INFLATION REPORT

DECEMBER

2014

'...we shall make no attempt at anything that is contrary to the benefit and interest of the public.'

Mátyás Hunyadi

INFLATION REPORT

DECEMBER

2014

Published by the Magyar Nemzeti Bank

Publisher in charge: Eszter Hergár

H-1054 Budapest, Szabadság tér 9.

www.mnb.hu

ISSN 2064-8723 (print)

ISSN 2064-8774 (on-line)

Pursuant to Act CXXXIX of 2013 on the Magyar Nemzeti Bank, the primary objective of Hungary's central bank is to achieve and maintain price stability. Low inflation ensures higher long-term economic growth and a more predictable economic environment, and moderates the cyclical fluctuations that impact both households and companies.

In the inflation targeting system in use since August 2005, the Bank has sought to attain price stability by ensuring an inflation rate near the 3 per cent medium-term target. The Monetary Council, the supreme decision-making body of the Magyar Nemzeti Bank, performs a comprehensive review of expected developments in 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, financial and capital market trends and risks to stability.

In order to provide the public with a clear insight into how monetary policy works 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 Directorate Economic Forecast and Analysis, the Directorate Monetary Policy and Financial Market Analysis, the Directorate Fiscal Analysis and the Directorate Financial System Analysis, as well as the macroeconomic developments underlying these forecasts. The forecast is based on the 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 under the direction of Dániel Palotai, Executive Director of the Directorate Monetary Policy. The Report was prepared by staff at the MNB's Directorate Economic Forecast and Analysis, Directorate Monetary Policy and Financial Market Analysis, Directorate Fiscal Analysis and Directorate Financial System Analysis. The Report was approved for publication by Dr. Ádám Balog, Deputy Governor.

The Report incorporates valuable input from other areas of the MNB and the Monetary Council's comments.

The projections are based on information available for the period ending 11 December 2014.

CONTENTS

LIST OF BOXES

THE MONETARY COUNCIL'S STATEMENT ON MACROECONOMIC DEVELOPMENTS AND ITS MONETARY POLICY ASSESSMENT

In the Monetary Council's judgement, persistently loose monetary conditions are consistent with the achievement of price stability.

In the Council's judgement, with the easing cycle completed, maintaining loose monetary conditions for an extended period is warranted by the medium-term achievement of the Bank's inflation target and a corresponding degree of support to the real economy. In addition to the primary goal of meeting the inflation target, the Council also takes into account the condition of the real economy and incorporates financial stability considerations into its decisions.

Global economic growth continues at a moderate pace. The low inflation environment is likely to persist for a sustained period.

Significant differences remain across the individual regions in terms of economic growth. The recovery in the euro-area economy has been slow and fragile, while strong growth in the US is likely to continue looking ahead. Growth has been slowing in the larger emerging market economies. Global inflation remains moderate, in line with the decline in commodity prices, particularly the sharp drop in crude oil prices and weak demand, and inflationary pressure in the global economy is likely to remain moderate for a sustained period looking ahead. There have been differences in the monetary policy stance of globally influential central banks in recent months; however, monetary conditions remain loose overall and, consequently, global interest rate and liquidity conditions continue to be supportive.

Inflation in Hungary is likely to be significantly below the inflation target next year, and rise to levels around 3 per cent only in the second half of the forecast period.

The Council expects inflation to be significantly below the inflation target next year, and rise to levels around 3 per cent in the second half of the forecast period. In recent months, inflation has been lower than the projection in the September issue of the Inflation Report, mainly on account of the sharp decline in commodity prices, the low food prices and weak demand. In the first half of the forecast period, domestic inflation is likely to be substantially below the target, mainly reflecting cost shocks having downside effects on inflation as well as the weak demand and inflation environment in Hungary's major trading partner countries. In the second half of the forecast period, inflation is likely to move in line with the inflation target, reflecting the recovery in activity and the increase in wage dynamics, as the effects of cost shocks fade away. Inflation expectations anchored around the target are likely to ensure that price and wage-setting will be consistent with the inflation target.

In the Council's judgement, domestic economic growth may continue in a balanced pattern.

The recovery in the real economy has continued over the past quarter, with output rising across most sectors on an annual basis. At the forecast horizon, domestic demand is expected to make the largest contribution to growth. Subdued global activity and the slowdown in the euro area economy are likely to act as a drag on export growth in 2015; however, the contribution of net exports to growth is likely to increase in the second half of the forecast period. The extended and prolonged Funding for Growth Scheme is likely to promote corporate investment next year, but weak global economic activity abroad and lower receipts of EU funding are likely to work in the opposite direction. Households' investment activity is expected to rise gradually from its historically low level. As seen in previous quarters, the gradual improvement in employment and rising household real income due to low inflation are likely to play a key role in the recovery in household consumption. The uniformity decision of the Curia concerning household loans will effectively contribute to the reduction of existing debts thus household net financial wealth is expected to increase, accelerating the deleveraging process. The conversion of foreign currency loans into forint is expected to reduce uncertainty surrounding households' future income and wealth position, thereby strengthening consumer confidence and supporting the recovery in consumption and domestic demand.

Hungary's financing capacity remains high and external debt is falling.

The external position of the economy amounted to nearly 8 per cent of GDP in the second quarter of 2014. Over the coming year, the trade surplus is expected to rise despite the increase of imports driven by the pick-up in consumption and investment, reflecting the improvement in the terms of trade and, from 2016, the recovery in external demand. The surplus on the transfer account is likely to fall from its historical high as the budget cycle of European Union funding ends. As a result of the two offsetting effects, Hungary's current account surplus and external financing capacity are likely to stabilise at a high level in the coming years. Consistent with this, the country's external debt ratios, key in terms of the country's vulnerability, are likely to continue to decline. The Bank's self-financing programme, the conversion of foreign currency loans into forint and the provision of foreign currency funding by the Bank related to conversions will contribute positively to the change in gross debt.

The Hungarian risk premium has fallen in the past quarter and sentiment has been generally favourable in global financial markets.

International investor sentiment has been generally favourable in the past quarter. Global risk appetite fell in the middle of October, but sentiment in financial markets began to improve from the end of the month. The positive turnaround in sentiment reflected the release of favourable macroeconomic data in the US, the launch of the ECB's asset purchase programme, monetary easing by the Bank of Japan, the reduction in interest rates in China and the continued decline in crude oil prices. Of the domestic risk indicators, the CDS spread has been broadly unchanged over the past quarter and foreign currency bond spreads have fallen. Long-term yields on forint-denominated bonds have declined significantly in the period since publication of the September Inflation Report. The forint has appreciated against the euro in the past quarter, due mainly to country-specific factors. Hungary's persistently high external financing capacity and the resulting decline in external debt have contributed to the reduction in its vulnerability. In the Council's judgement, a cautious approach to monetary policy is warranted due to uncertainty in the global financial environment.

The macroeconomic outlook is surrounded by both upside and downside risks. Downside risks to inflation increased.

Overall, downside risks to inflation increased relative to the September Report projection. The Monetary Council considered three alternative scenarios around the baseline projection in the December Report, which, if materialise, might influence significantly the future conduct of monetary policy. In the alternative scenario assuming persistently lower oil prices, the decline in the price of oil is mainly driven by supply-side factors. The lower inflation environment points in the direction of looser monetary conditions than assumed in the baseline scenario and economic growth may be stronger. The alternative scenario assuming persistently weak external demand implies downside risks to growth and inflation, and therefore looser monetary conditions ensure the achievement of the inflation target. The intensification of geopolitical tensions, associated with a decline in external demand, could lead to a sudden, sharp rise in the risk premium. As a result, exchange rate depreciation might raise inflationary pressure, and therefore a tighter monetary policy stance might ensure that the inflation target is met at the forecast horizon.

In the Council's judgement, there is a degree of unused capacity in the economy and inflationary pressures are likely to remain moderate in the medium term. The negative output gap is expected to close gradually at the monetary policy horizon. Looking ahead, therefore, the disinflationary impact of the real economy is likely to diminish. With current monetary conditions maintained, inflation is likely to move into line with the target in the second half of the forecast period, despite disinflationary trends in external markets. The Council judges that, based on available information, the current level of the central bank base rate is consistent with the medium-term achievement of price stability and a corresponding degree of support to the real economy. If the assumptions underlying the Bank's projections hold, achieving the medium-term inflation target points in the direction of maintaining current loose monetary conditions for an extended period.

SUMMARY TABLE OF THE BASELINE SCENARIO

(Forecast based on endogenous monetary policy)

	2013	2014	2015	2016
	Actual	Projection		
Inflation (annual average)				
Core inflation	3.3	2.2	2.4	3.3
Core inflation without indirect tax effects	1.5	1.4	2.2	2.8
Inflation	1.7	-0.2	0.9	2.9
Economic growth				
External demand (GDP based)	1.0	1.5	1.6	2.3
Household consumption expenditure	0.1	1.8	2.8	2.3
Government final consumption expenditure	2.6	1.4	-0.5	-1.0
Gross fixed capital formation	5.2	13.9	1.8	-1.0
Domestic absorption	1.2	4.3	1.8	0.8
Export	5.9	8.1	6.3	6.9
Import	5.9	9.8	6.2	6.1
GDP	1.5	3.3	2.3	2.1
External balance[1]				
Current account balance	4.1	4.2	5.1	6.0
External financing capacity	7.8	7.9	8.0	7.8
Government balance[1,5]				
ESA balance	-2.4	-2.5	-2.4	-1.9
Labour market				
Whole-economy gross average earnings	3.4	2.2	3.7	3.1
Whole-economy employment	1.6	5.1	1.0	1.8
Private sector gross average earnings[2]	3.6	4.2	4.0	4.8
Private sector employment	0.8	4.8	0.8	0.8
Unemployment rate	10.2	7.7	7.6	6.6
Unit labour cost in the private sector[3]	2.0	5.9	1.5	3.0
Household real income[4]	1.8	3.0	2.4	1.5

[1] As a percentage of GDP.
[2] According to the original CSO data for full-time employees.
[3] Private sector unit labour cost calculated with full time equivalent domestic employment.
[4] MNB estimate.
[5] With complete cancellation of free reserves.

1. INFLATION AND REAL ECONOMY OUTLOOK

In the past quarter, the Hungarian economy continued to expand, while inflation remained low. In line with rising output, employment increased, while private sector wage dynamics remained stable. In the autumn months, inflation developments were weaker than expected in the September forecast, and the annual inflation rate remained negative, primarily due to the significant decline in oil prices.

In the subsequent quarters, cost-side inflationary forces may remain very subdued. In 2014 and 2015, inflation is likely to remain substantially below target and will approach the target value of 3 per cent only towards the end of the forecast horizon. Compared to our September forecast, lower inflation is expected next year, primarily because of the significant decline in commodity prices. When the first-round impact of supply shocks fades out, inflation may rise close to the target with the improvement in domestic demand and wage dynamics. Recently stabilising inflation expectations may contribute pricing and wages being in line with the inflation target over the medium term, in parallel with the recovery of domestic demand.

Domestic demand may be the main driving force of economic growth in the years ahead. Improving labour market conditions, accommodative monetary policy and the gradual reduction of the uncertainty related to households' financial outlook all support domestic demand. In addition, the significant decline in commodity prices reduces production costs, and low inflation will boost real wages for a broad range of domestic agents in the economy. In the period following the crisis, consumption decisions were primarily determined by the high debts of households. With the gradual decrease in the volume of debts in recent years, debt burdens may restrict consumption less and less, while the government measures following the legal uniformity decision of the Curia on household loans will effectively contribute to the reduction of existing debts. Looking ahead, the conversion of foreign currency loans may reduce the need for precautionary savings against the uncertainty regarding households' financial wealth and income position. The persistently weak growth in Hungary's most important trading partner, the euro area, as well as the Russia-Ukraine conflict may reduce Hungarian export dynamics in the quarters to come. Net exports may contribute to growth to an increasing extent in 2016, in parallel with the strengthening of the international business cycle.

With continued economic growth, the number of people employed in the private sector may rise as well. Extension of the public work schemes may also contribute significantly to higher employment. As a result of improving labour market conditions, the unemployment rate may decrease over our forecast horizon. Free capacities on the labour market will decrease, facilitating a gradual improvement in wage dynamics.

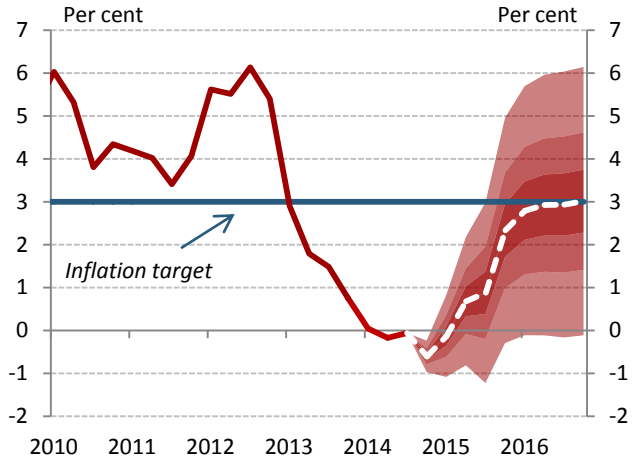
The external financing capacity of the Hungarian economy may remain considerable in the coming years, which will help to further reduce net external debt. The budget deficit may remain below 3 per cent of GDP this year and next year, and if a disciplined fiscal policy is continued, the government's deficit target is likely to be reached.

All in all, the real economy may continue to exhibit disinflationary effects over the entire forecast horizon, as a result of two opposing developments. The output of Hungary's trading partners may fall short of its potential level for a longer period, which will reduce capacity utilisation in the export sector and result in low imported inflation. By contrast, domestic demand is set to expand over the forecast horizon, offsetting the disinflationary impact of the external environment. According to our forecast, the output gap may close by the end of 2016.

1.1. Inflation forecast

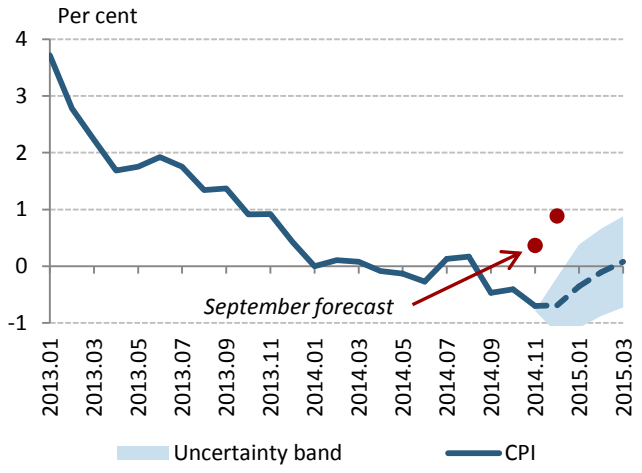
Compared to the September Report, our inflation forecast for 2015 has decreased significantly, primarily as the result of the significant drop in commodity prices. Due to the slower growth in the world economy and the euro area, imported inflation may remain low. In parallel with the continued revival in household consumption and the slow increase in wage dynamics, the consumer price index may gradually rise and approach the 3 per cent medium-term target by the end the forecast horizon.

Chart 1-1: Fan chart of the inflation forecast



Source: MNB

Chart 1-2: Monthly evolution of the near-term inflation forecast



Note: Annual change. The uncertainty band shows the root mean squared error of previous years' near-term forecasts.
Source: MNB

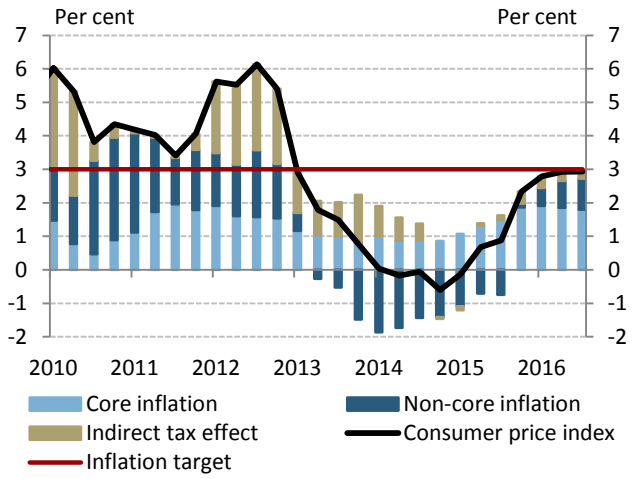
Inflation is likely to remain substantially below target in 2015 and to approach the target value of 3 per cent representing price stability by the end of the forecast horizon. Cost-side pressures remain exceptionally low in the Hungarian economy. Due to the recent significant decline in oil prices in particular, we expect inflation to remain below the September projection during the first half of the forecast period. In the second half of the horizon, as the direct effects from the negative cost shocks fade and due to improving domestic demand, we expect inflation to approach the target value (Chart 1-1).

According to our near-term projections, inflation may remain negative in the months ahead and then gradually rise from the first half of 2015. All in all, inflation may be around –0.2 per cent this year and around 0.9 per cent next year.

The low inflation next year can mainly be explained by cost-side factors. Oil prices dropped significantly at the end of 2014, and the price dynamics of regulated products and imported products may also remain subdued. Inflation in the euro area, Hungary's main trading partner, has remained subdued in recent months, and according to expectations it will remain substantially below the ECB's target over the entire forecast horizon. In line with this, external inflationary pressures in both processed and unprocessed products will remain very subdued. These disinflationary impacts are only partly offset by tax changes in next year's budget, which will gradually come into force (see Box 1-1). The rate of annual inflation is expected to rise from the middle of next year.

