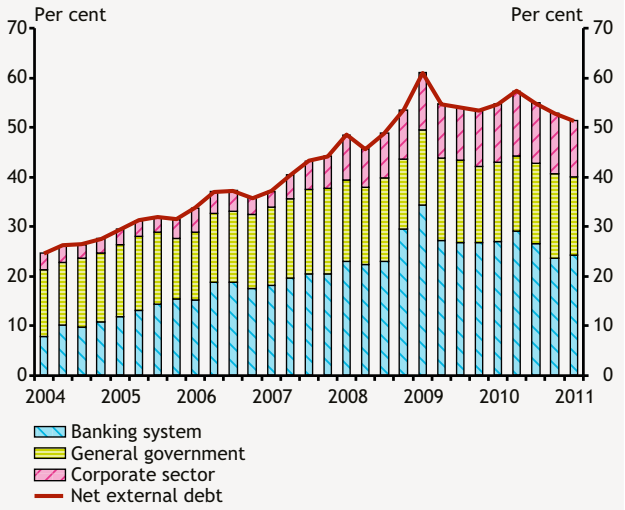
Chart 5-3
Changes in FDI



Meanwhile, following almost a year and a half of debt outflow, the same period saw an inflow of debt-type funds in the range of approximately EUR 400 million, exceeding 1.5 percent of the country's quarterly GDP. It is worth noting, however, that this increase is in part a result of a

[6] Income flow data related to direct capital are based on estimates in the balance of payments statistics. The estimate will be replaced by data based on reported corporate data next September.

Chart 5-4
Net external debt
(in proportion to GDP)



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

technical factor – a rise in Hungary's net government debt[7] towards the EU. Without this, the outflow of debt-type funds would have continued. In addition to the above, developments during Q1 were characterised by the adjustment of the trends[8] observed at the end of 2010: the overall debt of banks grew by approximately EUR 2 billion (or 8 percent of quarterly GDP), although this figure falls behind the extensive outflow of liabilities recorded at the end of last year. By contrast, consolidated external public debt was lowered by more than EUR 1 billion. This decrease was the result of various factors of contrasting effects: a drop in the central bank's portfolio of outstanding repos significantly reduced the banking sector's net debt, which was only partially offset by increases in foreigners' purchases of treasury and MNB bonds and in Hungary's net government debt to the EU. The quarter under review also saw the ÁKK's issue of foreign currency bonds in the amount of EUR 2.5 billion. Since this move also represented a rise in the central bank's foreign currency reserves, the sector's net external debt remained unchanged.

5.1.3 THE EXTERNAL DEBT RATE

Despite an influx of debt-generating liabilities, the net external debt rate continued on its year-long downward path and, by the end of Q1 2011, the forint-denominated indicator stood at 51 percent[9] of GDP. This decrease was a result of the forint's appreciation and, to a lesser extent, growth in GDP. The debt rate reached an all-time low since the onset of the crisis: compared with the September 2008 figures, some of the external public debt has been cut, while the GDP-proportionate net external debt of banks and corporations grew, respectively, by 1 and by over 2 percentage points. On the basis of data we have received, we believe this process may have continued up until very recently; however, the shrinking of the debt rate may have been brought to a halt or even reversed by the rapid appreciation of the Swiss franc.

[7] The increase in net government debt to the EU resulted from the fact that Hungary's receivables from the EU have been reduced by around EUR 0.7 billion. This represents funds transferred by the EU during Q1 that had been pre-financed by the government and were thus posted in the past as receivables from the EU.

[8] At the end of 2010, the banking sector promptly reduced its short-term external liabilities and largely replaced them with the foreign currency liquidity received from the MNB. The latter funds were obtained by the MNB from abroad, primarily through repo transactions. It is the process the correction of which took place during the first quarter of 2011.

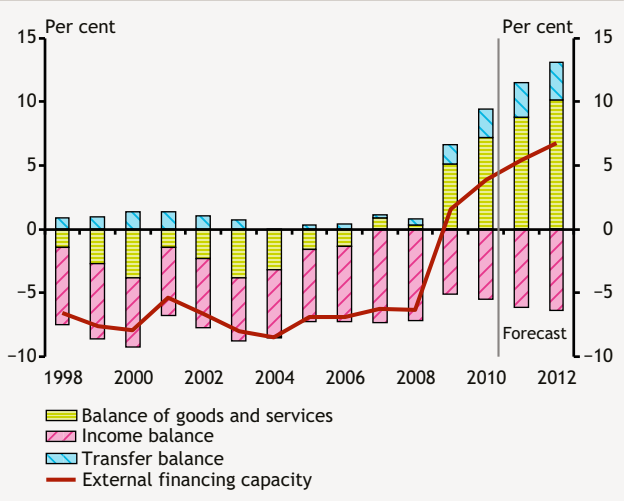
[9] The euro-based external debt rate was 53.4 percent. This deviation is caused by statistical/methodological reasons.

5.2 Forecast for Hungary's external balance position

The external balance position of the Hungarian economy is expected to gradually improve further in the years ahead. According to our forecast, the financing capacity of the country may increase to around 7 percent of GDP in 2012 compared to its current level of above 5 percent, and we expect a further increase for 2013. This growth is driven by the continuously rising surplus of the balance of goods and services on the one hand, and stronger inflows of European Union transfers on the other hand, while we anticipate a deficit increase as regards the income balance.

Deteriorating economic prospects significantly altered our forecast of foreign trade developments. We lowered our projections for both export and import growth across our entire forecast horizon, and in case of the latter the decrease was slightly higher. The slowdown in export dynamics is clearly related to the deterioration of the global economic position, while imports are affected adversely by the deceleration in both the internal and external demand (via the import content of sluggish export growth). Our projection is still based on the assumption that export growth will surpass import growth in the years to come. Consequently, our projection indicating a surplus of the balance of goods and services has been adjusted upwards relative to our forecast in the previous *Quarterly Report on Inflation*.

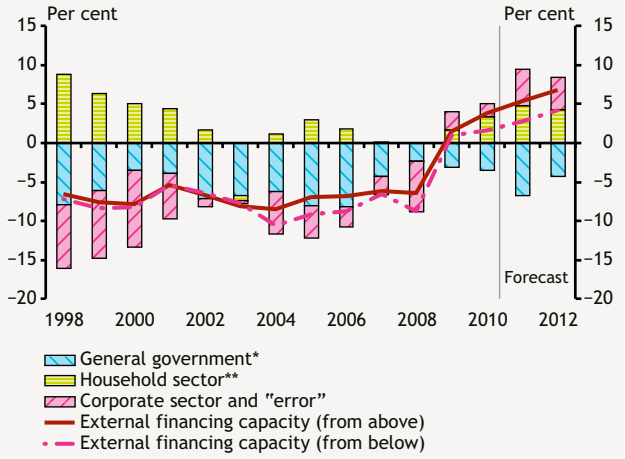
Chart 5-5
The structure of external financing capacity
(as percentage of GDP, per cent)



Our forecast did not change notably with respect to the transfer account; we continue to assume that the substantial net inflows of European Union funds will play a decisive role. These favourable developments are expected to continue until the end of the budgetary planning period in 2013, which implies that EU transfers will contribute to the external financing capacity of the Hungarian economy by 3.5-4.5 percent of GDP.

A gradually increasing income balance deficit will dampen the positive effects stemming from the improvement of the balance of goods and services and the transfer account. We foresee a smaller increase in the deficit for 2012 and a larger increase for 2013 compared to the approximately 6 percent recorded for this year. Although our forecast has not changed considerably since the previous *Quarterly Report on Inflation*, this is the net result of factors with opposing effects. As regards the profit balance, while due to weaker-than-expected internal and external demand we anticipate somewhat lower, but still growing profit

Chart 5-6
Expected changes in the net financing capacity of specific sectors
(as a percentage of GDP)



** In addition to the central government, the augmented general government includes local governments, ÁPV Ltd., institutions discharging quasi-fiscal duties (MÁV, BKV), the MNB and authorities implementing capital projects initiated and controlled by the government but formally implemented under PPP schemes. The augmented SNA deficit takes into account private pension savings.*
*** Net financial saving consistent with the SNA deficit does not contain private pension savings. The official financing saving of households (in the financial account) is different from data on the chart.*

expenditures across the entire time horizon, the path of the interest balance has shifted towards higher deficit. As for the latter, rising risk premia increased, while declining euro yields reduced the expected deficit.

Examining the developments in the savings of specific sectors, we find, once again that the remarkably improving position of the private sector in 2011 combined with the increase in the SNA deficit of the general government led to a small improvement in financing capacity, consistent with the financial account (i.e. calculated using a 'bottom up' method). The considerable improvement of the financing position in 2012 can mainly be attributed to the substantial decline in the borrowing requirement of the general government, whereas the savings position of the private sector is expected to slacken somewhat in comparison to the previous year.

In addition to the factors already known (tax cuts, disbursement of real yields), the VAT refund withheld in previous years is a new item contributing to the major deterioration of the augmented general government position this year. However the deficit may decrease significantly from 2012, assuming implementation of the Structural Reform Programme and the measures of the Convergence Programme.

In 2011, the GDP-proportionate financing capacity of households is expected to be close to 5 percent, and remain elevated despite the slight decline anticipated for the coming years. The improvement observed this year resulted from the tax cut, the strengthening of precautionary considerations, the worse-than-expected credit environment and, as a one-off item, the disbursement of real yields. The dropping out of the latter in 2012 will be partially offset by the scheduled tax measures, which are expected to boost savings. At the same time, we assume that lending activity will reach its lowest point this year, and the slow improvement process starting from 2012 may translate into a slight worsening of the sector's financing capacity.

As regards the corporate sector, improving profitability, subdued investment activity and dynamically increasing EU transfers are still expected to maintain our net savings position in the coming years. In addition, as a one-off effect, the sector's balance for 2011 will be further improved by the VAT refund granted by the government.

5.3 Fiscal position and outlook

In line with the macroeconomic path, we did not incorporate to our forecast the announcements on the budget made by the Government on 16 September, and the fiscal effects of the final redemption with a preferential exchange rate are also not included. The first estimates on the budgetary effects of the announcements made on 16 September are summarized in the 5.1. box.

Primarily owing to the reduction of personal income taxes, the underlying fiscal developments in 2011 point to a substantial easing of close to 3.5 percent of GDP. By contrast, however, in the context of the measures outlined in the Structural Reform Programme (Kálmán Széll plan) and the Convergence Programme, we expect a fiscal restraint of 2.6 percentage points in 2012.

The 2011 ESA balance of the general government is expected to show a 1.9 percent surplus due to the transfer of private pension fund portfolios as an extra revenue item, and the deficit target communicated by the Government – below 2.9 percent excluding a substantial portion of one-off items – may be attainable. It is considered a risk factor, however, that measures related to the cancellation of stability reserves and intended to serve as the basis for spending cuts remain unknown. Therefore, unless budgetary units adjust themselves to more modest appropriations, the ESA balance could turn out less favourably. However, as the budgetary balance will no longer be improved by one-off measures in 2012, the ESA deficit could rise to 3.7 percent[10] despite the partial inclusion of the stability reserve in the base after its cancellation in 2011. Due to deteriorating growth prospects, it is primarily VAT revenue and, to a lesser extent, wage-related taxes and contributions that could end up at levels worse than previously expected. All this can only be partially offset by the Government's additional tax measures.

Since the output gap is closing only slowly over the period 2010–2012, the cyclical component contributes to the 2012 deficit figure by close to 2 percentage points. This implies that, in the context of the measures taken account of in the forecast, fiscal deficit may fall to below 2.5 percent of GDP over the long run following the closure of the output gap, i.e. the convergence of revenues to the trend.

5.3.1 FISCAL IMPACT ON DEMAND

Since one-off items exert a significant influence on the general government balance in 2011 and 2012, we present the fundamental fiscal developments by describing the evolution of the augmented SNA indicator. A change in the SNA balance is a measure of fiscal impulse, gauging the effect of fiscal measures, fiscal developments and the automatic stabilisers on the income position of the other sectors. Fiscal stimulus amounted to 3.4 percent in 2011, to be followed by fiscal restraint of 2.6 percentage points in 2012.

The main contributor to fiscal easing in 2011 was the transformation of the personal income tax regime, which

[10] In line with our forecasting method, we only took account of measures which are likely to be adopted and sufficiently detailed to estimate their fiscal effects.

Table 5-1
General government balance indicators
(as a percentage of GDP)

	2010	2011	2012
ESA balance	−4.3	1.9	−3.7
Augmented SNA balance	−3.5	−6.7	−4.3
Cyclical component	−2.5	−1.8	−1.9
Cyclically-adjusted augmented SNA balance	−1.0	−4.9	−2.3

increased net household incomes by around 1.5 percent of GDP in and of itself. The disbursement of pension fund real yields and the VAT refund granted to economic agents in line with the ruling of the European Court of Justice entailed fiscal easing of 1 percentage point each as a one-off effect.[11] These effects were only partly offset by the curtailment of GDP-proportionate wage costs associated with wage freezes. Overall, in 2011 households and firms will experience GDP-proportionate fiscal stimulus of more than 2 percentage points and around 1 percentage point, respectively.