The main factors determining inflation trends over the medium term are aggregate demand and the expectations of economic agents, which suggest that inflation will gradually approach the target. The currently negative output gap gradually closes over the forecast horizon. Therefore, the disinflationary effect of the real economy will weaken. The revival in consumption demand may be supported by the improving labour market conditions, as well as by the measures affecting borrowers with foreign exchange loans, through the easing of precautionary motives. Households will be less exposed to exchange rate movements, which will reduce uncertainties

Chart 1-3: Decomposition of the inflation forecast



Source: MNB

Table 1-1: Details of the inflation forecast

		2014	2015	2016
Core inflation		2.2	2.4	3.3
Contribution to inflation		*1.4*	*1.6*	*2.2*
Non-core inflation	Unprocessed food	–3.9	2.9	4,0
	Gasoline and market energy	–1.7	–7.0	2,4
	Regulated prices	–6.6	–0.6	2,2
	Total	–4.7	–1.8	2,6
Contribution to inflation		*–1.6*	*–0.6*	*0.8*
Inflation		–0.2	0.9	2.9

Note: The subgroups may not sum to the aggregate figure due to rounding.

Source: MNB

related to their income position and financial situation.

Unit labour cost dynamics in the private sector may pick up in the second half of the forecast horizon. The reduction of free capacities and increasing labour market tightness leads to higher wage dynamics. This may be partly offset as productivity gradually increases in parralel with economic growth. As inflation expectations align with the central bank's target, they may help maintain wage and price dynamics at levels consistent with the inflation target.

From the current low level, core inflation adjusted for indirect taxes may rise slowly in parallel with the pick-up in domestic demand and gradually increasing wage dynamics. Core inflation is expected to gradually rise over the forecast horizon, owing to the ongoing revival in consumption demand, as well as to wage dynamics slowly increasing with the reduction in free labour market capacities. In addition to improving demand conditions, the increasing tax obligations of the retail trade sector may also be partially reflected in consumer prices. However, the decline in oil prices may also feed into core inflation via reduced production costs, thus mitigating the increase in core inflation (Chart 1-3, Table 1-1).

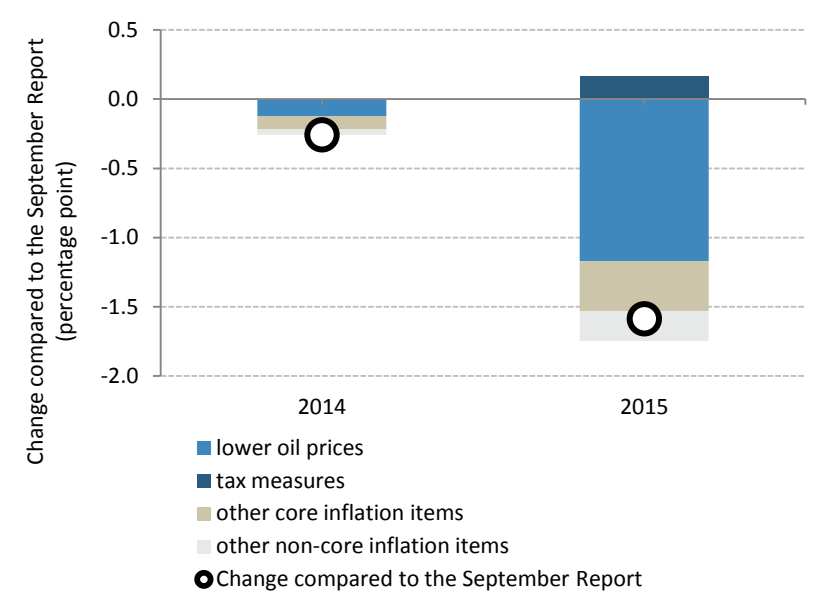
The price index of non-core items may develop considerably lower than the baseline projection of the September Inflation report. The significant recent decline in oil prices points to a reduction in the inflation of these products. In addition, owing to globally favourable food harvests and abundant stocks, unprocessed food prices also have a disinflationary impact over the short term. The low dynamics of regulated prices continue to contribute to muted non-core inflation (Chart 1-3, Table 1-1).

The impact of government measures on inflation may remain moderate even with next year's new tax measures. Tax changes gradually coming into force in 2015, which primarily affect tobacco products, point to rising inflation. At the same time, the additional reduction in regulated energy prices implemented in the autumn of 2014 reduces the dynamics of the price index. In our forecast, we assume unchanged regulated energy prices over the entire forecast horizon. Non-energy regulated prices may develop in line with the subdued inflation environment (Table 1-1).

Box 1-1: Factors behind the revision of our inflation forecast

In our current forecast, we project a 0.9 per cent inflation rate for 2015, compared to the significantly higher 2.5 per cent inflation figure expected in our September Report. **There are several reasons behind this substantial revision, with the external assumptions used for the forecast playing the main role** (Chart 1-4).

Chart 1-4: Change of the inflation forecast in 2014-2015



Source: MNB

- **Global oil prices have fallen significantly since the September Inflation Report.** The Stock market exchange price for North Sea Brent crude oil, the benchmark in Europe, fell by 30 per cent in USD terms and by 27 per cent in EUR terms, bringing the price to around USD 65 per barrel by the editorial deadline for this Report. On the whole, the revision of our forecast for next year can be largely attributed to the lower oil prices.
- **Inflation data received in the autumn also proved to be lower than expected.** With regard to core inflation items, the difference resulted primarily from a steep decline in highly volatile airfare prices in September, and a downward drift in processed food prices in October. Falling oil prices may have contributed to the former, while the latter may have been affected by the Russian embargo. The carry-over effect of these autumn price declines will also influence inflation in 2015.
- As regards the product group subject to **administered prices,** landline calling rates and the prices of school books decreased as well. Furthermore, in line with the generally lower inflation environment, we expect to see more subdued dynamics in non-energy administered prices next year.
- **Government measures coming into effect in 2015** also contributed significantly to the changes in our projection. From January 2015, large retail food chains are required to pay an increased food chain supervision fee. The scope of tax on unhealthy food and the environmental protection product fee will be expanded to include more products. Moreover, from February of next year, tobacco factories and wholesalers must pay an extraordinary health care contribution, and a new supplier of tobacco retailers will be introduced from the middle of the year. After the change has come into effect, tobacco shops will be required to order their products exclusively from the central tobacco supplier. In addition to the above, our previous forecast was based on the assumption that the excise duty on tobacco products would be raised in 2015 in accordance with EU tax harmonisation rules.[1] However, based on the latest information available, this will not take place next year in the form it had been

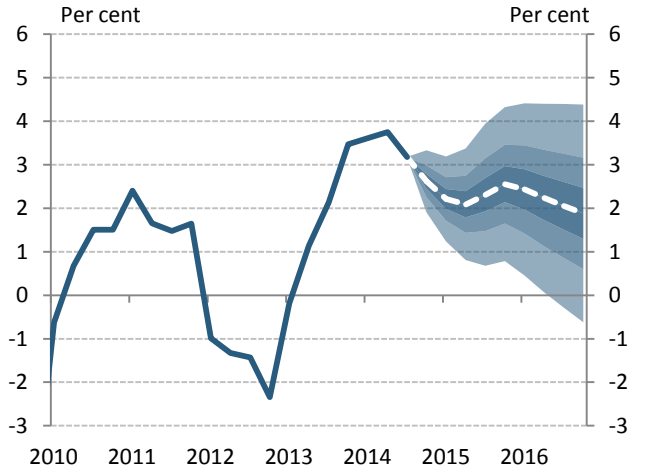
[1] In essence, it is aimed at ensuring convergence between the excise taxes imposed on tobacco products in EU Member States in accordance with European Union directives. The convergence would help ensure a high level of protection for human health on the one hand, and reduce fraud and smuggling within the Union, on the other hand.

envisaged. As a result of the new measures, only the specific duty part of the excise tax would increase, while its ad valorem part would be reduced. As a net result of the government measures, our inflation forecast for 2015 is slightly higher overall, driven primarily by the changes affecting tobacco products. Most of the effect of the new tax rules may occur from the second and third quarters of 2015 as the central supplier of tobacco retailers will be set up and operational in the second half of the year. Consequently, the new measures may well have an impact on inflation figures in 2016 as well. While **tax-adjusted inflation** – a priority monitored by monetary policy – is expected to reach the 3 per cent target only **at the end of the forecast horizon** in parallel with the gradual closure of the output gap, the **consumer price index** may **hover around the target from as early as the second half of 2016.**

1.2. Real economy forecast

Economic growth, which has been dynamic this year by international standards as well, may continue at a more moderate pace next year. Economic growth will primarily be supported by domestic demand next year, while net exports may contribute to growth to a greater extent in 2016. Improvement on the labour market, low inflation, low interest rates, and the gradual easing of precautionary motives will all foster internal demand. With the gradual reduction in the indebtedness of the population, the deleveraging process may hinder consumption growth to a smaller degree than previously. Along with growth in demand, rising corporate investment is supported by the extension of the Funding for Growth Scheme. The volume of government investment may drop from the present high level as the base effects of the funds drawn down from the EU budgetary cycle of 2007-2013 run out. The moderate growth of the world economy and the euro area hinders the dynamics of Hungarian exports. Net exports may contribute to growth positively again in 2016, in parallel with the strengthening of our sales markets.

Chart 1-5: Fan chart of the GDP forecast



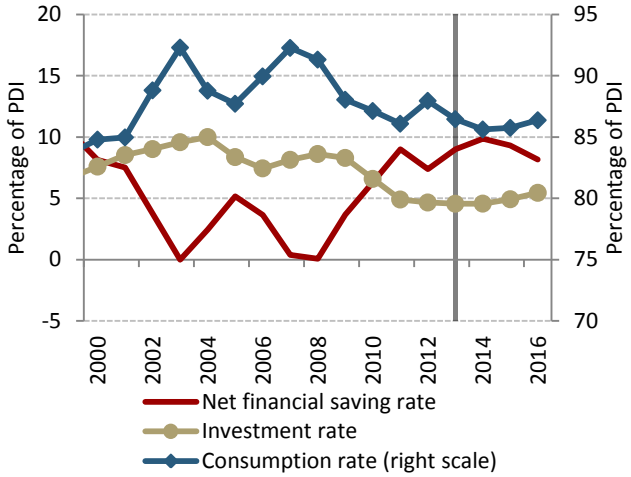
Note: Based on seasonally adjusted and reconciled data
Source: MNB

Next year, economic growth may primarily be driven by domestic demand. Improving labour market conditions, the low inflation, the accommodative monetary conditions and easing prudential considerations due to the conversion of foreign currency loans will all support growth in demand. The Hungarian economy may grow at a rate of 2.3 per cent in 2015, and 2.1 per cent in 2016 (Chart 1-5).

Household consumption supports the recovery in domestic demand and economic growth over the entire forecast horizon. The rise in employment and significant growth in real wages due to low inflation may contribute to accelerating consumption. Together with low expected inflation, the nominal pension increase planned in the 2015 draft budget may raise pensions in real terms. Thus, real income may increase for a wide group of households which have a higher-than-average propensity to consume. This effect is partly offset by the reduction of other social transfers in real terms, as well as by the increasing tax burden on fringe benefits.

In the period following the crisis, the high indebtedness of households was the main determinant of consumption decisions. However, with decreasing debt levels, net loan repayments also decline, which in itself contributes to the reduction of the financial saving rate. The Curia's legal uniformity decision on household loans and the

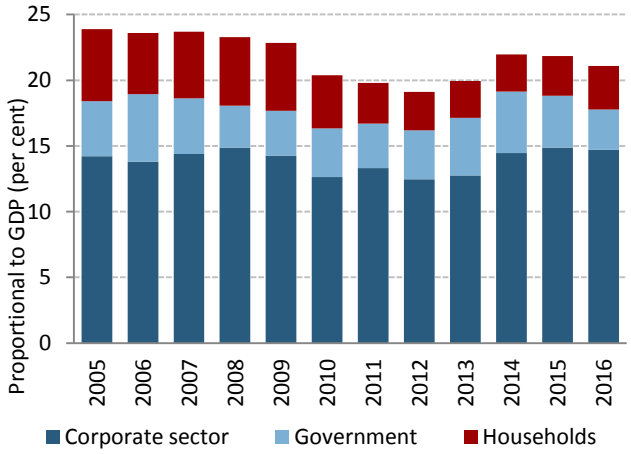
Chart 1-6: The use of household income



Note: As percentage of disposable income. Net financial savings of households exclude mandatory contributions payable to the private pension funds.

Source: CSO, MNB

Chart 1-7: Development of sectoral investment



Source: CSO, MNB

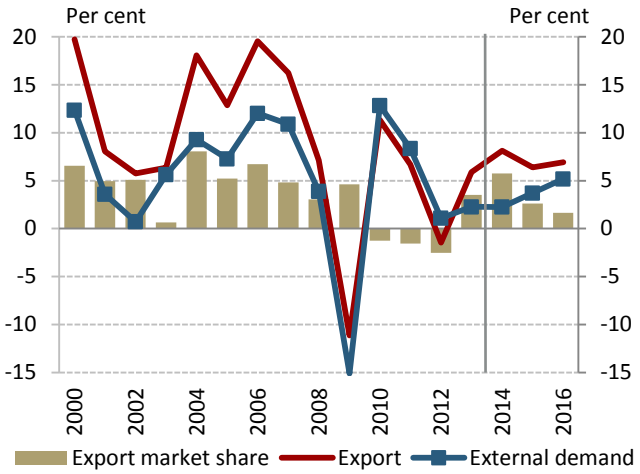
conversion of foreign currency loans may also support consumption growth in 2015. These measures increase the net worth of households and reduce the monthly instalments on existing loans, thereby promoting the deleveraging process. In addition, the conversion of foreign currency loans may reduce the uncertainty about future financial wealth and income among households, which may lead to a decrease in precautionary savings. **Consequently, the saving rate may gradually fall, although it may remain high by historic standards (Chart 1-6).**

Fixed investment will grow significantly this year, with the investment rate exceeding 20 per cent. In the following year, the dynamics of investments may decrease, due in part to the high base of 2014. The rapid growth in the past quarters can be primarily explained by combined effect of the utilisation of EU funding, strengthening economic activity, accomodative monetary conditions and the Funding for Growth Scheme. The drawdown of EU funds will reach its peak in 2014 and then decline, reducing public investments. Corporate investment may be fostered by growing domestic demand as well as the extension of the Funding for Growth Scheme. By contrast, the more uncertain international prospects may reduce investment dynamics in the manufacturing industry. Households' improved real income position and low financial yields may gradually increase the investment activities of households, but with the ongoing deleveraging process we expect a slow turnaround in the investment rate of the sector (Chart 1-7).

The volume of corporate loans is expected to increase slowly over the whole forecast horizon, while the decline in the volume of household loans may continue. With the extension of the Funding for Growth Scheme, the growth of the loan portfolio may be more rapid than assumed in September. We expect a gradual extension primarily in the volume of corporate loans extended to small and medium-sized enterprises over the whole forecast horizon.

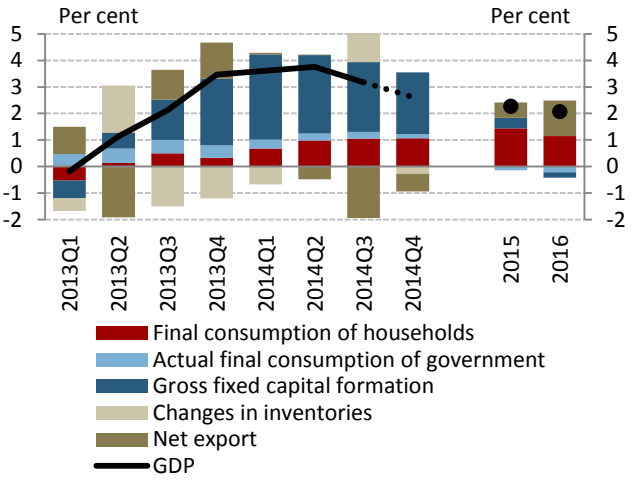
Over the short term, export growth may be hindered by slack external demand. Growth prospects in both the world economy and the euro area deteriorated in the past quarter. Additionally, the Russia-Ukraine conflict significantly reduced the economic performance of the affected countries. This may be partially offset by the impacts of lower oil prices on economic recovery in energy-importing countries (see Box 1-2). The commissioning of new vehicle industry capacities significantly increased Hungary's export market share in

Chart 1-8: Changes in export market share



Note: Annual change.
Source: MNB

Chart 1-9: Evolution of GDP growth



Source: CSO, MNB

the past quarters. In the years ahead, this effect may gradually wear off (Chart 1-8). On the other hand, the capacity expansion in supplier industries may foster economic growth in the years to come. We expect export growth to accelerate again in the second half of the forecast horizon, in parallel with strengthening demand in Hungary's export markets. In accordance with this, net exports may support growth to a greater extent in 2016 (Chart 1-9).

Output gradually approaches its potential level over the forecast horizon. Household consumption – the most relevant factor for domestic inflationary pressure – may continue to rise, but may fall short of its pre-crisis level even in the years ahead. The output gap may remain negative in key export markets, and thus surplus capacities may persist in export-oriented sectors. The real economy remains disinflationary over the forecast horizon, and the output gap may close by the end of the horizon.

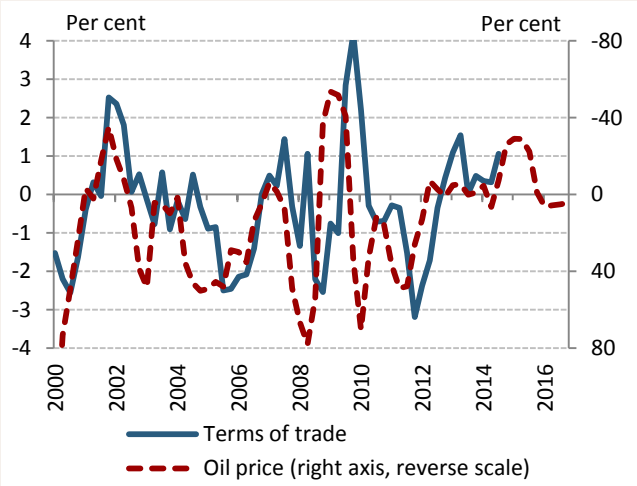
The recovery in aggregate demand can have a favourable impact on potential growth as well. This may be facilitated in the years ahead by the increase in labour market participation, lower unemployment and growth in corporate investments. Thus, in addition to the closing of the output gap, the gradual increase in potential growth also contributes to economic growth.