In line with the Structural Reform Programme and the Convergence Programme, 2012 will see a continued reduction of the public wage bill and in that year transfers will also decrease, which alone means a 0.7 percentage point demand cut. In respect of transfers, reductions are expected in pensions, family allowances, passive unemployment benefits and sick-pay. Contrary to our previous projections, however, we do not take into account the full balance-improving effect that the Government intends to generate through measures affecting the recipients of disability support, and of disability pensioners, as the draft legislation containing the details required for a sound calculation was not presented in July, as envisaged in the Government's

Table 5-2
Decomposition of the fiscal impulse
(as a percentage of GDP)

	2010	2011	2012
SNA deficit	−3.5	−6.7	−4.3
fiscal impulse*		3.4	−2.6
from which			
Change in personal income tax		1.5	0.1
Net change in public wage bill		−0.2	−0.2
Current transfer		−0.1	−0.7
One-off (VAT, real yields)		1.9	−1.9
Other		0.4	0.1
Total impulse for households		2.3	−1.7
Total impulse for corporates		1.2	−0.9

** Change in primary SNA balance.*

[11] This refund took place because the European Court of Justice ruled that the Hungarian VAT refund practice was incompatible with EU law, as it did not allow taxpayers to reclaim excess VAT in the case of purchases where they had not previously paid the consideration in full.

communication. The disbursement of real yields and the one-off VAT refund prescribed by the European Court of Justice will not be repeated in 2012, which implies an additional 2 percentage points of fiscal restraint compared to 2011. We assume that the tax measures will not have a pronounced impact this year. The changes affecting the personal income tax regime on the basis of the Structural Reform Programme and the Convergence Programme represent a fiscal stimulus of 0.1 percent of GDP in total. As part of the reform, the personal income tax base will be increased only by a half of employer contributions, and the tax credit system will be transformed as well. Overall, in 2012 households and firms will experience GDP-proportionate fiscal restraint amounting to around 1.7 percentage points and around 1 percentage point, respectively.

The cyclical component of the general government deficit will decline by 0.6 percentage points between 2010 and 2012, and will be close to 2 percent even in 2012. Based on the evolution of the cyclically-adjusted SNA balance, the deficit may drop below 2.5 percent of GDP once economic performance returns to its medium-term level.[12] Our expectations regarding the balance achievable over the medium term are somewhat obscured by the fact that the cyclically-adjusted 2012 SNA balance includes the special taxes affecting the financial sector and other specific sectors, amounting more than 1.1 percent of GDP. In our understanding, only one half of the special taxes imposed on the financial sector will be maintained in 2013. Accordingly, the decline in the revenues from special taxes may increase the medium-term deficit in its own right. On the other hand, in addition to the measures of the Structural Reform Programme and the Convergence Programme reflected in our baseline scenario, additional savings can be achieved in 2012, and the two programmes envisage further measures aimed at deficit reduction in 2013.

5.3.2 ESA BALANCE

In addition to the fundamental developments, a number of one-off items will have a significant impact on the evolution of the ESA balance in 2011 and consequently, the general government may achieve a surplus of 1.9 percent, despite the increasing SNA deficit. As a result, the deficit target communicated by the Government – below 2.9 percent excluding a substantial portion of one-off items – may be attainable. The transfer of private pension fund assets will no longer improve the ESA balance in 2012. As a result, the ESA balance is set to deteriorate significantly despite the fiscal restraint, and according to our forecast the deficit may reach 3.7 percent of GDP.

[12] In this context, it should be emphasised that the calculation of the cyclical component of the budget involves considerable uncertainty.

Relative to the SNA balance, among the one-off items, the remaining portfolio of those returning from the private pension system after the disbursement of the real yields may improve the balance by 9.5 percentage points. By contrast, the balance may be impaired by around 2 percentage points by the debt consolidation of the Hungarian State Railways (MÁV) and the Budapest Transport Company (BKV), as well as the planned buyout of PPP contracts. The VAT refund prescribed by the ruling of the European Court of Justice will deteriorate both the SNA balance and the ESA balance.[13]

As far as the 2011 ESA balance is concerned, it is considered a risk that measures related to the July 2011 cancellation of the stability reserves – carried out simultaneously with the amendment of the budget act – and serving as the basis for spending cuts have yet to be made public, and the effects of the cancellation on net spending during the first eight months of 2011 could only be detected to a moderate extent. Unless budgetary units and chapters can take effective action and adjust to more modest appropriations, supplier liabilities may surge, and even residual surplus funds could be released. In both of these cases, the 2011 balance would be worse. These effects may be somewhat offset by the fact that, given the timeframe required by the process, we see implementation risk concerning the planned PPP contract buyout scheme and, in the event that some of these contracts are terminated by repurchase only in 2012 instead of 2011, any improvement to year's ESA balance would come at a cost to next year's.

In 2012 the transfer of the private pension funds' assets will not improve the ESA balance anymore. Despite of the restrictive fiscal demand effect the balance will further deteriorate and according to our forecast the deficit may reach 3,7 percent of GDP.

In consideration of the planning circular which provides the basis for the preparation of the budget for 2012, unlike in our previous forecast, we took account of the partial inclusion of the stability reserve in the 2012 basis after its cancellation. As for measures under the Structural Reform Programme, our forecast for 2012 contains a GDP-proportionate balance improving effect of 0.9 percentage points adjusted for direct taxes; meanwhile, regarding the elements of the Convergence Programme, we took into account the freeze on all personnel and material expenses. Our forecast also takes into account the effects of increases in excise and gambling taxes and product fees that were announced following the publication of the previous Report on Inflation. At the same time, worse-than-expected economic developments determining the base effects and

[13] Changes in our forecast relative to the *Public Finance Review* published in July resulted primarily from this ruling.

the tax bases lower revenues by 0.6 percent of GDP. As a result of a slower rate of growth in consumption and lower wage dynamics, it is primarily VAT revenues and, to a lesser degree, wage-related taxes and contributions that could show figures lower than in our previous forecast.

Uncertainties regarding the spending of budgetary units represent upside risks in terms of both the 2011 and 2012 ESA deficit, and this year the PPP buyout scheme, proving to be more protracted than what expected by the Government, could also lead to higher deficits.

Box 5-1
Fiscal impacts of the announced measures

Our public finance forecast associated with the macroeconomic baseline scenario indicates an ESA deficit of 3.7 percent for 2012.

According to the announcement, the Government intends to improve the balance by HUF 450 billion on the revenues side by way of the following measures:

- According to our calculations, raising the normal VAT rate to 27 percent may increase revenues by HUF 150 billion as a direct effect, which is consistent with the Government's expectations. However, the announcement indicated that this revenue would be added to a new, so-called national protection reserve. The reserve may only improve the balance if it is not spent during the year; however until no commitment is made in this respect it increases the expenditure side of the budget by an amount corresponding to the revenue surplus.

- A part of the revenue surplus results from the excise tax and gambling tax increase, which has already been reflected in our baseline scenario as a surplus of HUF 47 billion.

- According to our estimate, fiscal revenues may be boosted by HUF 69 billion as a result of the 1-percentage-point increase in employee contribution, by HUF 24 billion as a result of increasing the contribution base of private entrepreneurs and joint ventures, by HUF 22 billion due to the restricting of loss carry forward and by HUF 8 billion due to the increase in company vehicle tax. In the absence of sufficient details, we cannot estimate the amount of revenues to be generated by the introduction of the online gambling tax and the accident tax.

- Based on our calculations, the simultaneous elimination of the super-gross tax base and the tax credit entails a tax reduction in the range of HUF 20 billion.

Consequently, relative to our baseline projection, the fiscal balance is expected to improve by more than HUF 270 billion in the context of the announced revenue measures, and to deteriorate by close to HUF 20 billion as a result of the personal income tax reform. Meanwhile, the national protection reserve will increase the expenditure side of the budget by an additional HUF 150 billion. Accordingly, the total additional balance improving effect of the revenue measures amounts to more than HUF 100 billion.

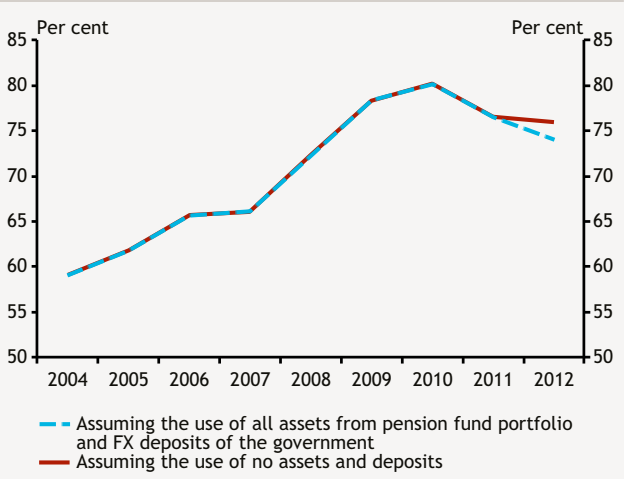
Besides the revenue boosting measures, the Government also announced that, over and above the measures of the Széll Kálmán plan and the inclusion of the elimination of the stability reserve in next year's basis (already reflected in our baseline scenario), it intended to cut expenses by another 1 percent of GDP, i.e. HUF 300 billion. The intention is to achieve these savings primarily by improving efficiency; however, in the absence of sufficient detail we are unable to assess whether this is a realistic estimate.

Among the measures announced by the Government we only took into account the effects of the ones sufficiently detailed to make the calculations. Consequently the 3.7 percent GDP-proportionate deficit forecast indicated in our baseline scenario would drop to 3.4 percent. Therefore, ceteris paribus, in order to achieve the 2.5 percent deficit target set by the Government, the balance should be improved by an additional 0.9 percent of GDP.

5.4 Expected developments in public debt

At the end of 2010 gross general government debt amounted to 80.2% of GDP, which, under our projection, marks a peak in the debt ratio, as we expect a decline in debt relative to GDP from 2011 determined by the private pension portfolio transferred to the Pension Reform and Debt Reduction Fund. In 2012 further decline is expected. The ratio may decline under 75 percent till the end of the year.

Chart 5-7
Gross public debt
(as a percentage of GDP)



In 2011 developments in public debt are determined by the private pension portfolio transferred to the Pension Reform and Debt Reduction Fund. The Hungarian government securities received by the Fund were cancelled by the debt management agency, immediately reducing public debt by 4.7 percent of GDP. Moreover, the gradual sale of the remaining assets partially covered the regular and one-off budgetary expenditures without the need for further debt issuance.

Based on our public deficit forecast, by the end of the year public debt may amount to 76.5 percent of GDP, including the debt consolidation of the public transportation companies announced in the Convergence Programme. If the debt assumption is incomplete or postponed altogether, the debt rate may prove to be somewhat lower. Our forecast takes account of the Government's announcement that an additional EUR 1 billion would be spent on the reduction of public debt over and above the payment of maturing loans and bonds. In our understanding, this implies that the sale of the private pension portfolio will accelerate, and the proceeds will be used to cover the one-off expenses incurred (such as the court ruling regarding the VAT refund). If this holds true, at the end of the year the value of assets remaining in the portfolio will be around HUF 500 billion depending on the actual market value of the securities. Following the repayment of EUR 3 billion loans, the FX deposit holdings of the general government may slightly exceed EUR 1 billion at the end of the year.

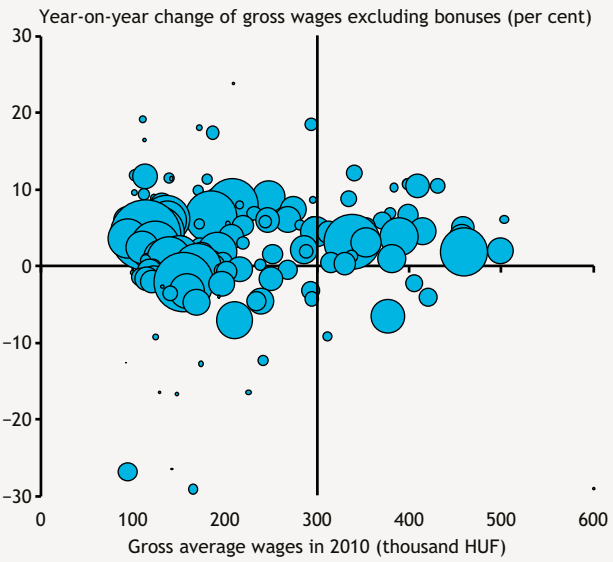
Based on our public deficit forecast and assuming an unchanged exchange rate, 2012 may see a decline in the debt-to-GDP ratio. The private pension fund portfolio and the FX deposit provide the budget with a financing reserve, the utilisation of which could result in a faster reduction of debt, but this might carry risks for the medium-term financing possibilities of the budget.

6 Special topics

6.1 What can be the main factors behind the unexpected acceleration of wage growth during recent months?

Private sector wage dynamics accelerated in the first half of 2011. In the manufacturing sector, this may have been warranted by the positive economic activity at the beginning of the year, but acceleration also occurred among market services, more closely tied to sluggish domestic demand. Moreover, the trend observed in Q1 continued in Q2, despite the substantial deterioration in growth prospects and a dip in industrial output. As a result, the increase in real wages in both manufacturing and services exceeded productivity growth, which lowered the corporate sector's profitability. In our analysis, we seek to find out what factors, more or less independent of the developments of the economic climate, may have triggered this acceleration in wage dynamics.

Chart 6-1
Changes in regular wages in the various sectors among blue collar and white collar workers
(annual change, June 2011)



Note: the size of the bubbles indicates the size of the categories.