Box 1-2: Impact of falling oil prices on the real economy

In addition to its impact on inflation, the recent slump in global oil prices may also affect economic growth. This Box describes the pass-through of improving terms of trade to domestic economic agents, and what effects this may have on consumption, investment and exports.

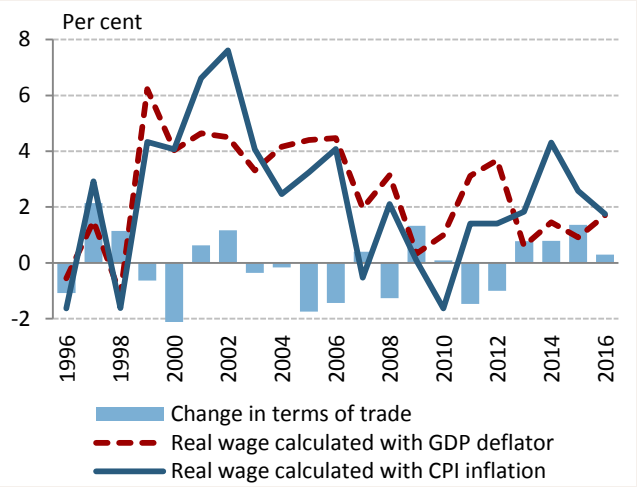
Lower oil prices improve the terms of trade (i.e. the relative price of exports and imports) **of net energy-importing countries**. In Hungary, there is a close relationship between developments in terms of trade and oil prices (Chart 1-10). This stems from the country's strong reliance on energy imports. In 2013, Hungary's energy imports amounted to 6.4 per cent of GDP, half of which consisted of oil and refined products, while trade in natural gas and other energy sources accounted for the other half.

Chart 1-10: Evolution of the oil price* and Hungarian terms of trade (annual change)



Note: * Brent crude oil in USD terms, based on futures for 2015-2016.
Source: CSO, MNB

Chart 1-11: Real wages and the terms of trade



Note: Average gross wage in the private sector, deflated with various price indices
Source: CSO, MNB

Declining oil prices reduce companies' production costs, which improves their profitability. Firms may pass on some of this cost reduction to households by **lowering prices.** In addition, companies gain more leeway in **wage setting,** as they have the ability to offer a higher nominal wage increase without a negative impact on their profit margins. The deflator of value added can hint at changes in corporate profitability. The implicit deflator of value added (P_Y) is obtained as the ratio of value added at current prices (Y_{nom}) to value added at constant prices (Y_{real}). Value added, in turn, is defined as gross output (GO) less intermediate consumption (IC):

$$P_Y = \frac{Y_{nom}}{Y_{real}} = \frac{P_{GO}GO - P_{IC}IC}{GO - IC}$$

In essence, the value added deflator measures the nominal income earned by corporations at a given output volume. The decline in oil prices lowers the price index of intermediate consumption (P_{IC}), which increases the value added deflator in itself.[2] **Therefore, it is relevant to companies that real wage costs, as derived from the value added deflator, are expected to increase at a historically low rate over our forecast horizon, despite the fact that consumers will perceive a substantial increase in real wages** (Chart 1-11).

Along with changes in real wages, the growth effects of falling oil prices also depend on **the extent to which households spend their additional income on consumption.** If they expect oil prices to remain low over the long term, they may spend a larger portion of their extra income on consumption. On the other hand, **over-indebted households may**

[2] Obviously, if the oil price drop is passed on to consumers, the output price index (P_{GO}) also falls. However, as long as the pass-through is less than 100 per cent, the value added deflator should increase.

prioritise further reduction of their debts, and spend the extra income from the improvement of the terms on debt repayment. In this case, the short-term impact on consumption may be weaker.

Investment effects basically depend on whether the decline in oil prices will generate a protracted upswing in demand. On the other hand, cheaper energy may dampen investment activity aimed at the improvement of energy efficiency. Finally, the effect on **exports** is fundamentally determined by the impact of the oil price decline on global growth.

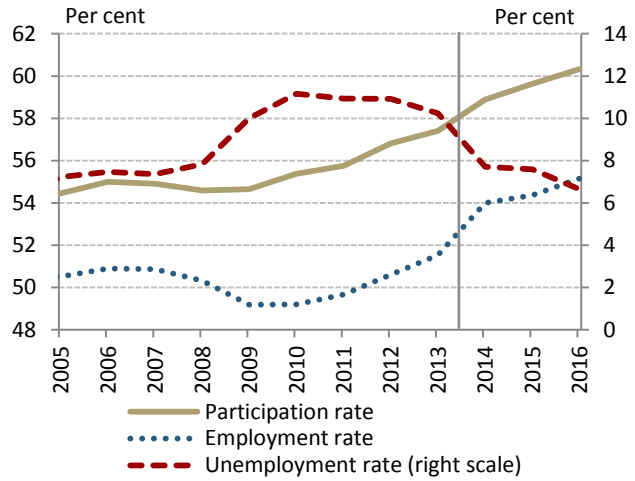
Empirical estimates suggest that the **supply-driven decline of oil prices may boost net energy-importing economies (including the euro area and Hungary), while reducing output in energy-exporting countries.** The balance of these two opposing effects on the world economy is likely to be positive. On the other hand, if the oil price falls due to weaker global economic activity, the growth impact is uniformly negative for both energy importers and exporters.[3] Both supply and demand factors may have played a role in the recent fall of oil prices, but the contribution of each factor is difficult to quantify.

The growth impact of the decline in oil prices may be lower in the post-crisis period than in previous years. At the moment, severely indebted households may choose to spend the extra income from the decline in oil prices on reducing their debts, instead of on consumption. Consequently, the short-term growth effect may be more subdued in Hungary and in advanced economies than would have been suggested by estimates on data pertaining to the pre-crisis period.

1.3. Labour market forecast

Over our forecast horizon, participation and national economy employment may continue to increase. With continuing economic growth, the number of people employed in the private sector may also grow, while the extension of the public work programmes significantly contributes to employment in the national economy. Free labour market capacities will gradually decline, and the unemployment rate may drop to below 7 per cent by the end of the forecast horizon. The tighter labour market contributes to the increased dynamics of nominal wages. At the same time, the stabilising inflationary expectations facilitate wages and prices developing consistently with the inflation target over the time horizon of monetary policy.

Chart 1-12: Employment, participation and unemployment in the national economy



Source: MNB calculations based on CSO data

The participation rate continues to grow over our forecast horizon. Participation increased dynamically in the years following the crisis, primarily as a result of labour supply boosting measures. In the coming years, these impacts will gradually wear off. At the same time, the increase in labour demand stemming from economic growth may enable certain groups (so-called discouraged workers) who turned inactive during the crisis to return to the labour market (Chart 1-12).

In addition to increased employment in the private sector, the planned extension of public work programmes may also foster an increase in employment in the national economy. Over our forecast horizon, the number of people employed in the private sector may increase to a moderate extent. The spread of part-time employment forms may continue to facilitate job creation. As a result of this trend, the number of hours worked may

[3] See, for example, Peersman, G. – Van Robays, I. (2012): Cross-Country Differences in the Effects of Oil Shocks, *Energy Economics*, Vol. 34 No. 5, pp. 1532–1547. The authors performed estimates on the four largest economies in the euro area. Based on the weighted average of these estimates, a 10 per cent, supply-related downward shift in oil prices may lead to a 0.3 per cent increase in euro area GDP in around four years following the price reduction.

increase more slowly than the number of employed. The planned increase in the number of public workers will continue to play a major role in job creation in the national economy in the years ahead. Based on the relevant government announcements, the number of people in public employment may rise to around 260,000 by 2016.

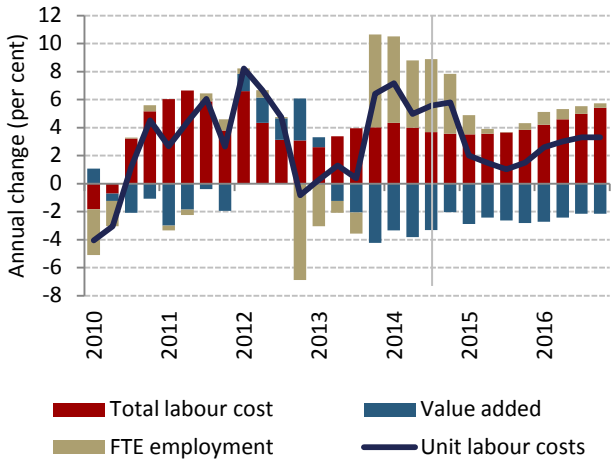
As a result of favourable developments in employment, the labour market may become tighter. By the end of the forecast horizon, the unemployment rate may fall to below 7 per cent. This decline can be explained primarily with employment growth, which is partly offset by further increases in participation (Chart 1-12).

The decline in free capacities on the labour market may contribute to accelerating wage dynamics. As a result of low inflation, wage dynamics in the private sector may remain moderate in 2015. This is also reflected in results of a survey by the Hay Group in December 2014. The respondent companies, most of which are large enterprises, expect about a 2 percent wage increase, which is similar to the wage increase actually registered in 2014. More than half of the companies are planning to raise wages in 2015, although 14 percent have not yet decided whether or not to increase the wages of their employees. The increase in the tax burden on fringe benefits may have played a role in respondents reporting an expected reduction in the cafeteria amount.

Over the forecast horizon, the growth rate of unit labour costs may increase (Chart 1-13). Improving labour productivity may partially offset the acceleration in nominal wage growth. Furthermore, as the decline in commodity prices lowers companies' production costs, the profitability of the sector may not deteriorate despite higher unit labour costs (for details, see Box 1-2). The adjustment of inflation expectations may also help to ensure that developments in private sector wages and prices are in line with the inflation target over the monetary policy horizon.

The growth rate of the national economy wage index is restrained by the rising number of public workers and the slow increase in public wages. The extension of the public work programmes and public sector wages have a significant effect on the development of the national economy wage index. The low wage level of public workers has an impact on the average wage index in the national economy through the composition effect.

Chart 1-13: Decomposition of unit labour cost



Source: MNB calculations based on CSO data.

Box 1-3: Main external assumptions behind the projections

Hungary is a small, open economy, and consequently projections for the main macroeconomic variables are strongly influenced by external factors and the assumptions made about their future development. This brief description of changes in the main underlying assumptions aims to improve the transparency of the central bank's forecast (Table 1-2).

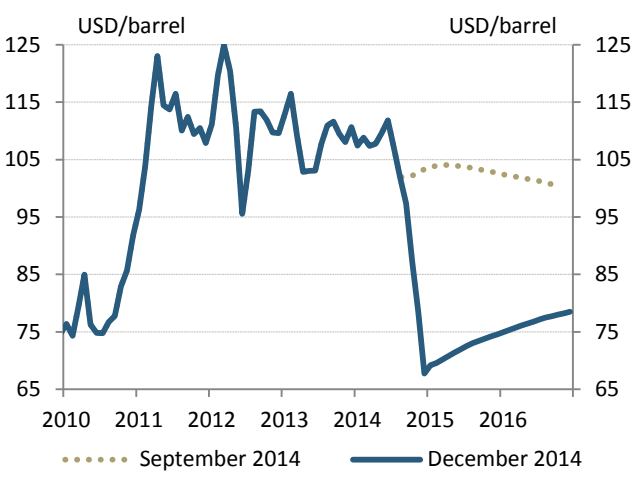
Table 1-2: Main external assumptions of the projections

Technical Assumptions	2014		2015		2016	Change	
	Sept.	Dec.	Sept.	Dec.	Dec.	2014	2015
Oil (USD/barrel)	106.0	99.4	103.6	72.1	76.9	-6.2%	-30.4%
Food prices							
Wheat (USD/bushel)	5.93	5.83	5.98	5.73	6.02	-1.7%	-4.2%
Maize (USD/bushel)	4.16	4.14	3.94	3.98	4.26	-0.5%	1.0%
USD/EUR	1.347	1.33	1.315	1.237	1.237	-1.3%	-5.9%
Euro area inflation (%)	0.60	0.43	1.10	0.66	1.45	-0.2 pp.	-0.4 pp.
GDP growth of our main trading partners (%)	1.7	1.5	2.0	1.5	2.2	-0.2 pp.	-0.5 pp.

Note: GDP growth of Hungary's 21 main export partner countries, weighted with export shares.
Source: CBT, Bloomberg, OECD, Consensus Economics, MNB calculations

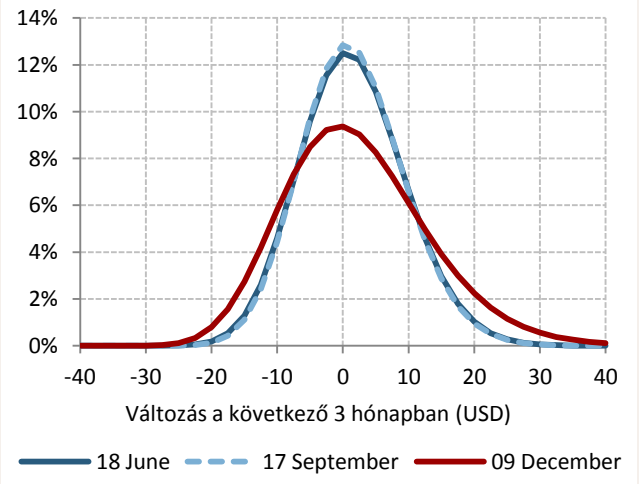
Commodity prices have decreased significantly since the September forecast, and oil prices in particular have dropped sharply. Supply and demand side factors may have both contributed to this decline. Slower global activity and the rising output of major oil exporters results in considerably lower oil price assumptions compared to the September forecast (Chart 1-14). However, in parallel with falling spot prices, the uncertainty about future oil prices has increased considerably. The dispersion of oil price options and analysts' expectations have both risen since September (Chart 1-15).

Chart 1-14: Brent oil price and futures



Source: Bloomberg

Chart 1-15: Probability distribution of the expected change in oil prices in the next three months



Note: Based on WTI options
Source: Bloomberg

Futures prices for unprocessed food have continued to fall compared to our September assumptions. This is mostly due to better-than-expected harvests. Therefore, food commodity prices may be lower over the entire forecast horizon.

In line with weaker global activity, expectations for economic growth in the euro area have declined. Growth in Europe is still hampered by high private and public indebtedness, as well as the slowdown of emerging market economies and the conflict between Ukraine and Russia. This may be partly offset by the stimulating effect of lower oil prices and the monetary policy measures of the ECB. Persistent weakness in the euro-area recovery may hamper growth in Hungary's regional peers as well (Table 1-3).

Table 1-3: Forecasts on GDP growth of our principal trading partners

	2014		2015	
	September	Current	September	Current
Euro area (55,5%)	0.9	0.8	1.4	1.1
Romania (5,6%)	2.5	2.1	3.2	2.9
United Kingdom (3,9%)	3.1	3.0	2.6	2.6
Poland (3,9%)	3.2	3.2	3.4	3.2
Czech Republic (3,8%)	2.6	2.4	2.6	2.5
Russia (3,1%)	0.1	0.3	0.8	0.1
United States (3,0%)	2.1	2.3	3.1	3.0
Ukraine (2,4%)	-6.5	-7.3	0.6	-1.2
China (1,8%)	7.4	7.3	7.2	7.0

Note: The numbers in parentheses indicate 2013 shares in Hungarian goods exports

Source: Consensus Economics

Inflation in the euro area may remain low, due to the sharp drop in commodity prices, weak growth prospects and subdued domestic demand. Analysts' expectations confirm that the ECB may maintain its accommodative monetary stance for a prolonged period. The divergence between the monetary stance of the Fed and the ECB may persist. This is also reflected in the depreciation of the euro compared to our September assumption.

1-1. táblázat: Changes in our projections compared to the previous Inflation riport

	2013	2014		2015		2016
	Actual	Projection				
		September	Current	September	Current	Current
Inflation (annual average)						
Core inflation	3.3	2.4	2.2	2.9	2.4	3.3
Core inflation without indirect tax effects	1.5	1.6	1.4	2.7	2.2	2.8
Inflation	1.7	0.1	-0.2	2.5	0.9	2.9
Economic growth[6]						
External demand (GDP-based)	1.0	1.5	1.5	1.6	1.6	2.3
Household consumer expenditure	0.1	2.2	1.8	2.6	2.8	2.3
Government final consumption expenditure	2.6	0.8	1.4	0.1	-0.5	-1.0
Fixed capital formation	5.2	12.5	13.9	2.6	1.8	-1.0
Domestic absorption	1.2	3.6	4.3	2.1	1.8	0.8
Export	5.9	6.5	8.1	5.9	6.3	6.9
Import	5.9	7.1	9.8	6.0	6.2	6.1
GDP	1.5	3.3	3.3	2.4	2.3	2.1
External balance[1]						
Current account balance	4.1	3.1	4.2	3.1	5.1	6.0
External financing capacity	7.8	7.0	7.9	6.2	8.0	7.8
Government balance[1,5]						
ESA balance	-2.4	-2.5	-2.5	-2.4	-2.4	-1.9
Labour market						
Whole-economy gross average earnings	3.4	3.2	2.2	3.4	3.7	3.1
Whole-economy employment	1.6	4.4	5.1	0.2	1.0	1.8
Private sector gross average earnings[2]	3.6	4.2	4.2	4.0	4.0	4.8
Private sector employment	0.8	4.2	4.8	0.1	0.8	0.8
Unemployment	10.2	8.1	7.7	7.8	7.6	6.6
Private sector unit labour cost[3]	2.0	4.4	5.9	0.7	1.5	3.0
Household real income[4]	1.8	3.9	3.0	1.9	2.4	1.5

[1] As a percentage of GDP. September forecasts do not consider the methodological change effective from the end of September.
[2] According to the CSO data for full-time employees.
[3] Private sector unit labour cost calculated with full-time equivalent domestic employment.
[4] MNB estimate.
[5] With complete cancellation of free reserves.
[6] September forecsast is not consistent to the current forecast because of ESA2010 methodological change.
Source: MNB

1-2. táblázat: MNB baseline forecast compared to other forecasts

	2014	2015	2016
Consumer Price Index (annual average growth rate, %)			
MNB (December 2014)	-0.2	0.9	2.9
Consensus Economics (November 2014)[1]	-0.1 - 0.0 - 0.3	1.4 - 2.0 - 2.9	-
European Commission (November 2014)	0.1	2.5	3.0
IMF (October 2014)	0.3	2.3	3.0
OECD (November 2014)	-0.1	2.0	3.0
Reuters survey (December 2014)[1]	-0.2 - (-0.1) - 0.0	1.0 - 1.5 - 1.8	2.4 - 2.7 - 3.2
GDP (annual growth rate, %)			
MNB (December 2014)	3.3	2.3	2.1
Consensus Economics (November 2014)[1]	3.0 - 3.3 - 3.5	1.6 - 2.2 - 2.9	-
European Commission (November 2014)	3.2	2.5	2.0
IMF (October 2014)	2.8	2.3	1.8
OECD (November 2014)	3.3	2.1	1.7
Reuters survey (December 2014)[1]	3.2 - 3.3 - 3.4	1.6 - 2.2 - 2.8	-
Current account balance[3]			
MNB (December 2014)	4.2	5.1	6.0
European Commission (November 2014)	4.3	4.3	4.3
IMF (October 2014)	2.5	2.0	1.2
OECD (November 2014)	3.9	4.4	4.7
Budget deficit (ESA-95 method)[3,4]			
MNB (December 2014)	2.5	2.4	1.9
Consensus Economics (November 2014)[1]	1.7 - 2.8 - 3.0	2.2 - 2.7 - 3.1	-
European Commission (November 2014)	2.9	2.8	2.5
IMF (October 2014)	2.9	2.8	2.8
OECD (November 2014)	2.9	2.6	2.5
Reuters survey (December 2014)[1]	2.5 - 2.8 - 2.8	2.2 - 2.7 - 2.9	-
Forecasts on the size of Hungary's export markets (annual growth rate, %)			
MNB (December 2014)	2.2	3.7	5.2
European Commission (November 2014)[2]	3.3	4.0	5.4
IMF (October 2014)[2]	3.3	4.2	-
OECD (November 2014)[2]	3.4	3.7	4.8
Forecasts on the GDP growth rate of Hungary's trade partners (annual growth rate, %)			
MNB (December 2014)	1.5	1.6	2.3
European Commission (November 2014)[2]	1.5	1.7	2.2
IMF (October 2014)[2]	1.3	1.8	-
OECD (November 2014)[2]	1.6	1.7	2.2

[1] For Reuters and Consensus Economics surveys, in addition to the average value of the analysed replies (i.e. the median 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] As a percentage of GDP.

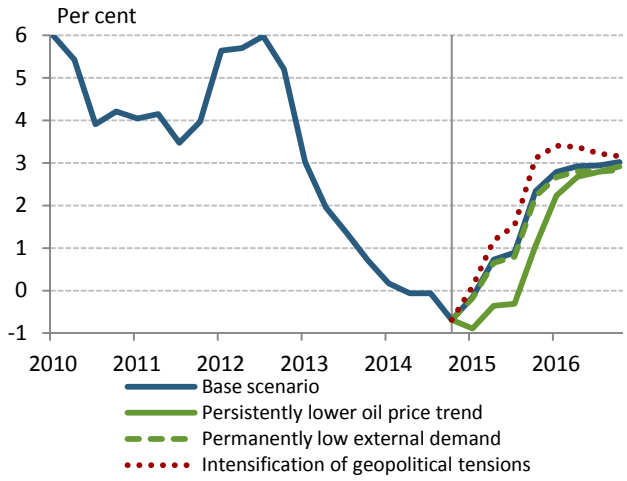
[4] With complete cancellation of free reserves.

Sources: Eastern Europe Consensus Forecasts (Consensus Economics Inc. (London), November 2014); European Commission Economic Forecasts (November 2014); IMF World Economic Outlook Database (November 2014); Reuters survey (December 2014); OECD Economic Outlook No. 94 (November 2014).

2. EFFECTS OF ALTERNATIVE SCENARIOS ON OUR FORECAST

In addition to the baseline projection of the December Inflation Report, the Monetary Council has identified three alternative scenarios which may have significant effects on the future development of the monetary policy. According to the assumptions of the scenario which projects lower oil prices over the long run, the oil price decrease is primarily related to factors on the supply side. All in all, the more moderate inflation environment suggests a looser monetary policy stance than assumed in the baseline scenario, and at the same time economic growth may be more favourable. The scenario which assumes persistently low external demand implies a downside risk to both growth and inflation, and consequently, achieving the inflation target is ensured by looser monetary conditions. Finally, the intensification of geopolitical tensions may cause a decline in external demand as well as a sudden, large-scale increase in the risk premium. As a consequence of the latter the exchange rate depreciates, which increases inflationary pressure, and thus tighter monetary policy can ensure that the inflation target is achieved over the forecast horizon.

Chart 2-1: Impact of the risk scenarios on our annual inflation forecast



Source: MNB

Persistently lower oil prices

During the past half year, the world market price of crude oil has continuously decreased. By early December, the Brent oil price had fallen to below USD 70 per barrel. In the past period, the decline in oil prices resulted from the development of oil market demand and supply, lower transport and storage costs and financial market processes. Due to the weakening international business activity, demand in the largest net oil-importing countries declined. Among factors on the supply side, the US is increasingly replacing its import demand with internal resources. North American shale oil extraction has expanded significantly, and at the same time production by OPEC countries has increased. The futures oil prices used in the baseline scenario indicate a mildly increasing, but moderate upward trend next year.

According to the assumption in this alternative scenario, as a result of rising oil production, oil prices may remain at a lower level over the long term. This may favourably affect enterprises in energy importing countries due to declining production costs, while households' disposable income may increase. All of this may also have a benign influence on the growth prospects in Hungary's key foreign trade partner, the euro area, which may thus support domestic growth.

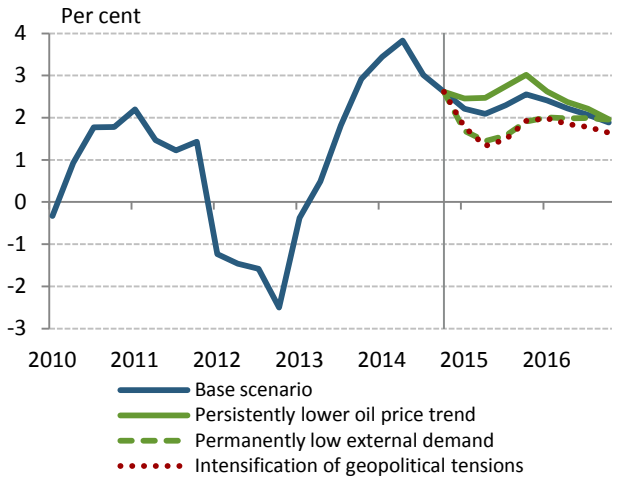
This alternative scenario projects a permanently lower oil price and slightly more favourable external demand compared to the baseline scenario. Owing to the benign effect on domestic production conditions and external demand, lower oil prices lead to faster GDP growth. In addition, a lower oil price continues to mitigate inflation. Rising core inflation due to acceleration in economic activity may be tolerated by monetary policy, because a permanent shift in oil prices may change the relative prices which are consistent with the domestic inflation target. **In light of all of this, achieving the medium-term inflation target implies a trend of easing monetary**

conditions, due to the downside inflation risks.

Permanently low external demand

External inflation continued to decline in the past quarter, mainly owing to the combined effects of persistently weak demand and moderate commodity prices. During the autumn months, euro-area inflation continued to decline, while growth data also proved to be worse than expected. The considerable oil price decrease observed in the past few weeks implies a further downside risk to international inflation processes. As a result of these effects, deflationary risks may have increased in the euro area.

Chart 2-2: Impact of the risk scenarios on our GDP forecast



Source: MNB

In addition to the permanently high debt level, the deterioration in the growth prospects of emerging countries and the Russia-Ukraine conflict may also impede growth in the euro area. Weak economic activity and low inflation which continuously remains below expectations raise the risk that **the output gap is even more open** than assumed in the baseline scenario and looking ahead, **the recovery may be slower than expected** in the euro area. Accordingly, the extremely low inflation may persist in Europe, exacerbating the risk of deflation. In addition, growth deceleration in emerging economies, especially in China, may also contribute to the weakening of global activity, which may result in additional disinflationary effects through commodity prices. As a result of the above, domestic imported inflation may be lower than expected in the baseline scenario.

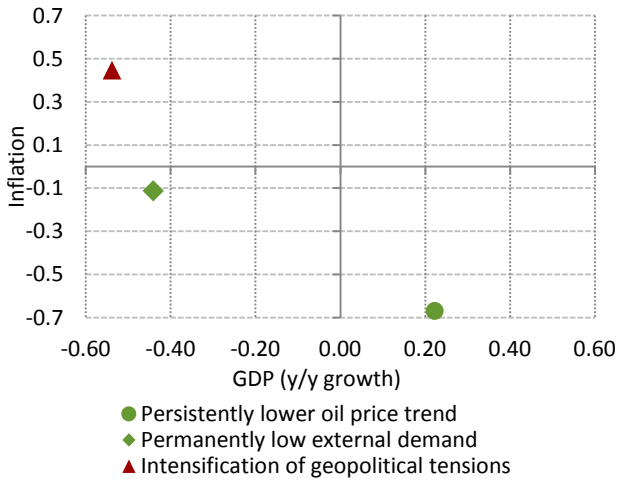
Consequently, in this alternative scenario we suppose that weaker-than-projected external demand will have a stronger disinflationary impact, resulting in a lower external inflation path and, via the foreign trade channel, more subdued growth. Furthermore, due to low external inflation, globally influential central banks may maintain loose monetary conditions for an extended period. In this scenario, as a result of stronger disinflation effects, **achieving the inflation target suggests looser monetary conditions than assumed in the baseline scenario.**

Intensification of geopolitical tensions

According to the assumption in the baseline scenario, growth in Hungary's export markets may accelerate slowly in the years to come. However, there is a risk that, as a result of the intensification of geopolitical tensions, the international macroeconomic environment continues to deteriorate, which implies a significant downside risk to external demand.

An intensification of geopolitical tensions may affect Hungary's economic activity through several channels. In

Chart 2-3: Risk map: effect of alternative scenarios on the baseline forecast



Note: The risk map presents the average difference between the inflation and growth path of the alternative scenarios and the baseline forecast on the forecast horizon. The red markers mean tighter and the blue markers mean looser monetary policy than the baseline forecast.
Source: MNB

respect of the operation of financial markets and the risk appetite of international investors, it is significant that the general increase in uncertainty and the continued capital outflow from the Russian and Ukrainian region may cause increased volatility in regional exchange rates and may have other unfavourable macroeconomic consequences via an increase in risk premiums. Moreover, the deterioration of performance of the Russian and Ukrainian economies will have an adverse impact on Hungarian exports.

In this scenario, the intensification of geopolitical tensions causes deterioration in investor sentiment, which is consistent with a higher risk premium path than in the baseline scenario. A rise in the risk premium **weakens the exchange rate, which intensifies inflationary pressures**. Based on the assumption of the alternative scenario, the significant slowdown of the Russian economic growth and the contraction of the Ukrainian economy **suggest a major downside risk** to the development of **Hungary's external demand and export**. The weakening exchange rate causes a rise in inflation, and accordingly the **inflation target can be achieved with tighter monetary policy.**

3. MACROECONOMIC OVERVIEW

3.1. International environment

Global economic growth is restrained and continues to exhibit significant differences between the regions. The already moderate euro-area growth was dampened further by geopolitical tensions, while the economic performance of the United States and China weakened somewhat, but remained strong. In line with the sharp fall in oil prices and restrained demand, global inflation trends remained subdued. Although developed country central banks have followed different paths in recent months in terms of their monetary policy stance, the interest environment remained supportive.

3.1.1. Developments in global ecomomic activity

Although the performance of the global economy improved overall in 2014 Q3, it remained subdued. There continue to be significant differences between growth in the major economic regions. While growth in the euro area was merely moderate, strong growth continues to be seen in the United States and this may remain the case going forward.

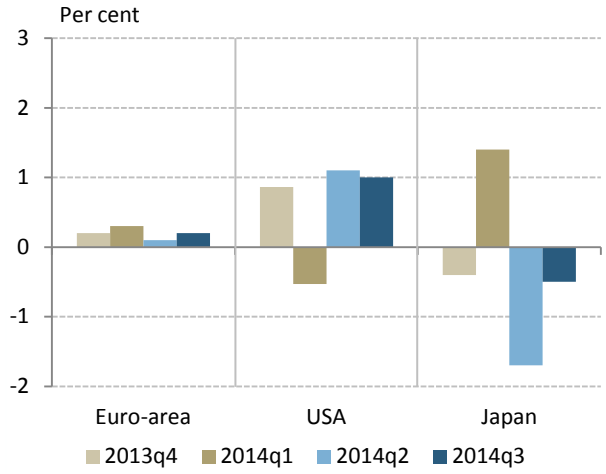
Data for Q3 indicate that the euro-area experienced moderate (0.2 per cent) quarterly growth (Chart 3–1). This growth resulted mainly from the recovering performance of the periphery countries, but it remained moderate, partly owing to the geopolitical tensions. Germany, Hungary's most important foreign trade partner, grew by 0.1 per cent compared to the previous quarter, which can be attributed to household consumption and the mildly improving foreign trade balance. At the same time, investment and inventories declined compared to Q2. After the downturn in Q2, economic activity improved in France.

The euro area's slow, protracted recovery from the crisis is primarily reflected in weak consumption and investment data. Restrained investment activity characterises all of the Member States and economic agents. The main reason for subdued domestic demand is the prolonged period of deleveraging, which is the main deterrent to the recovery of the euro area. In addition, factors such as tight credit conditions and uncertainty surrounding the growth prospects of the euro area may also play a role in weak investment spending, but their effects may diminish over the medium term.

Forward-looking indicators point to subdued performance in the euro area (Chart 3-3). Owing to geopolitical tensions, business confidence deteriorated further in the euro area, which implies a further negative risk looking ahead. Confidence indicators point to more restrained growth dynamics than expected. German industrial orders failed to expand further (Chart 3-2).

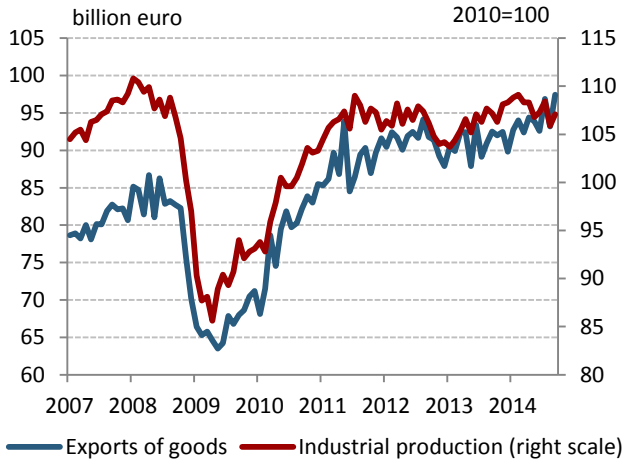
Euro-area unemployment stood at 11.5 per cent in Q3, slightly lower than observed in the first half of the year, but

Chart 3-1: Quarterly GDP growth in the advanced economies



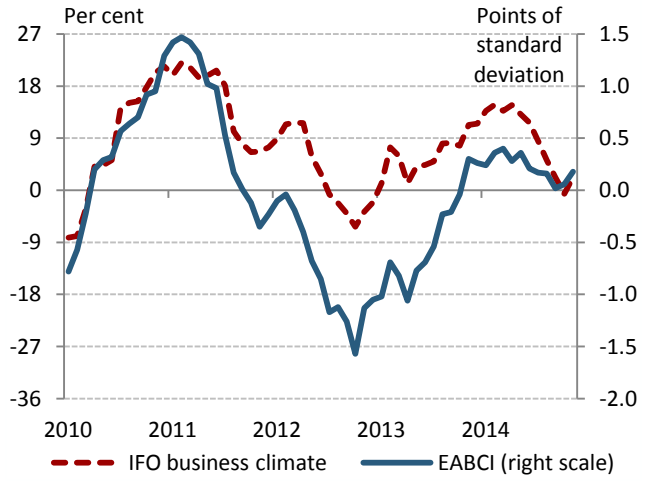
Note: Seasonally adjusted quarterly change.
Source: OECD

Chart 3-2: German industrial production and exports of goods



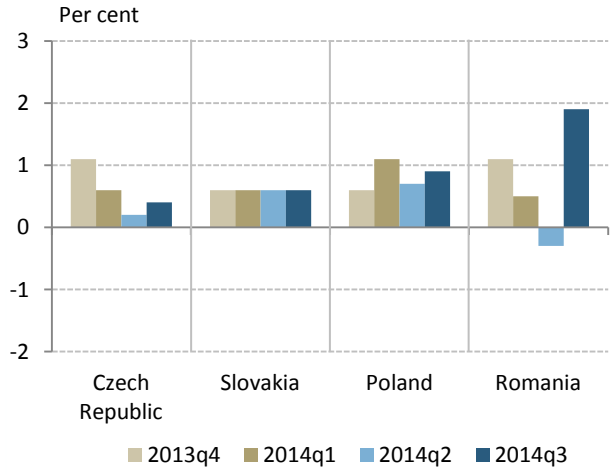
Source: Eurostat

Chart 3-3: Business climate indices for Germany and the euro area



Source: European Commission, IFO

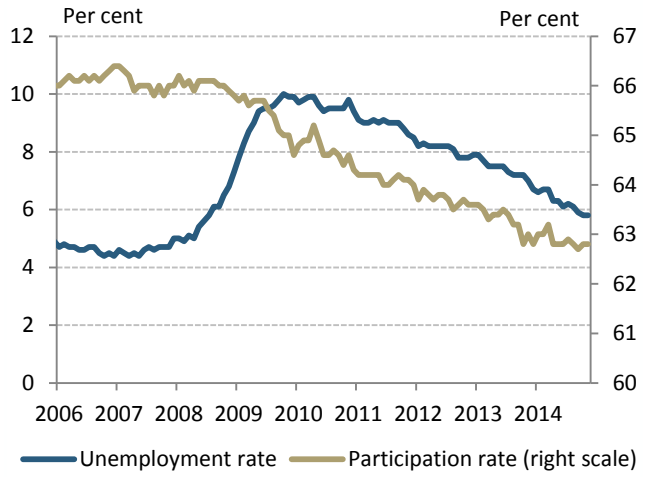
Chart 3-4: Quarterly economic growth in CEE countries



Note: Seasonally adjusted series

Source: Eurostat, Institutul National de Statistica

Chart 3-5: Unemployment and participation rate in the United States



Source: Bureau of Labor Statistics (BLS)

the labour market has yet to show any clear signs of a recovery.