CHANGES IN TAXATION

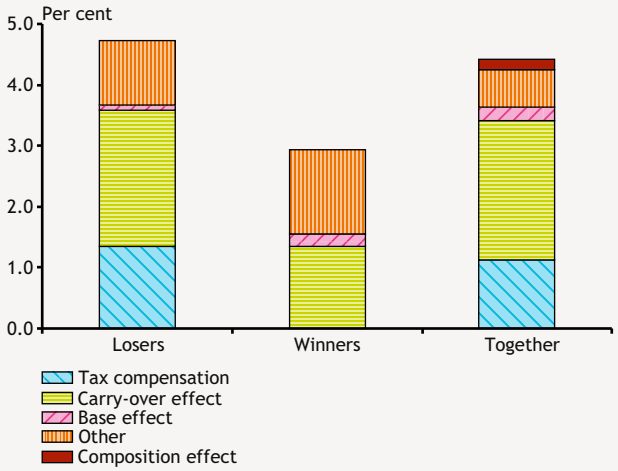
The Government substantially decreased the tax burden on labour on an aggregate level in 2010 and 2011. The easing of the tax burden on labour represents a cut in the relative price of labour, and therefore leads to a decline in the wage share in the short run. Employers – in particular in countries with weaker trade unions – try to keep real wages low and take advantage of tax cuts in order to increase their profits. Over the medium term, however, cheaper labour relative to capital also stimulates labour demand from firms, so employment may increase while the wage share returns to its original level.

The personal income tax change in 2011 affected the differently remunerated employee groups to varying degrees. As presented in the MNB's November 2010 Report on Inflation,[14] workers with a gross wage of under HUF 290,000 – approximately eight-tenths of the workforce – fared worse after the change, in other words if gross wages had remained unchanged, their net wages would have decreased.[15] In the case of employees with higher wages, the opposite applies: their net wages would have increased on average by 10-15 percent even with unchanged gross wages. Based on the above, we would expect the increase in gross wages stemming from the tax cut to be higher among low and average income groups, and more restrained in higher income groups. However, the disaggregated data gleaned from institutional statistics reveal that the

[14] Magyar Nemzeti Bank (2010), *Quarterly Report on Inflation*, November.
[15] Also taking into account the family tax benefit, the number of those losing out on the tax change is lower, but this factor does not play a part in corporate wage bargaining and thus in the developments of gross wages.

acceleration in wage dynamics affected both wage categories (Chart 6-1, 6-2).

Chart 6-2
Breakdown of the changes in regular wages
(annual change, 2011 Q2)



The regular wages of those who lost out on the tax change were nearly 5 percent higher in Q2 on a year-on-year basis (Chart 6-2). The carry-over effect accounts for nearly half of the increase,[16] in other words regular wages increased by approximately 2-2.5 percent compared to the beginning of 2011 in the lower and average income categories. The tax compensation effect stemming from the above may be 1.5 percentage points at most: firms may compensate their employees faring worse on a voluntary basis. This may be justified by the fact that the corporate sector mainly shed itself of its most unskilled labour during the crisis, retaining skilled labour and also started hiring the latter as the economy recovered. It is probable that due to the positive economic prospects still prevailing at the beginning of this year, the sector wishes to retain this qualified labour and is thus compelled to at least offset the net wage loss.

The wages of the winners of the tax change saw their wages increase by 3 percent compared to last year and by approximately 1.5 percent compared to the beginning of this year. Stemming from the mechanism presented above, however, gross wages should have decreased in these income categories. What could be the reason that prevented this from occurring, or at least not being reflected in statistical data?

WHITENING

One of the first reasons that come to mind is the phenomenon of whitening. This may be characteristic of firms that only pay a portion of wages officially, handing over the rest in cash in order to decrease tax and contribution payments. The personal income tax cut allows such firms to whiten their operation, in other words to decrease their extent of tax avoidance in a manner that prevents the wages actually received by employees from shrinking. In this case, the unreported portion of wages will become lower or disappear altogether, while the reported portion will increase. In this case, the gross wage increase reflected in statistics does not have an inflationary effect, as neither the firm's costs, nor the employee's net income increase.

Using the findings of the research carried out at the time of regulatory changes in 2006–2007,[17] we can separately

[16] The carry-over effect refers to the part of the annual index stemming from the previous year, in other words the part of the June 2011 wage index arising from wage raises implemented between June and December 2010. The base effect is felt when salient wage increases (or decreases) in the same period of the previous year distort the current year's annual index downwards (or upwards), even given an unchanged wage level.

[17] Eppich, Győző and Szabolcs Lőrincz (2007), 'Three methods to estimate the whitening-related distortion of the wage statistics', *MNB Occasional Papers*, 66.

Chart 6-3
Changes in regular wages in various sectors compared to December 2010

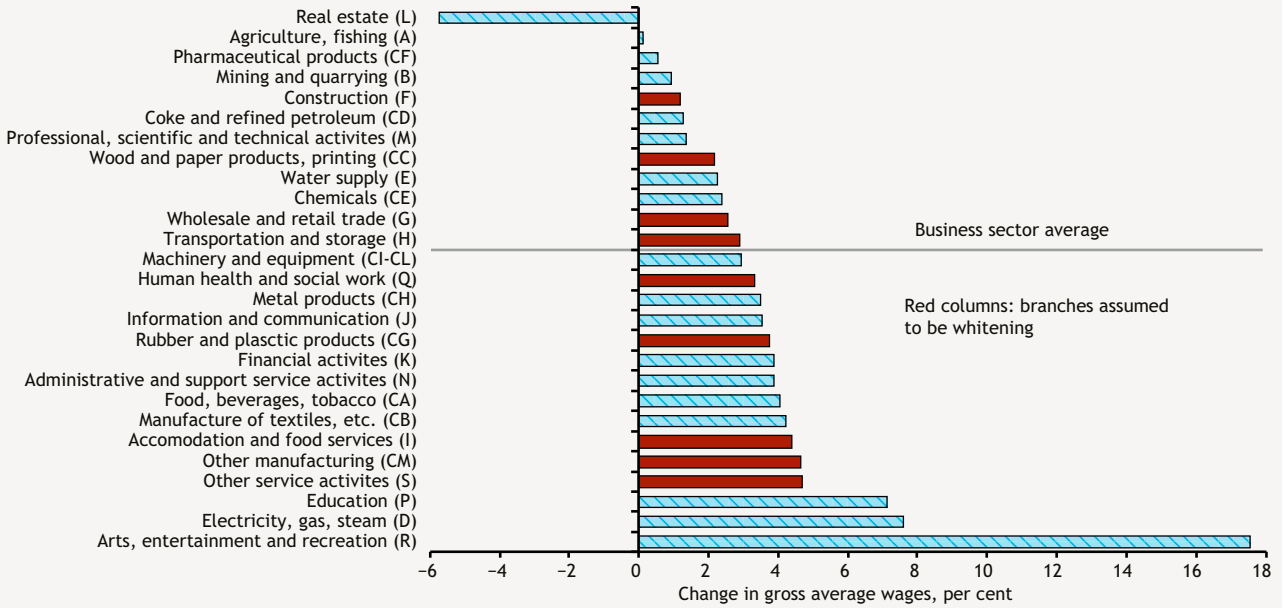
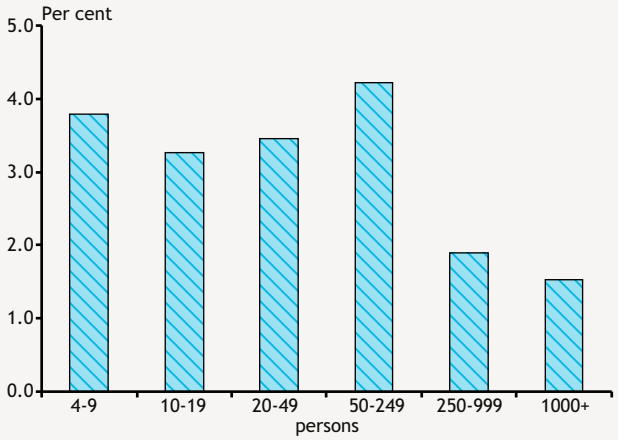