Among the periphery countries, Greece and Spain achieved tangible quarter-on-quarter growth in Q3 (0.7 per cent and 0.5 per cent, respectively). Portugal's growth momentum faltered, while output in Italy declined further amid the deteriorating performance of industry and agriculture.

As regards non-euro area European countries, **the United Kingdom saw continued economic growth with a 0.7 per cent quarterly increase in value added.** On the expenditure side, private sector consumption contributed to growth to the largest extent, while net exports fell sharply.

Third quarter growth data for the countries in the Central and Eastern European region showed a mixed picture, but figures improved on the whole (Chart 3-4). The Slovakian economy expanded by 0.6 per cent as in the previous quarter, and Poland posted the second highest growth figure in the European Union (0.9 per cent) in quarter-on-quarter terms. Romania demonstrated the most dynamic growth (1.9 per cent), well exceeding expectations. The slowest growth was observed in the Czech Republic.

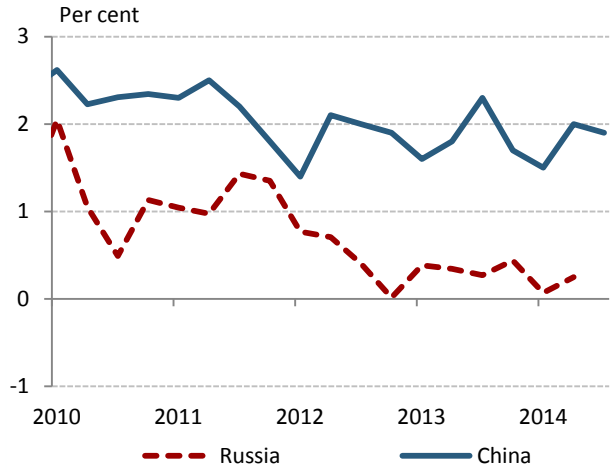
Growth in the United States decelerated somewhat compared to the previous quarter, but still remained strong. The annualised quarterly growth rate was 3.9 per cent in Q3. The structure of this growth, however, was less favourable than in the previous quarter. Growth in private consumption and household investment decelerated, but rising defence expenditure significantly increased public sector spending, enabling the economy to continue on its dynamic growth path. By offsetting the negative growth effect of the strengthening exchange rate, the sharp fall in oil prices may help these growth dynamics to continue in Q4. Labour market trends were favourable in Q3: after a further decline, the unemployment rate dropped below 6 per cent in September and October. Meanwhile, the labour force participation rate decreased further, which also contributed to the moderation of the unemployment rate (Chart 3-5).

The performance of the Japanese economy continued to deteriorate in Q3. The contraction was less pronounced than in Q2: rising government expenditure and the expansion of net exports somewhat offset the decline observed in household consumption following the VAT increase in April. At the same time, short-term business survey indicators point to slow acceleration, while the weakening of the yen may also support the expansion of

the economy. Labour market developments remained favourable, with the unemployment rate dropping to 3.6 per cent by September, compared to 3.8 per cent in July.

In respect of the major emerging economies, growth dynamics decelerated in China in year-on-year terms (7.3 per cent), mainly as a result of the downturn in the real estate sector (Chart 3-6). Industrial output was on a steady growth path in the third quarter. As regards the expenditure side, consumption increased further and net exports grew dynamically, while the contribution of investment was slightly negative. At the same time, GDP growth is still fuelled by strong credit expansion, which exacerbates economic imbalances and increases financial vulnerability.

Chart 3-6: Quarterly GDP growth in China and Russia



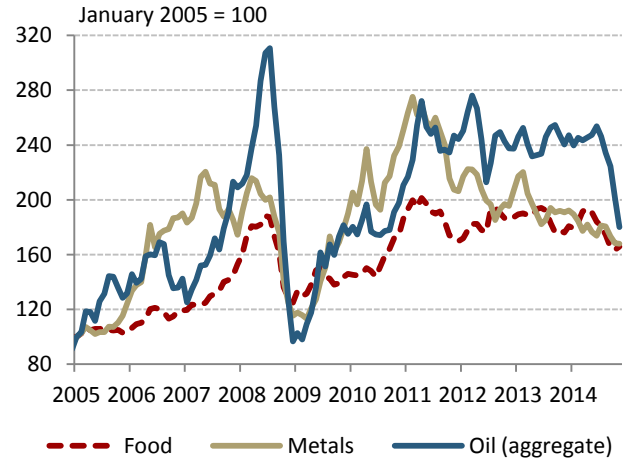
Note: Seasonally adjusted series.
Source: OECD

Russia recorded annual growth of 0.7 per cent in the third quarter. The annual rate of growth in Russia has been decelerating continuously since 2012 Q1. In addition to the geopolitical risks arising from the Russia-Ukraine conflict and the economic sanctions, the contraction of investment activity also dampens growth. The conflict continues to imply a downside risk looking ahead. According to analysts, growth may decelerate to 0.3 per cent by 2014 and slow even further to 0.1 per cent in 2015. In addition, in view of Russia's reliance on income from oil, falling oil prices may further harm the growth outlook.

3.1.2. Global inflation trends

Recent months have seen a sharp fall in commodity prices (Chart 3-7). From USD 110 in early June, global crude oil prices dropped to USD 95 per barrel by the end of September before falling to around USD 70 by late November. On the one hand, this trend can be explained by the rise in oil production, thanks primarily to the surge in US shale oil production and to the recovery of Libyan and Iraqi oil production. Saudi Arabia also stepped up its oil production. On the other hand, in the context of decelerating global growth, demand for oil has weakened. In the second half of the period, the appreciation of the US dollar also contributed to the further decline in oil prices. At their conference at the end of November, representatives of the OPEC Member Countries decided against lowering their production quota, which pushed down oil prices even further. The steep fall in oil prices may exert a further disinflationary impact on a global scale.

Chart 3-7: Changes in major commodity prices (USD)



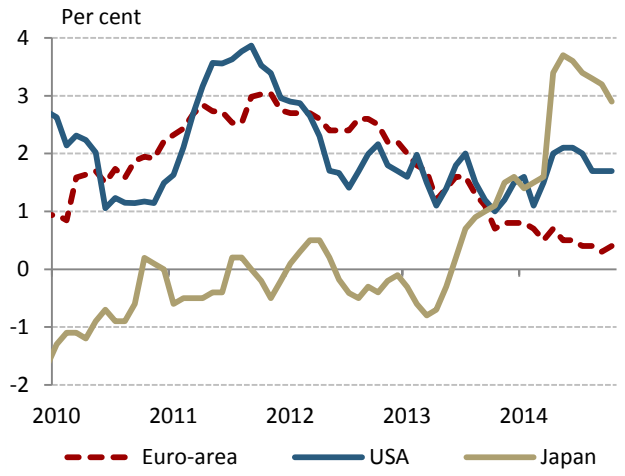
Source: IMF-IFS

Prices of industrial commodities decreased overall compared to the second quarter. While global metal prices still rose by 4.3 per cent in July in the context of falling inventories, the deteriorating demand outlook and the strengthening of the US dollar pushed prices down in

recent months, especially in the case of iron ore. Owing to optimistic supply expectations, the decline in unprocessed food prices observed in Q2 continued in Q3.

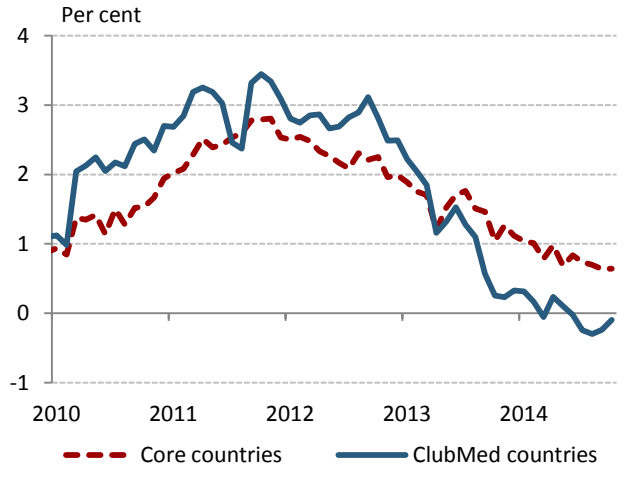
The rate of increase in consumer prices remained close to or below the target in most developed countries (Chart 3-8). In developed countries the output gap is negative, and therefore, demand-side inflationary pressures remained moderate. Owing to the continuing decline in commodity prices, there is no perceivable inflationary pressure from the expenditure side either. In the United States, the annual growth rate of the consumer price index was 1.7 per cent in the last three months. Price increases calculated from consumption expenditures – a relevant factor from the perspective of monetary policy – also moderated and dropped as low as 1.4 per cent in September. Euro-area inflation was 0.3 per cent in September, 0.4 per cent in October, and then 0.3 per cent in November again, based on preliminary data. Falling commodity prices, in particular, energy and food prices, and weaker-than-expected domestic demand all contributed to low inflation. Inflation in the core countries of the euro area declined somewhat, and remained negative in periphery countries (Chart 3-9). The high inflation level observed in Japan can be attributed to the effect of the VAT increase in April, but the core inflation measure (which excludes indirect tax effects) remained low at around 1.3 per cent in the past quarter. Inflation exhibited a declining trend in Q3 and stood at 2.9 per cent in October. In the United Kingdom, the annual growth rate of consumer prices dropped to 1.2 per cent in September, falling below the August inflation forecast of the Bank of England.

Chart 3-8: Inflation in advanced economies



Note: Annual change.
Source: OECD

Chart 3-9: Inflation in the euro area

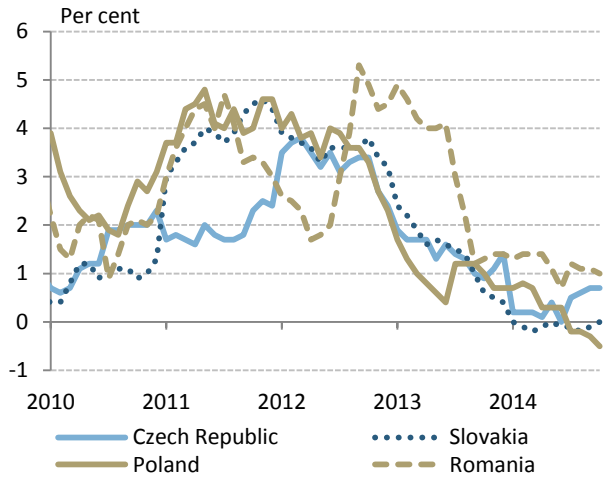


Note: Annual change. Core countries: Germany, France, Netherlands and Austria. Club Med Countries: Greece, Italy, Portugal and Spain
Source: Eurostat

Inflation remained below target levels in the Central and Eastern European region (Chart 3-10). CEE countries are characterised by a negative, but gradually closing output gap. In the Czech Republic, inflation stood at a low, but positive level (0.7 per cent) in September and October. Annual inflation remained in the negative range in three countries in the region (Hungary, Slovakia and Poland) in September. While annual inflation in Slovakia stagnated in October, inflation in Poland hit a low of -0.6 per cent, amid declining food and energy prices and slack external demand. Romania continues to post the highest inflation rate in the region.

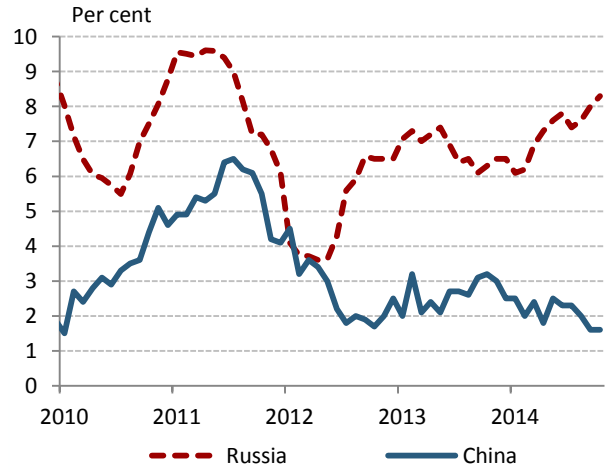
Inflation in China decreased to 1.6 per cent in September and October, mainly owing to the decline in food prices. By contrast, as a result of the depreciation of the rouble and the sanctions affecting food imports, **Russian inflation rose to 8.3 per cent by October** (Chart 3-11).

Chart 3-10: Inflation in CEE countries



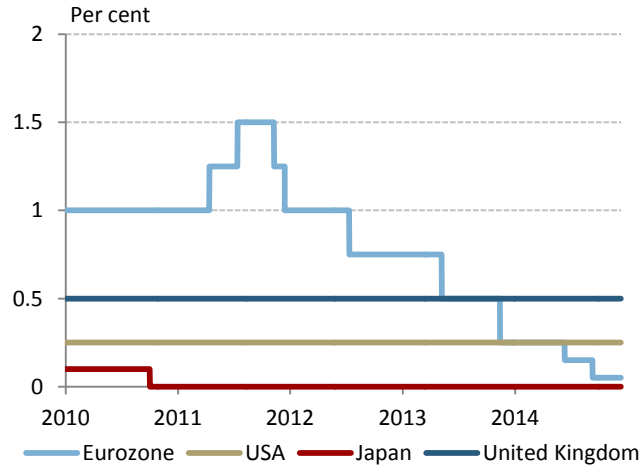
Note: Annual change.
Source: OECD, Eurostat

Chart 3-11: Inflation in China and Russia



Note: Annual change.
Source: OECD

Chart 3-12: Central bank rates in advanced economies



Source: Databases of central banks

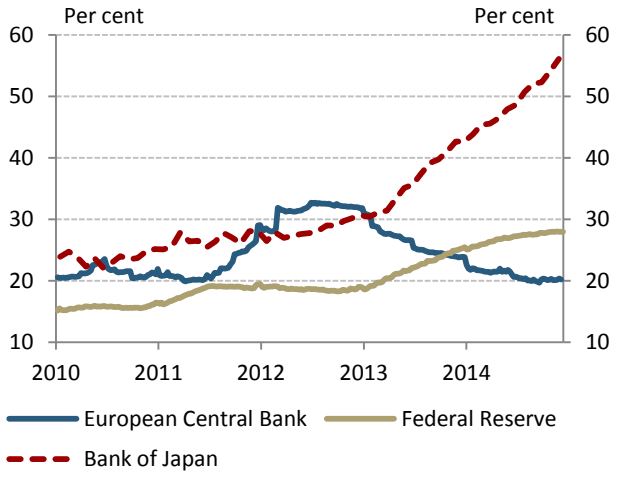
3.1.3. Monetary policy and financial market developments

Globally influential central banks have maintained relaxed monetary conditions in recent months (Chart 3-12). In most countries, there are no trends in terms of inflation and capacity utilisation that point to monetary tightening over the short term; indeed, certain countries may even consider easing their monetary stance further looking ahead. In a number of countries, such as the USA and the United Kingdom, inflation proved to be lower than expected and fell short of the inflation target; thus, looking ahead, the previously envisaged gradual monetary tightening may be postponed. In certain countries (Canada, Sweden and Norway), risks arising from households' indebtedness and the real estate market situation remained considerable and may still warrant a more extensive use of the macroprudential set of instruments. If these do not prove to be suitably efficient, a possible interest rate increase may alleviate stability tensions.

As anticipated, in accordance with its October decision, the Federal Reserve ended its asset purchase programme, and expectations regarding the first interest rate increase have shifted to a later date. This does not, however, translate into monetary tightening as maturing bonds and yields will be reinvested until the first interest rate increase. As a result, the Fed's balance sheet total may remain at a high level for an extended period of time (Chart 3-13). The forward guidance remained unchanged, and accordingly the key policy rate may remain at the prevailing low levels considerable time after the termination of asset purchases, especially if inflation stays below the 2 per cent long-term target. In recent months, inflation's gradual advance toward the inflation target has also faltered in the United States. Looking ahead, inflation may prove to be lower than expected which, among other things, may encourage the Fed to maintain its accommodative monetary policy stance. Based on the interest rate path implied by market data, expectations of the Fed's interest rate increase shifted to a later date, and the increase is not expected to take place before the second half of 2015.