Chart 6-4
Changes in regular wages in various workforce size categories compared to December 2010



examine the sectors and workforce size categories affected by whitening. Private sector regular wages rose by 3 percent since end-2010. The wage increases in several sectors that we deemed as characteristically undergoing whitening surpassed this average, as well as those of firms in smaller workforce size categories (Chart 6-4). It is also true, however, that above-average wage increases also occurred in several sectors not affected by whitening, and the wage dynamics accelerating at the fastest rate were observed among firms with a medium sized workforce of 50-249 employees.

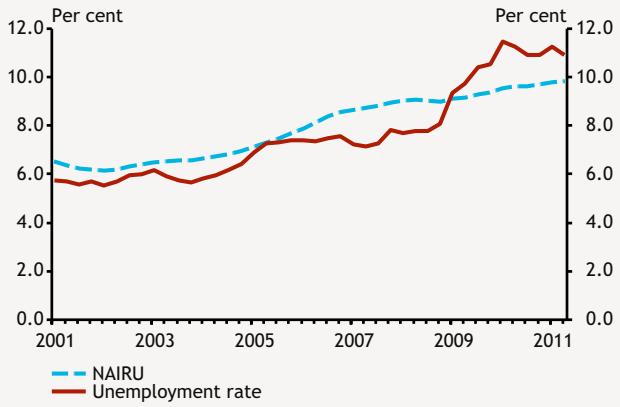
The hypothesis is weakened by the fact that in this category, average wages are lower than HUF 290,000, in other words the average worker was affected negatively by the tax changes, while whitening could in fact be presumed among the winners of the tax change.

TIGHTER LABOUR MARKET

Another possible reason behind rising wages could be a tighter than assumed labour market. One of the most common indicators of labour market tightness is the unemployment gap, i.e. the difference between the current unemployment rate and the Non-Accelerating Inflation Rate of Unemployment[18] (NAIRU). If unemployment remains below its equilibrium, non-inflation generating level (that is

[18] According to the literature, the main factors affecting the NAIRU are the level of social services, the education level of the unemployed or the ratio of long-term unemployed. In practice, the NAIRU is defined using methods that filter out trends (the Hodrick-Prescott filter or multivariate state-space models).

Chart 6-5
Developments in the unemployment rate and the NAIRU

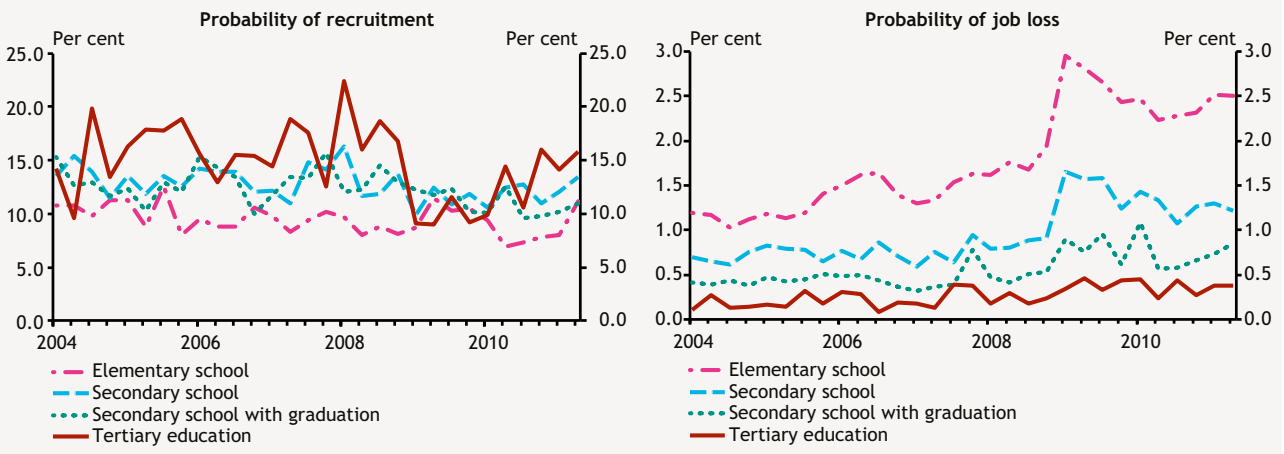


the unemployment gap is negative), based on the logic of the Phillips curve, the growth rate of nominal wages is greater. In such a situation, employees' negotiation position is stronger, and therefore employers are compelled to offer higher wages. In case of a positive unemployment gap, the opposite occurs: the rate of wage growth is more restrained.

Based on our current knowledge, the labour market can be considered as slack in early 2011, and the unemployment gap stands at approximately one percentage point (Chart 6-5). This is corroborated by the number of unsubsidised vacancies, which remains low.

However, there is a possibility for error in the assessment of the NAIRU – which cannot be directly observed – which may in reality be higher and the unemployment gap lower than we currently assume. The possibility of this arises if the labour sought by firms and the qualification structure of jobseekers do not match up. In order to examine this issue, we have broken down the probability of job finding and separation, derived from the quarterly labour force survey, according to education level. Following the onset of the crisis, early 2009 saw the probability of job loss spike for essentially all education levels, then slowly decline gradually; it has not, however, returned to its pre-crisis level as of yet. Accordingly, the probability of finding a job decreased for all education levels from 2009, but took a different turn from 2010. Unskilled jobseekers with no elementary school qualification had a higher chance of finding employment over the past year and a half – the increase in public employment programmes presumably affected this group primarily. In contrast, the probability of finding employment for those with secondary education qualification only shifted minimally from its trough of 2010. However, there was a clear reversal among the unemployed

Chart 6-6
Probability of job loss and recruitment according to education level



with higher education qualification: in 2011 H1, their chances of finding employment had returned to pre-crisis levels (Chart 6-6).

Stemming from the above, firms' labour demand may have shifted towards the most highly qualified employees, who have higher wage demands anyway. As it is this group that presumably found employment the fastest as the economy recovered, the most highly qualified employees were characteristically removed from among the ranks of the unemployed – with the exception of public-sector workers – employers are having a harder time satisfying their demand for such labour. As a consequence of the above, the NAIRU may be closer to the actual unemployment rate than assumed in our baseline scenario.