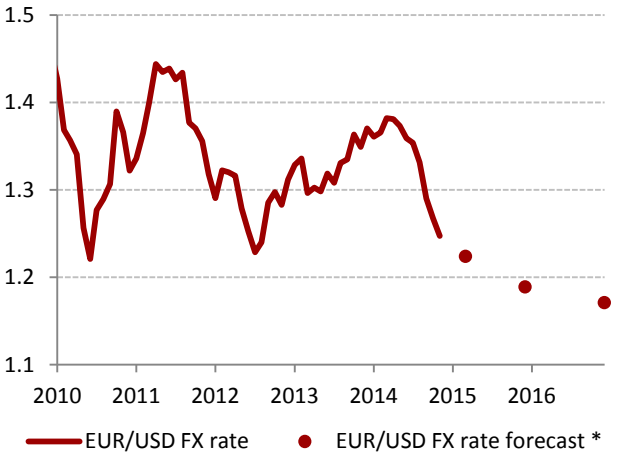
The ECB lowered its key policy rate to 0.05 per cent in September and has not changed conditions since then. Meanwhile, it launched the asset purchase programmes announced in the summer as a form of unconventional quantitative easing. The first tender of the ECB's targeted long-term refinancing instrument was received with mixed sentiment. In October, the ECB launched its covered bond purchase programme (CBPP), which is expected to stimulate lending to small and medium-size enterprises and contribute to the restoration of the transmission

Chart 3-13: Central bank total assets in advanced countries (percentage of GDP)



Source: Databases of central banks, IMF, Eurostat

Chart 3-14: Changes in the EUR/USD exchange rate



Note: * December 2014 forecast. Higher values mean euro appreciation.
Source: ECB, Consensus Economics

mechanism. The asset-backed securities purchase programme (ABSPP) was also initiated in November. The President of the ECB has stressed on numerous occasions that monetary policy alone is unable to revive economic growth and bring the low inflation level in line with the target; concerted structural reforms are needed to address these problems. The euro weakened against the dollar following the announcement of new measures (Chart 3-14).

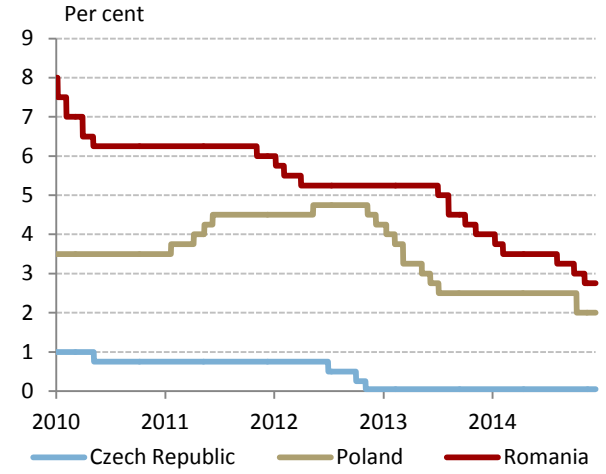
The Bank of England maintained its forward guidance after having modified it previously when the unemployment threshold was reached. In its guidance, the central bank stressed that the interest rate would only be raised gradually. The timing, extent and progress of the increase will depend on economic conditions and various indicators linked primarily to capacity utilisation and the labour market. Based on market expectations, the expected date of the first interest rate increase shifted to July 2015. Meanwhile, several decision-makers indicated that maintaining the prevailing low interest rate level would jeopardise the balanced recovery of the economy.

The Bank of Japan extended the framework of its programme of quantitative and qualitative easing. The Bank of Japan increased the value of government securities to be purchased to JPY 80,000 billion from JPY 50,000 billion, with plans to extend the maturity structure by 3 years on average. Most Japanese policy-makers agreed that the decelerating dynamics of the Japanese economy and rising energy prices warrant further monetary policy stimulus in order to achieve the inflation target.

With regard to the central banks of emerging economies, the People's Bank of China reduced the 14-day repo rate in September and November, and lowered the interest rates on one-year deposits and loans in November. These decisions were made in view of the global economic slowdown observed in recent months, and are intended to stimulate Chinese economic growth. In order to protect the exchange rate of the rouble, after the steps taken in April, the Central Bank of Russia intervened again in October. Despite strong interventions, the exchange rate has fallen to a historical low. Combined with intensifying upward risks to price stability, these developments prompted the CBR to raise the interest rate by 150 basis points at the end of October. In November, the intervention band was abolished and Russia switched to a free-floating exchange rate regime, may enabling the central bank to introduce inflation targeting from the beginning of 2015.

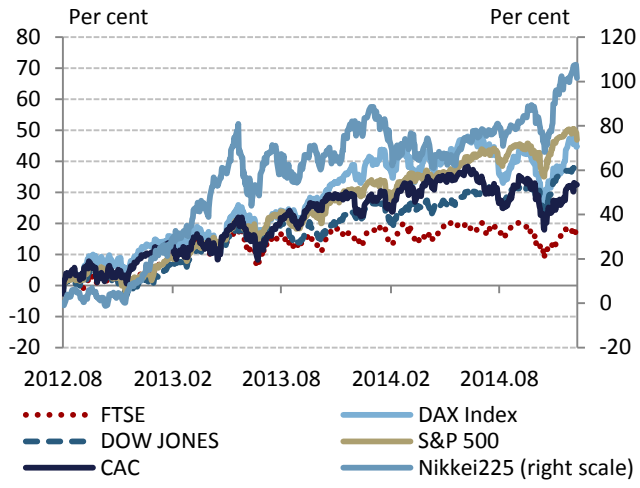
Central banks in the Central and Eastern European region also maintained loose monetary conditions (Chart 3-15).

Chart 3-15: Central bank rates in CEE economies



Source: Databases of central banks

Chart 3-16: Leading stock exchange indicators



Source: Bloomberg

At its October session, the National Bank of Poland lowered the key policy rate to 2 per cent. This decision was made in view of the deceleration of the economy and the increasing probability of inflation undershooting the target over the medium term. The central bank base rate remained unchanged in November. but based on central bank communication, policy-makers do not rule out the possibility of additional interest rate cuts if the incoming data indicate the worsening of the economic outlook. As expected, in consideration of the low inflation rate, the National Bank of Romania reduced the key policy rate by 25 basis points in both September and November. In recent months, the Czech central bank has maintained its key policy rate at 0.05 per cent and indicated that it remains committed to this level even longer than previously anticipated, presumably until at least 2016 Q1. Looking back to the past one year, the central bank evaluated the outcome of the application of the exchange rate as a monetary policy instrument. The threat of deflation and hence, the likelihood of a protracted recession, proved to be even stronger than expected a year earlier. Nevertheless, thanks to the commitment to the exchange rate level, the risk of deflation has been reduced, and inflation may increase to the 2 per cent target next year.

Global market sentiment was favourable overall in the past period, although as a combined result of several factors risk appetite was shaken worldwide in mid-October, resulting in steep declines in stock market indices and increased demand for bonds issued by developed countries. From the end of October, market sentiment picked up again and major stock market indices surged to historical heights (Chart 3-16). Investors continued to respond positively to the central bank communications of developed countries. Emerging currencies depreciated against the US dollar in general; however, the extent of the depreciation varied widely from country to country. Central and Eastern European currencies depreciated slightly or stagnated against the euro. At the same time, bond market yields have generally fallen in the narrower region since mid-September. 10-year yields declined by 25–70 basis points on average.

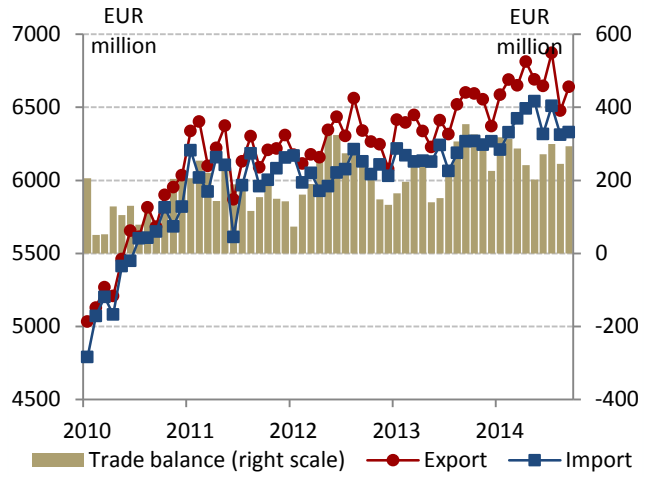
3.2. Aggregate demand

Hungarian GDP continued to grow in the third quarter. The expansion can primarily be attributed to investment and increasing household consumption from the demand side. Net exports' negative contribution to growth was associated with the dynamic expansion of imports, which were boosted by the recovery in domestic demand.

In 2014 Q3, Hungary's GDP expanded at a rate of 3.2 per cent year-on-year. The performance of the economy improved by 0.5 per cent compared to the second quarter. Household consumption, private and public sector investment and exports all increased, and the contributions of domestic demand components have become more pronounced in terms of growth structure.

3.2.1. Foreign trade

Chart 3-17: Foreign trade and foreign trade balance

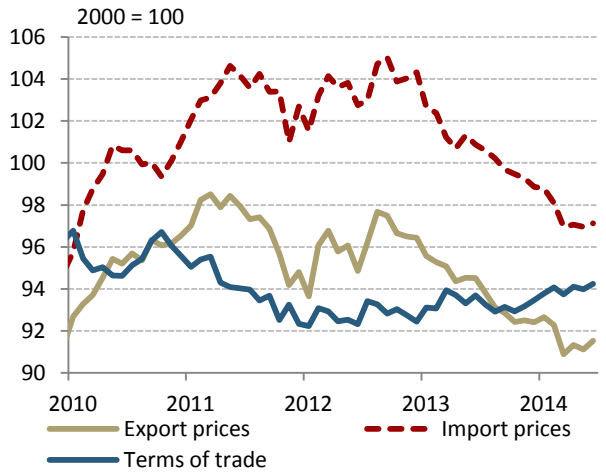


Source: CSO

External trade continued to grow dynamically in year-on-year terms. According to foreign trade statistics, exports of goods decreased, while exports of services increased on a quarterly basis. The decline in the exports of goods was explained by the unfavourable course of industrial production in Q3 (Chart 3-17). In parallel with the moderate performance of industry in October, the volume of exports of goods continued to decrease. Growth in exports of services was primarily explained by the pick-up in tourism demand. Transport and business services also contributed to growth. On the whole, the trade balance of services has improved slightly since the beginning of the year.

In addition to the rebound in domestic demand, the one-off effect of the filling up of natural gas storage facilities also boosted imports in Q3. As a result, the contribution of net exports to growth was negative in the period.

Chart 3-18: Change in terms of trade



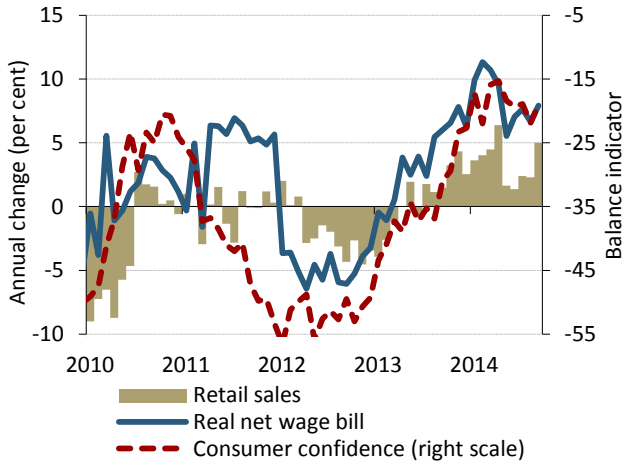
Source: CSO

Terms of trade improved in 2014 Q3 in the context of declining export and import prices in EUR terms (Chart 3-18). The shift to higher-value products within the composition of domestic exports bolstered the terms of trade. On the other hand, subdued external inflation and import prices supported by favourable commodity prices also contributed to the improvement of terms of trade. Looking forward, the drop in oil prices to a four-year low points to a robust improvement in terms of trade. The impact on the real economy of the increase in terms of trade is discussed in detail in Box 1-2.

3.2.2. Household consumption

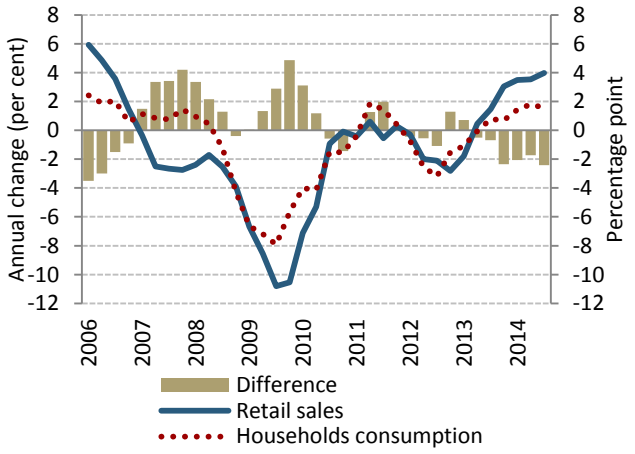
Household consumption expanded further in Q3, bolstered by rising real wages in connection with the improved labour market situation and low inflationary environment and by the upswing in retail sales (Chart 3-19). However, the 1 per cent annual increase in household consumption falls short of the dynamics observed in the

Chart 3-19: Developments in retail sales, income and the consumer confidence index



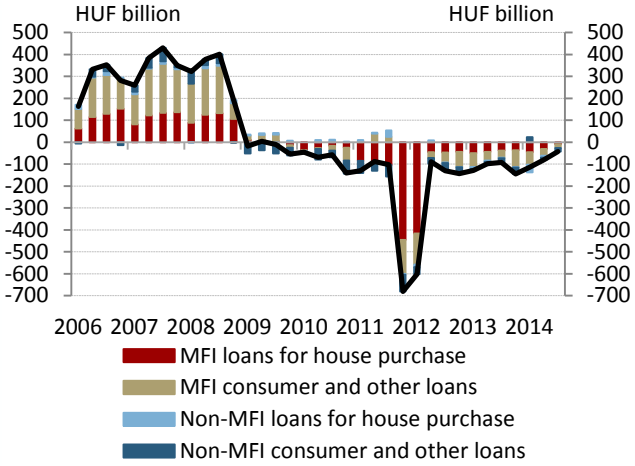
Source: GKI, CSO

Chart 3-20: Developments in retail sales and household consumption



Source: CSO

Chart 3-21: Quarterly transactions in loans to households from domestic financial intermediaries by credit purpose



Note: Loans granted by credit institutions and other financial intermediaries. Seasonally unadjusted transactions.

Source: MNB

previous quarter. The gap between retail sales and household consumption expenditure can primarily be attributed to the whitening effect stemming from the installation of tax authority cash registers. In addition, the change in dynamics observed in Q3 may also reflect the benefits of buoyant tourism in the summer months: purchases of non-residents in Hungary may have boosted retail sales (Chart 3-20). The saving rate remains high, but precautionary savings may begin to decline gradually. This trend may be supported by a shift in the structure of retail sales toward product groups that are more sensitive to real incomes in terms of demand (e.g. foods, non-durable goods). In recent months consumer confidence has stabilised at the high levels seen in pre-crisis years.

Households' net financial wealth continued to increase in the third quarter. The financial wealth-to-income ratio rose further from its historical peak. Amid increases in the financial instrument portfolio, household indebtedness is gradually declining.

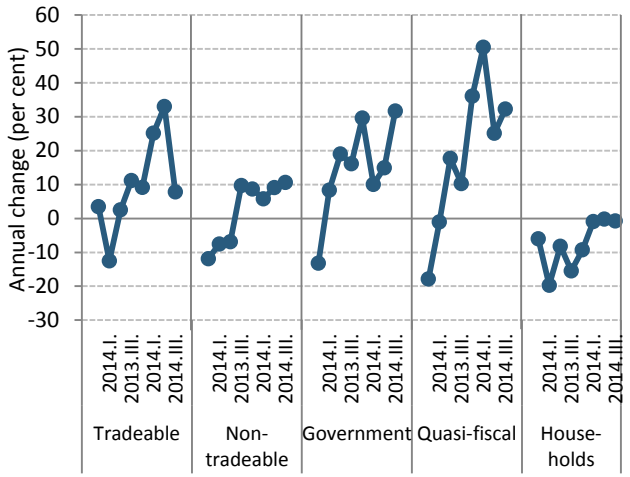
In 2014 Q3, loans to households from the financial intermediary system continued to decrease, falling by around HUF 42 billion in total (Chart 3–21). Although the contraction observed reflects the continuing reduction in foreign currency loans, forint-denominated lending picked up overall in the period covered. On the supply side, bank lending conditions eased in the case of consumption loans, but remained unchanged for housing loan products. However, rising real wages and declining interest rates on loans increased demand for housing loans, which was also reflected in the volume of new loan disbursements.

3.2.3. Private investment

Whole-economy fixed investment continued to grow in the third quarter. Hungarian investment activity was boosted mainly by the recovery of demand, the accelerated absorption of EU funds and the improving lending terms in connection with Funding for Growth Scheme (FGS). Gross fixed capital formation was up 13.2 per cent year on year in 2014 Q3. The investment rate rose further, reaching 23 per cent in the period.

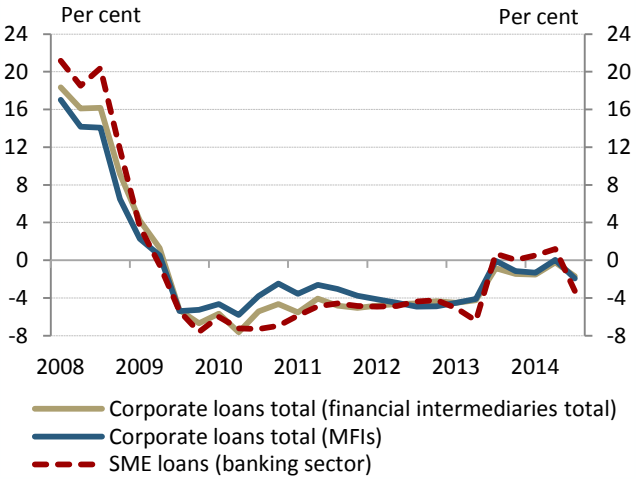
In addition to export-oriented industries, the investment activity of the quasi-fiscal sectors was predominant among corporations (Chart 3-22). Investment in manufacturing was driven by the suppliers of the vehicle production sector, which may reflect the increasing spillover effect of large vehicle manufacturing projects. At the same time, the dynamics of manufacturing sector investment decelerated compared to previous quarters. Agricultural investment also increased, primarily due to

Chart 3-22: Development of sectoral investments



Source: CSO

Chart 3-23: Annual growth rate of lending to non-financial corporates and SMEs



Note: Data for corporate loans total are based on transactions. For SME loans, estimated transaction are applied as of Q4 2013.
Source: MNB

the utilisation of funds provided by the FGS.

The significant acceleration of investment by the quasi-fiscal sectors typically dominated by large, state-owned corporations is primarily associated with investment projects related to public transportation and water management. The surge in projects can be linked to the absorption of EU funds. Among sectors producing for the domestic market, investment grew primarily in construction, along with wholesale and retail trade in Q3, while financial and insurance activities declined.

Households' investment activity improved in Q3. Rising real incomes and low interest rates both contributed to the shift of housing investment from its nadir. The implementation of renovations postponed during the years of the crisis may also have contributed to the upswing in investment activity of households.

In 2014 Q3, the corporate loan portfolio of the domestic financial intermediary sector rose by HUF 108 billion in total. This expansion primarily reflected the increase in forint-denominated loans. Despite the robust quarterly expansion, the corporate loan portfolio contracted by 1.7 per cent overall compared to the same period of the previous year; in terms of composition, transactions decreased the SME portfolio of the banking sector by 3.2 per cent (Chart 3-23). This downturn, however, stemmed from the strong base effect of substantial credit outflows recorded a year earlier under the first phase of the Funding for Growth Scheme. Corporate credit demand was stimulated by further reductions of the cost of funds associated with corporate loans outside the FGS; in addition, the average interest rate spread on loans decreased further in Q3. On the supply side, there are no signs of a similar recovery: based on the lending survey, the conditions on corporate loans did not change perceivably and no material easing is expected looking forward.

3.2.4. Government demand

Similar to previous quarters, the fiscal policy was characterised by two trends. On the one hand, investment demand of the public sector continued to increase in Q3, as the utilisation of funds accelerated in line with the gradually approaching end of the 2007–2013 EU budget cycle. At the same time, fiscal policy remains committed to maintaining a low government deficit level. The increase in government transfers measured at current prices was typically linked to wage increases in the education and health care sectors.

3.2.5. Changes in invetories

Changes in inventories of the national economy made a positive contribution to GDP growth in Q3. The filling up of domestic gas storage facilities because of the Russia–Ukraine conflict may have played an important role in this development. In addition, a broader range of the production sectors replenished inventories.

Box 3-1: What was the impact of the first phase of the Funding for Growth Scheme on investments? Measuring alternatives using corporate data

The Funding for Growth Scheme (FGS) announced in 2013 was aimed at easing the financing constraints of small and medium-sized enterprises and may have significantly influenced investment developments in past quarters. The impact of the FGS on investments has been analysed through macroeconomic data until now.[4] A more accurate analysis of the Scheme requires corporate-level data. This box presents how the investment-stimulating effect of the first phase of the FGS can be measured on corporate-level data.

Investment by enterprises taking part in the first phase of the FGS can be examined using the financial statements 2013 of the SME sector. The investment of enterprises cannot be directly observed in the database, but its value can be approximated by the sum of change in tangible assets and amortisation. An investment defined on the basis of financial statements appears as an investment at the macroeconomic level as well if it is supported by the purchase of a new asset.

Table 3-1: Average investment in SME sector, 2013 prices, HUF million

	FGS non-participants		FGS participants		FGS borrowers for investment purposes	
	2012	2013	2012	2013	2012	2013
SMEs total	3.8	4.6	47.7	66.0	43.1	95.3
micro-enterprises	1.4	2.3	20.3	33.3	18.0	50.0
small enterprises	15.5	16.9	49.8	70.1	49.2	108.4
medium-sized enterprises	109.6	113.3	146.9	182.2	146.8	274.6

Note: Average real investment in 2012 and 2013 in the SME sector, estimated from balance sheet data of the enterprise. The investment averages are broken down in the table according to the size of enterprises and the participation in the Scheme.
Source: MNB

Table 3-1 shows the average investments calculated from enterprise data according to participation in the FGS and size of enterprise. **Average investment by enterprises participating in the FGS increased in 2013 compared to 2012.** Based on the breakdown of average investment figures according to size, the relative growth of investment by enterprises that took part in the FGS is inversely proportional to the size of the enterprise. The strongest growth can be seen in micro-enterprises. On the basis of the results of Table 3-1, enterprises which took part in the first phase of the FGS implemented higher value investment on average than those which did not take part in the FGS. This result is in accordance with our former analysis: enterprises taking part in Phase I of the FGS are better, more productive small and medium-sized enterprises than the average.[5]

Enterprises borrowed FGS loans for different declared purposes. A loan borrowed for investment purposes may have larger impact on investments than one borrowed for working capital financing or for redemption of existing loans. The last two columns of Table 1 show the average investment of this group according to year and enterprise size. A significant investment increase exceeding that of average enterprises taking part in the FGS and its decreasing rate according to enterprise size can be seen in this enterprise group as well.

[4] See: Report on development of inflation, June 2013, Chapter 6.1 (The real economic effects of the Funding for Growth Scheme in our forecast)

[5] MNB (2014): A Növekedési Hitelprogram első szakaszában résztvevő vállalatok elemzése: Leíró statisztikák mikro adatok alapján (In Hungarian), Magyar Nemzeti Bank, April 2014.

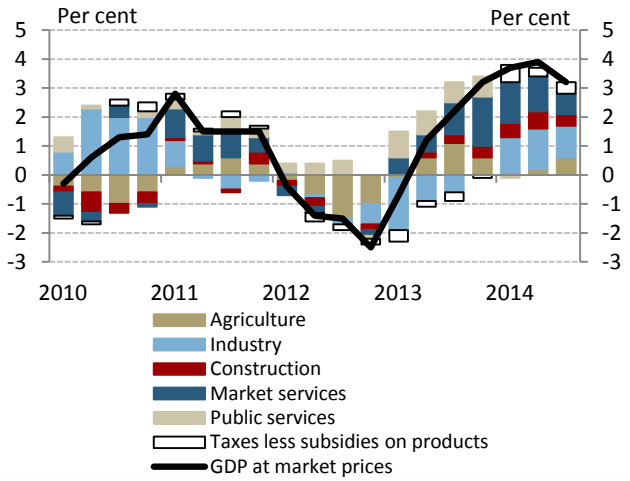
The rise in the investment activity of FGS participants may be partly due to the Scheme and partly due to improving aggregate economic activity. In order to precisely determine the Scheme's influence, the actual investment must be compared to the investment that would have been implemented without the Scheme. It is reasonable to assume that as macroeconomic conditions improved, several companies would have increased their investments even without FGS. However, these firms were more likely to take advantage of the Scheme. To gain a more precise estimate of the true impact of the Scheme, this self-selection effect should be accounted for. Detailed estimates of self-selection and **true programme effect are presented in the forthcoming study of Lieli et al. (2014).**[6]

[6] Lieli R. – Endrész M. – Harasztosi P. (2014): Az NHP I. szakaszának hatása a vállalati beruházásokra a 2013-as cégszintű adatok tükrében, MNB manuscript (in Hungarian).

3.3. Production and potential output

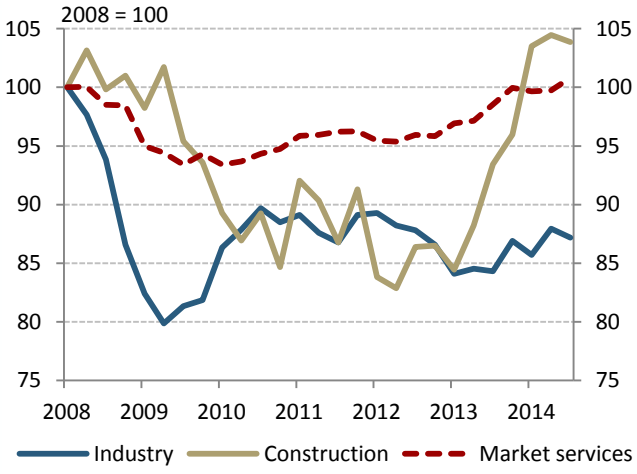
Output expanded on an annual basis in a broad range of sectors in 2014 Q3. This growth can primarily be linked to the performance of industry, construction and agriculture. At the same time, value added in industry and construction declined compared to the previous quarter. The rising investment rate and improving labour market activity point to a gradual recovery in potential growth.

Chart 3-24: Contribution of the output of the main sectors of the national economy to GDP growth



Source: CSO

Chart 3-25: Evolution of gross value added in the private sector



Note: Seasonally adjusted and reconciled data.
Source: CSO

Domestic output continued to expand in 2014 Q3. The rate of growth was consistent with the September Inflation Report. Output increased in a broad range of sectors, with industry contributing the most to growth on an annual basis (Chart 3-24).

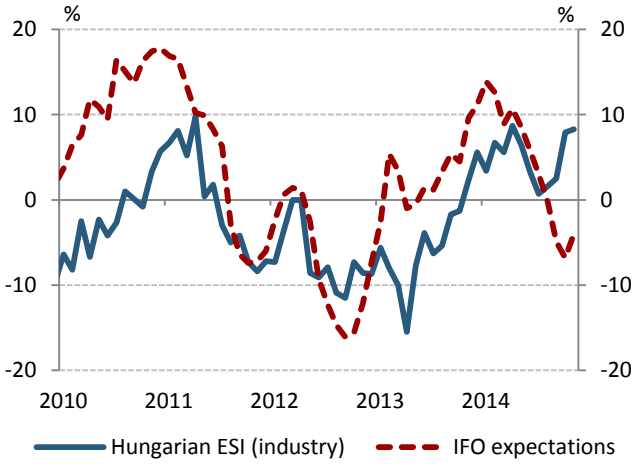
Industrial activity has decelerated in recent months. Value added in Q3 fell 0.9 per cent short of the performance recorded in Q2 (Chart 3-25). Output declined in a broad range of sectors in August, followed by only a moderate adjustment in September. Data reported for October suggest further weakening of industrial production with a 2.6 per cent decrease in output compared to the previous month.

The performance of vehicle manufacturing in Q3 may have been shaped by temporary factory shutdowns and the irregular timing of vacations in Germany. In the home provinces of the German parent companies of domestic vehicle manufacturers, the timing of schools' summer holidays and hence, employees' vacation schedules, tended to shift to August instead of July compared to the previous year. Moreover, sectors with larger exposure to the Russian and Ukrainian markets (chemical and metallurgical industry) were more restrained in the third quarter.

Forward-looking indicators provide mixed signals in respect of short-term outlook. The fragile growth prospects of the emerging countries, the worse-than-expected European economic activity, the Russia-Ukraine conflict and the adverse effects of the ensuing economic sanctions all represent downside risks. In contrast, the confidence indicator for Hungarian industrial production has improved in recent months (Chart 3-26).

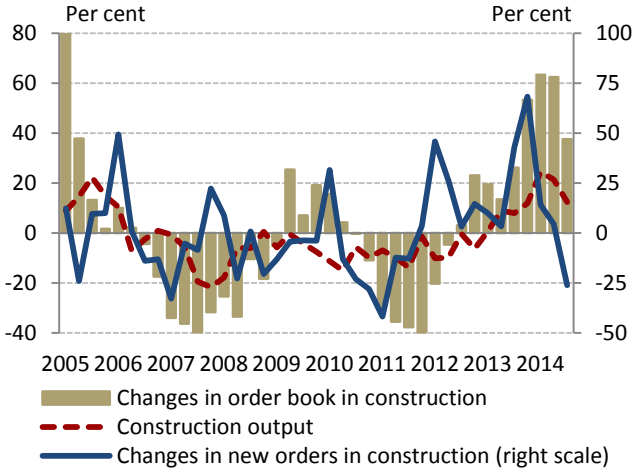
The surge in construction output may be coming to end, as reflected by the quarterly decline in its output (Chart 3-25)**.** After the quarterly growth observed in previous periods, output was down 0.6 per cent compared to the second quarter. The performance of this sector continues to be driven by infrastructure investment projects financed from EU funds. At the same time, these dynamics may be more restrained looking forward, in line with the end of the EU budget cycle. The decline in new orders in Q3 also points to more subdued output in the coming

Chart 3-26: Industrial business climate indicators



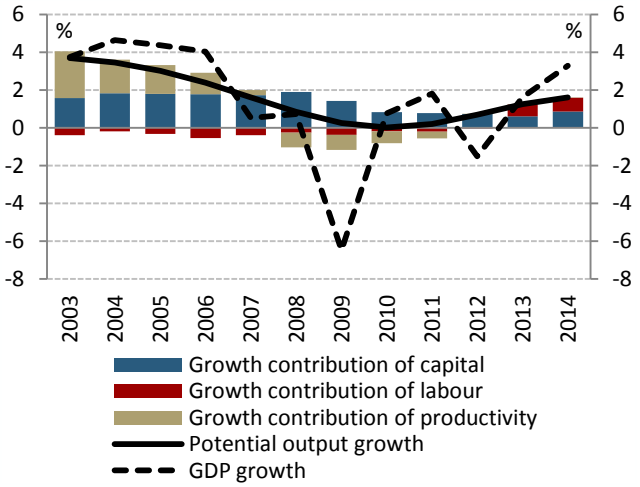
Source: CSO

Chart 3-27: Annual changes in construction output, orders and new orders



Source: CSO

Chart 3-28: Annual changes of potential output and GDP growth



Note: Seasonally adjusted data.
Source: MNB calculations

quarters (Chart 3-27).

According to preliminary data, agricultural performance was favourable this year. Agricultural output continued to expand compared to 2013. According to the 2014 estimates for agricultural accounts, gross value added exceeded the level of the previous year by 21 per cent. The growth was primarily explained by cereals, and the volume of maize production increased by one third compared to last year.

Value added in the service sectors continued to increase in 2014 Q3 (Chart 3-25). Output rose in a broad range of sectors. Retail sales have increased steadily in recent months; sales volume expanded in a wide range of products. The growth was facilitated by the expansion of domestic consumption demand. In addition, the pick-up in retail sales as measured by the statistics may also reflect the whitening effect resulting from the installation of tax authority cash registers. Retail sales improved further in October. The value added of the hospitality and tourism sectors continued to grow in Q3; the number of overnight stays and catering turnover both increased. The upswing in tourism is driven by the improving income position of households and by the increased utilisation of non-wage benefits aimed to foster domestic tourism.

The financial and real estate sectors continued to perform moderately. In line with subdued lending activity, the performance of the financial sector fell short compared to the previous quarter. Looking forward, the decrease in interest revenues linked to the conversion of foreign currency loans is expected to further reduce value added in 2015 Q1. The real estate sector saw a moderate correction in Q3. Looking forward, positive developments can be expected based on the best housing transaction data since the crisis and the increasing number of construction permits issued.

Potential growth may have risen gradually in recent years, helped by the recovery of aggregate demand. The production capacities of the economy may have been bolstered by the further expansion in labour force participation in Q3 and also by the rising investment rate (Chart 3-28). As a result of the methodological changes introduced in the context of ESA 2010, the level of the investment rate shifted upward, which increased both the level and the dynamics of potential output.

Box 3-2: Effects of methodological changes affecting the National Accounts

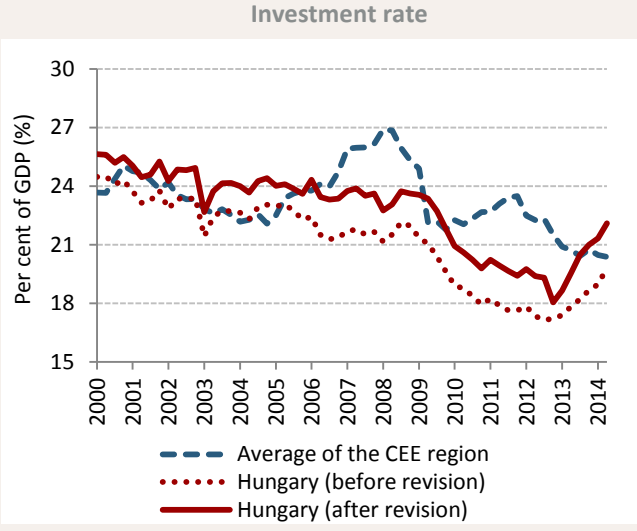
Upon the publication of the National Accounts for 2013, the Hungarian Central Statistical Office adopted the ESA-2010 methodology prescribed by Eurostat and as a result, the data included in the National Accounts have been changed retrospectively, to a more significant degree than would have been warranted by the regular annual revision. The level of GDP was shifted upward across the entire time horizon and simultaneously, gross fixed capital formation and hence, the investment rate increased considerably as well. In parallel with the higher level of nominal GDP, the government debt-to-GDP ratio decreased. As regards changes affecting the balance of payments (and consequently, GNI), the income balance improved significantly due to the more precise calculation of the remittances of workers employed abroad. This Box provides a brief description of the main methodological changes brought about by the introduction of ESA 2010. It also discusses the revision of GNI, and evaluates the changes in the time series in an international comparison.