However, we cannot be entirely confident in such a scenario either. The number of unsubsidised vacancies decreased continuously over the course of 2011, and the Beveridge curve – also used as an indicator of labour market tightness – remains at its 2009 level, which is not indicative of any substantial deviation between the qualification of labour demand and supply.

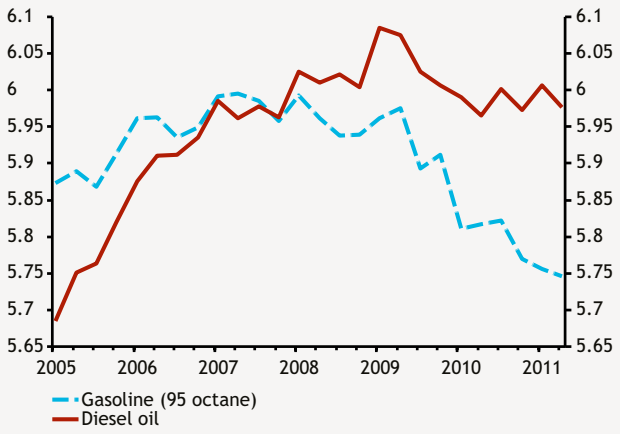
RISKS REGARDING THE BASELINE SCENARIO OF OUR FORECAST

The acceleration of regular wage dynamics observed in the first half of 2011 is surely the sum of several factors. The whitening of certain firms resulting from the changes in the personal income tax regime – i.e. the increase in reported wages without any increase in actually received wages – may surely play a role. Moreover, greater demand for and scarce supply of qualified labour, in other words a tighter labour market, may also drive the increase in wages. The two impacts represent different risks for monetary policy. The whitening of wages does not represent any cost- or demand-side inflationary pressure, as the increase in wages is not real. By contrast, a tighter labour market may represent upward inflationary pressure, particularly if demand for more productive, qualified labour remains elevated.

6.2 Price and income elasticity of demand for fuels

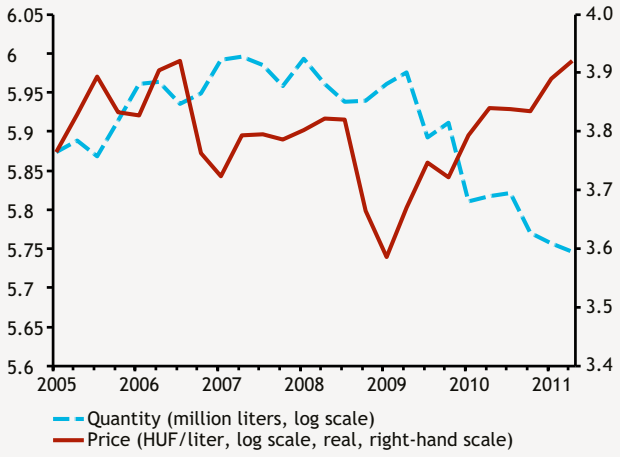
Chart 6-7
Gasoline and diesel oil sales of the member companies of the Hungarian Petroleum Association in Hungary between 2005–2011

(data in million litres, logarithmic scale)



Source: www.petroleum.hu.

Chart 6-8
Quantity and average price of 95 octane gasoline sales, 2005 Q1–2011 Q2



Sources: www.petroleum.hu *and CSO.*

The Hungarian Petroleum Association has been publishing the volume of its member companies' fuel sales since the beginning of 2005.[19] According to the sales figures (Chart 6-7), the growth rate of fuel sales volumes has decreased since 2008–2009. In the case of gasoline, the moderate growth observed until the turn of 2007-2008 reversed, while the relatively quick growth rate previously observed for diesel initially declined, and then sales started to stall.

One can ask the question to what extent this downswing in volumes can be explained by the price and income changes observed during the period. Global prices of crude oil, the most important input for fuels, exhibited hectic fluctuations throughout the period, and this volatility was reflected in domestic fuel prices as well. As Chart 6-8 clearly indicates, the shrinking sales of RON95 motor gasoline coincided with the dynamic growth in gasoline prices between 2009 and 2011.[20] A similar phenomenon occurred in the case of diesel as well; except that the surge in prices observed since early 2009 coincided with stagnating sales.

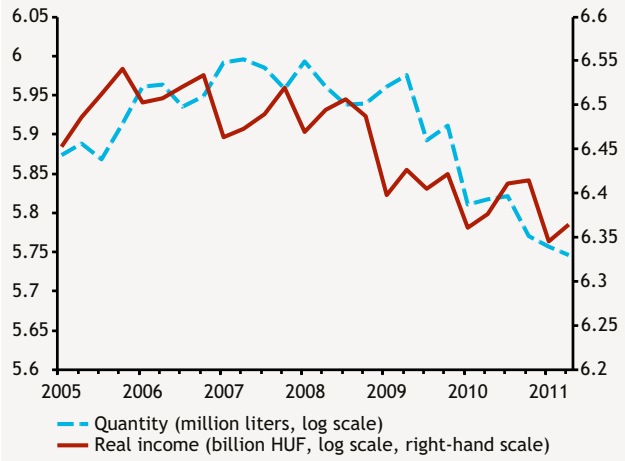
Another possible reason for the downturn in fuel sales may be the deteriorating income position of economic agents. Chart 6-9 appears to confirm this hypothesis: there is an overlap between the drop in gasoline sales and the decline in the real income of households. Again, the only difference in the case of diesel is the fact that it is the interruption of the previous dynamic growth trend that overlaps with the shrinking real income of households.

In the following, we quantify the extent to which rising prices and falling real incomes contributed to the decline in fuel consumption. To this end, we attempt to estimate the price and income elasticity of demand for fuels. Price elasticity is a measure which indicates the percentage by which a 1 percent price increase changes the demand for fuel, while income elasticity expresses the percentage change in demand in response to a 1 percent change in income.

[19] According to the annual reports posted on the Association's website (www.petroleum.hu), between 2006 and 2010 the member companies of the Association represented 77–80 percent of total domestic sales in the gasoline market and around 65–67 percent in the diesel fuel market. Quarterly sales figures are publicly available on the Association's website.

[20] In real terms, RON95 retail prices per litre have increased by around 30 percent since they reached their trough in 2009 Q1.

Chart 6-9
Quantity of 95 octane gasoline sales and households' real income, 2005 Q1–2011 Q2



Sources: www.petroleum.hu and CSO.

In order to estimate elasticities, we estimated the following regression equation:

$$\ln q_t = \alpha + \beta_1 \ln p_t + \beta_2 \ln y_t + \beta_3 TREND_t + \varepsilon_t,$$

where q_t, p_t and y_t stand for the quantity of demanded fuel, average quarterly retail price and real income, respectively. Moreover, the equation includes a deterministic trend capturing changes in fuel consumption triggered by external reasons (e.g. technical development, prevalence of motor vehicle use, vehicle use habits, the gradual advancement of diesel-fuelled vehicles). We estimated the equation on the logarithm of the variables to ensure that the coefficients reflect the effects of percentage changes per unit and as such, they can be directly interpreted as elasticity indicators.

Our estimate takes into account that the price variable in the equation is the fuel retail price emerging under market circumstances in response to supply-demand effects; in other words, it is not only prices that influence the demanded quantity (as suggested by the estimated equation), but vice versa, the demanded quantity also has an effect on prices. We addressed this endogenity problem by the application of instrumental variables: we instrumented the price explanatory variable by the global BRENT crude oil price per barrel, expressed in HUF, which is closely correlated with our actual explanatory variable, but it is not influenced by the dependent variable (Hungarian fuel demand).

According to the results, the price elasticity of gasoline demand and that of diesel demand are nearly identical: −0.542 and −0.534, respectively. The standard errors of the estimates are relatively small, thus the 95 percent confidence interval of the price elasticity parameter is roughly the interval of [−0.36; −0.72] in both cases.[21] In absolute terms, however, the estimated income elasticities

Table 6-1
Estimated price and income elasticities
(standard errors are in parentheses)

	95 octane gasoline	Diesel oil
Price elasticity	−0.542 (0.089)	−0.534 (0.082)
Income elasticity	1.674 (0.260)	2.464 (0.241)
Trend	0.0043 (0.0018)	0.0243 (0.0016)
Number of observations (N)	26	26
Adjusted R-squared	0.9238	0.9582

[21] The exact values are [−0.36; −0.73] for gasoline and [−0.36; −0.71] for diesel.

of demand are much higher: 1.674 for gasoline and 2.464 for diesel. Although the estimated standard errors are somewhat higher for these parameters, the 95 percent confidence intervals are still higher than 1 in both cases. Consequently, based on the definition used in microeconomics, fuel can be regarded as a luxury good (Table 6-1).

We performed various robustness checks for the estimated parameters in Table 6-1. First, we removed some relatively extreme observations at the end of the sample to assess the resulting changes in the estimated parameters. We found that the estimated values barely changed: estimated price elasticities remained between −0.44 and −0.61 throughout, while the estimated values of income elasticities fluctuated between 1.59–1.68 and 2.44–2.58 for gasoline and diesel fuel, respectively.

In another robustness check, on the right side of the equation we also included the lagged values of price variables, allowing for gradual adjustment of demand through several quarters. In this specification we found that, for gasoline demand, the contemporaneous (within-quarter) price elasticity was equal to −0.321, while long-term price elasticity stood at −0.633. By contrast, in the case of diesel the contemporaneous price elasticity did not differ significantly from long-term price elasticity, with both hovering between −0.53 and −0.54. In these specifications income elasticities did not differ significantly from the values estimated in the baseline specification.[22]

In the next step, we estimated the baseline specification on first differences with the trend variable dropped, which would be the correct specification if we suspected that the dependent variable contained a stochastic trend.[23] In this specification, the estimated price elasticities were −0.36 for gasoline and −0.27 for diesel (significant at 5 and 10 percent, respectively), slightly smaller than in the baseline specification. We also obtained smaller income elasticity estimates, 0.97 and 1.08 in the gasoline and diesel equations, respectively (both significant at the 5 percent level, but not significantly different from 1).

We also estimated the above baseline specification by including the lagged value of the dependent variable (i.e. ln q_{t-1}) on the right side. This specification would be accurate in case of a deterministic trend and an auto-correlated (persistent) dependent variable. We received an estimated price elasticity value of −0.33 for both products (gasoline and diesel), while the estimated values of income

[22] Each estimated parameter of these alternative specifications was significant at the 10 percent level.
[23] The unit root test designed to decide this question cannot be applied for such a small sample (N=26).

elasticities stood at 0.90 and 1.36, respectively (all estimated parameters were significant at the 1 percent level and income elasticities did not differ significantly from 1).

In addition, we also examined the potential effect of the assumption that some of the increase in sales in 2006–2007 could have been a result of whitening due to tighter customs inspections. According to our own estimates, 30 percent and 60 percent of the increment of 2007 can be attributed to whitening in the case of gasoline and diesel, respectively. Having adjusted sales data with these values, the estimated value of gasoline and diesel price elasticity was −0.41 and −0.38, respectively (both significant at the 1 percent level), and similarly, estimated income elasticities declined somewhat as well (1.31 and 1.86, with only the latter being significantly different from 1).

Finally, we examined whether the price elasticity of fuels are higher when nominal gasoline prices are higher. (One could imagine, for instance, that economic agents do not respond sensitively to price changes when the price is below a certain 'psychological threshold', whereas they drastically curb their demand above that). For this purpose, we included an interaction variable in the baseline specification above, which is equal to the product of the (log) price and the dummy variable indicating a higher-than-average price level.[24] However, we did not find any differences between the price elasticities observed under lower and higher nominal price levels: the difference was less than 0.01 in both cases (gasoline and diesel oil), not significant in either case.

In summary, we conclude that we found rather moderate price elasticities and somewhat higher income elasticities in all of the specifications. Based on the different specifications we estimate price elasticity to be well under 1 (in absolute terms), somewhere between −0.3 and −0.6, while income elasticity was at least one in all of the specifications. Since the difference between the elasticities is only slightly offset by the fact that price variables are somewhat more volatile than real income, we conclude that the downturn in fuel demand can be primarily attributed to the decline in real income and less to the increase in prices.

Our estimated price elasticity values are very similar to those received in other countries: in a survey paper summarising more than 300 price elasticity estimates,[25] the median values of short and long-term price elasticity estimates fell between −0.23 and −0.43. As for income

[24] Of course, we also instrumented this interaction variable by the interaction variable derived in a similar way from the BRENT price variable.
[25] Espey, Molly (1998), 'Gasoline demand revisited: an international meta-analysis of elasticities', *Energy Economics*, vol. 20 iss. 3, pp. 273–295.

elasticities, the same study – also based on 300 different estimates –reports a long-term median value of 0.81, somewhat lower than our estimate.

From the estimated price elasticities we can estimate the extent to which planned excise tax increase for diesel may boost budget revenues. If the tax is raised by HUF 13 as scheduled, in case of a complete pass-through it will increase existing diesel retail prices by HUF 16.25 (including 25 percent VAT), which is around 4.3 percent at the current price level. With our estimated price elasticity coefficients [–0.3; –0.6], this would lead to a 1.6–2.9 percent increase in tax revenues from diesel sales.

Boxes and Special topics in the Report, 1998–2011

February 2005

May 2005

August 2005

Boxes:

Special topics:

November 2005

Boxes:

May 2006

Boxes:

August 2006

Boxes:

November 2006

Boxes:

February 2007

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Boxes:

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Boxes:

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Boxes:

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Boxes:

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Boxes:

Appendix

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QUARTERLY REPORT ON INFLATION

September 2011

Print: D-plus

H–1037 Budapest, Csillaghegyi út 19–21.