Changes in the data of the National Accounts can be divided into three groups: on the one hand, there have been revisions related to the introduction of ESA 2010. On the other hand, the calculation method of GNI has changed in accordance with EU recommendations. Finally, the usual statistical revision has also taken place in order to reflect data corrections.

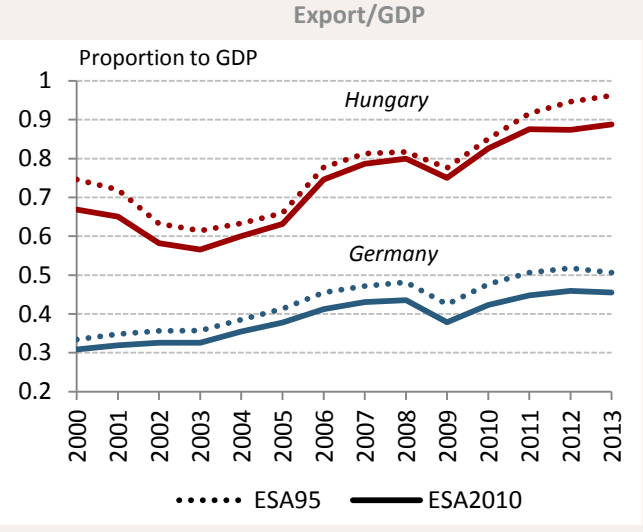
Key ESA-2010 revisions

The methodological changes primarily increased the volume of whole-economy fixed capital formation, in particular by the reclassification of intangible fixed assets from intermediate consumption. The GDP-proportionate investment rate was revised upward by around 1.5–2 percentage points for the entire period. The most noteworthy change is that according to the new methodology research and development activity (R&D) is recognised under the heading of produced assets rather than current expenses. As a result of the changes, GDP at current prices and the investment rate were both raised by around 1 percentage point. Another substantial revision was caused by the recognition of small tools[7] and own-account software and databases, which raised the level of the investment rate and GDP at current prices by around 0.5–0.7 per cent annually (Chart 3-29).

Chart 3-29: Revisions of selected GDP components



Source: Eurostat



Source: Eurostat

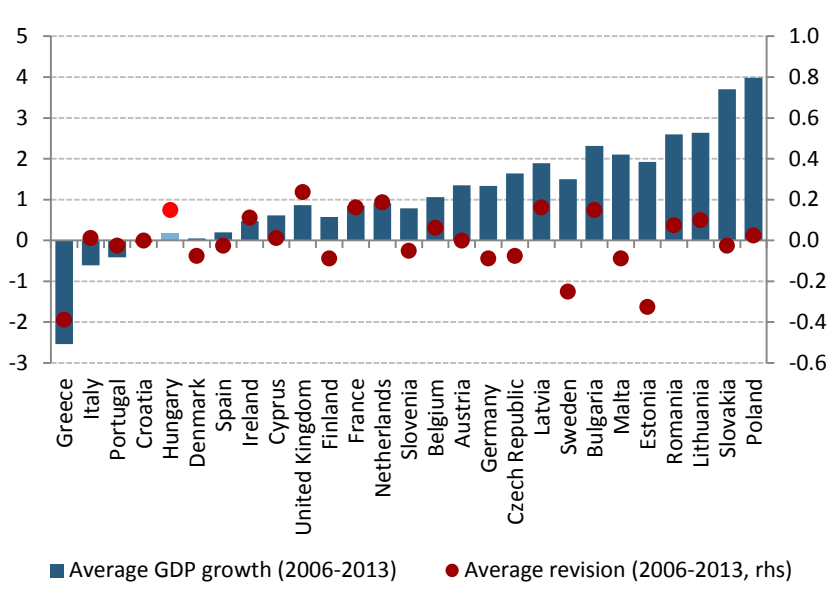
Under ESA 2010, goods for processing are recognised at net values; i.e. goods sent/received from abroad are no longer recognised as trade flow. Instead, only the processing fee will be shown as the export or import of services. While this change has no effect on GDP, it significantly reduced the export and import data of foreign trade turnover. Changes of

[7] This category includes tangible assets with a purchase or production cost up to a specified limit to be accounted for in a lump sum, concessions and similar rights and intellectual property. Since the revision lowered the limit, a larger portion of this category is to be classified as gross fixed capital formation, and a smaller part will be recognised as intermediate consumption.

similar magnitude can be seen in other European countries as well, including our most important trade partner, Germany, where the trade-to-GDP ratio declined substantially (Chart 3-29).

Data revisions raised the growth rate of the volume of Hungarian GDP by 0.1 per cent on average between 1995 and 2013. The change affected most significantly the figures of the period between 2011 and 2013; for example, 2013 growth increased by 0.4 percentage points to 1.5 per cent (Chart 3-30). Along with the methodological changes, regular statistical revisions also raised growth figures of recent years.

Chart 3-30: Revision of GDP after changeover to ESA2010 methodology



Source: Eurostat

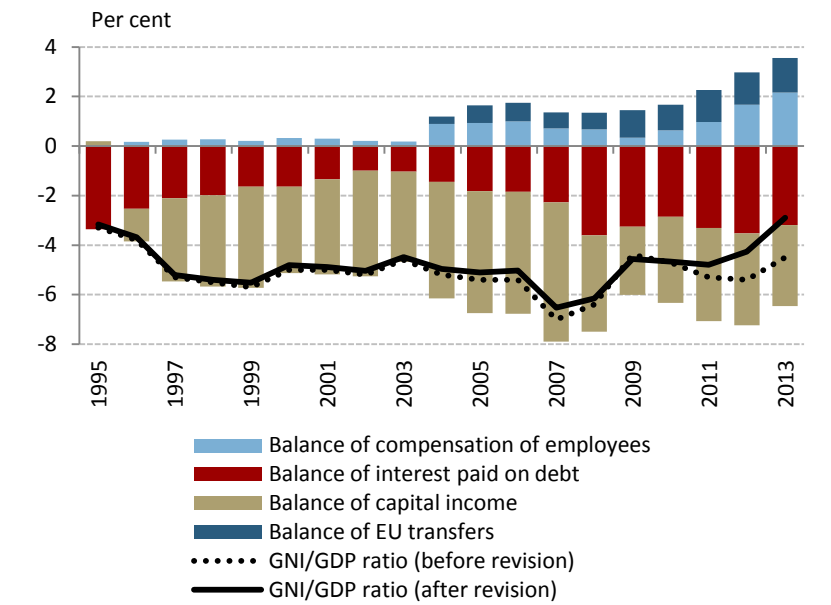
Revision of GNI data

In line with EU recommendations, the HCSO also revised GNI data as well. Changes in the source data used for the estimation of employee compensation transferred from abroad are of primary importance.[8] Data calculated according to the old methodology for earned income did not reflect the fact that the number of Hungarian employees working abroad has increased significantly in recent years.[9] The time series prepared according to the new methodology, however, is consistent with recent migration trends. Thus, the methodological changeover has raised both the level of GNI and the disposable income of households.

[8] Whole economy labour force balance data pertaining to the number of employees working abroad were replaced by the data presented in the labour cost survey. Gross average wages are now defined on the basis of the Eurostat database instead of the previously used ILO database.

[9] See for example, Bodnár, K. – Szabó, L. (2014): The effect of emigration on the Hungarian labour market. MNB Occasional Papers, no. 114

Chart 3-31: Evolution of gross national income



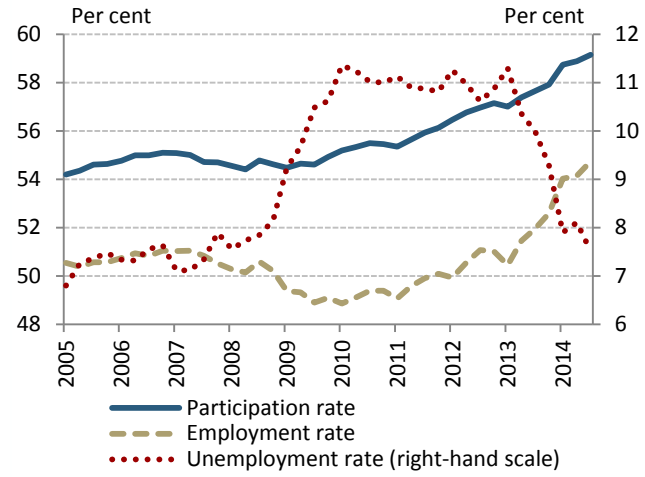
Source: CSO

The main objective of the methodological changes was to enable the statistics to provide a more reliable view of economic developments. Based on the revised data, the performance of the Hungarian economy was better than our previous knowledge. Regarding medium-term growth prospects, the upward revision of the investment rate (to 20 per cent by 2013) is a favourable sign.

3.4. Employment and unemployment

In the third quarter, private sector employment increased further, primarily as a result of improving job creation in the market services sector. The unemployment rate declined compared to the previous quarter. The growing labour demand of the private sector and the moderating level of unemployment point to the tightening of the labour market in recent quarters.

Chart 3-32: Participation, employment and unemployment, total economy



Source: CSO

Chart 3-33: Evolution of employment in the private sector

Note: * Without workers employed abroad.
Source: CSO

Similar to previous months, the labour force participation rate increased slightly in 2014 Q3. The growth in the number of employees surpassed the dynamics of previous months. After having faltered in May, public employment increased steeply. This may have facilitated a decline in the number of the unemployed during the autumn months. In Q3, the participation rate for the 15–74 age group was 59.2 per cent (Chart 3–32).

Employment in the national economy improved in Q3, amid the expansion of employment in the private sector and the general government alike. Public sector employment was boosted by the expansion of the public work programme. The increase in the number of employees working in the private sector can be mainly attributed to improving employment in the market services sector. Employment in the manufacturing sector stagnated in Q3, which was consistent with the slowing activity of the sector. After the drop observed in Q2, the number of hours worked in the private sector increased once again and returned to its level recorded at the beginning of the year (Chart 3-33).

Both the number of jobseekers registered by the National Employment Service and unemployment calculated from the data of the Labour Force Survey declined in Q3. Consistent with the increasing labour demand of the private sector, after a decline in Q2, the number of non-supported new jobs resumed growing. According to the Beveridge curve, the labour market tightened (Chart 3-34). Although the number of monthly announced job vacancies has not yet returned to the levels observed before the crisis, the stock of available job vacancies has already approached pre-crisis levels. Consequently, in addition to corporations' demand for labour, the tightness of the labour market may also be affected by the possible difference between the structure of labour market supply and demand.

In the case of a recovery in labour demand, in addition to the jobseekers defined by the HCSO, other groups may enter the labour market, alleviating the tightness of the labour market. The tightening of the labour market may counteract the currently subdued inflation, putting upward pressure on it especially in labour-intensive sectors. (The relationship between labour market

Chart 3-34: Evolution of Beveridge curve

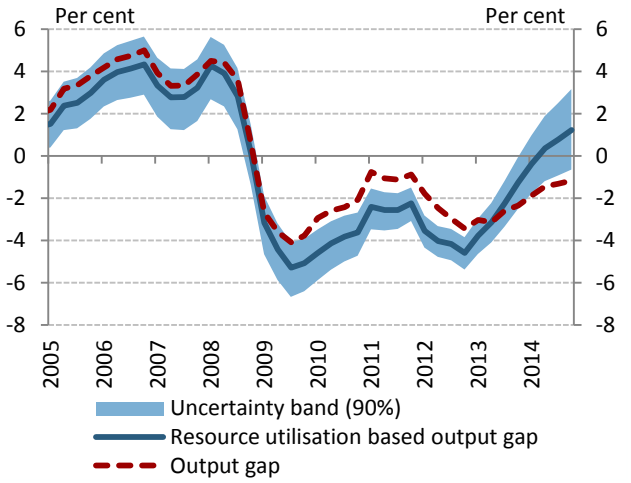
Note: The non-supported vacancy ratio indicates the ratio of non-supported vacancies to active workers in the quarter.
Source: MNB calculation based on National Employment Service and CSO data

tightness and labour reserves is discussed in detail in Chapter 6.1).

3.5. The cyclical position of the economy

Inflationary pressure from the real economy remains moderate. The underlying reasons are the weak cyclical position of Hungary's export markets and domestic demand below its equilibrium level. However, the output gap may close gradually in parallel with a pick-up in demand, which is also corroborated by the indicators that measure resource utilisation.

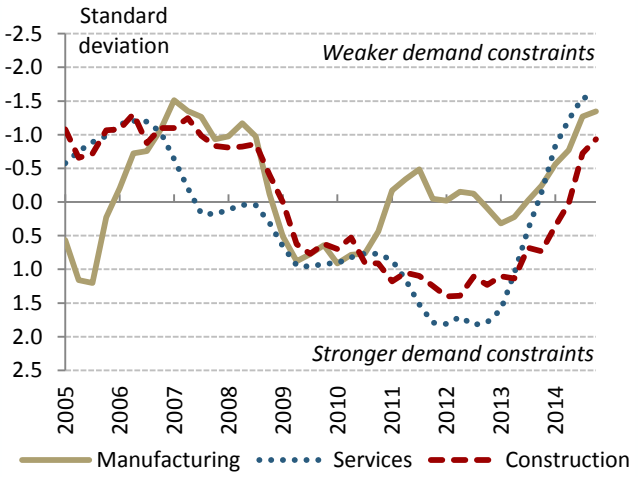
Chart 3-35: Output gap measures



Note: The resource utilisation based output gap consolidates the information content of various corporate capacity utilisation indicators into a single indicator. The uncertainty band reflects the uncertainty of that estimate. For a detailed description of the methodology, see: Rácz O. M. (2012): Using confidence indicators for the assessment of the cyclical position of the economy, MNB Bulletin, June 2012.

Source: MNB

Chart 3-36: Demand as a primary limiting factor of production in the ESI survey



Note: Standardised data, reversed scale. 3-quarter moving averages.

Source: European Commission

The subdued underlying inflation developments suggest that inflation is not only low because of favourable cost shocks, but also because inflationary pressure from the real economy is weak as well. According to our estimate, the output gap continues to be negative (Chart 3-35).

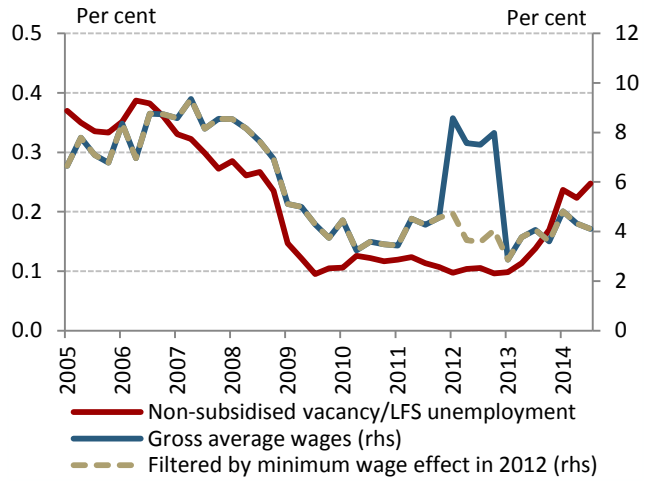
In parallel with a pick-up in economic activity, company survey-based confidence indices and labour market indicators point to the closing of the output gap. Confidence indicators continued to improve in the past months, approaching pre-crisis levels in Q3. A pick-up in demand may explain the increasingly intensive capacity utilisation, which is also corroborated by the fact that fewer companies indicate demand as a factor that limits production (Chart 3-36). The higher level of the resource utilisation-based output gap is justified by the fact that higher capacity utilisation is mainly typical in sectors that are less important in terms of aggregate inflationary pressure (industry, construction).

Based on incoming data, assessment of the cyclical position of the Hungarian economy has remained substantially unchanged since the September Report. The cyclical position of the economy may be explained by domestic demand, which remains below its equilibrium level, and the disinflationary effects from the world economy. At the same time, the gradual recovery in domestic household consumption points to the closing of the output gap.

3.6. Costs and inflation

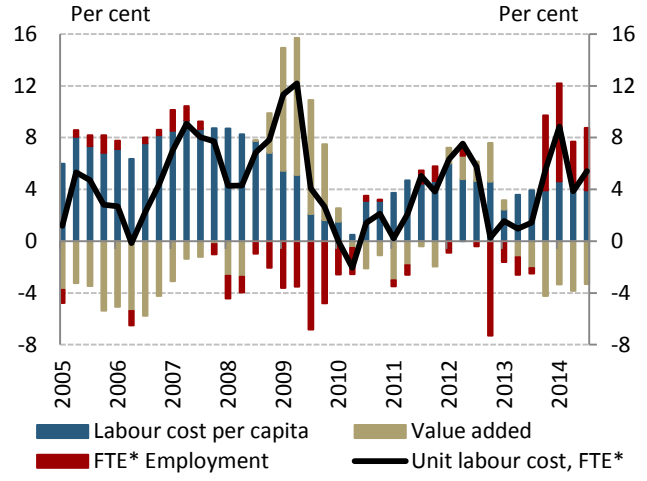
Inflation remained just barely in negative territory in recent months. Subdued demand, a considerable decline in oil prices, low imported inflation and the reduction of regulated price in several steps all contributed to the moderate inflation. Following the surge observed at the beginning of the year, the level of the wage index of the private sector was similar to that of the previous quarter.

Chart 3-37: Annual changes in gross average wages and labour market tightness



Source: CSO

Chart 3-38: Annual changes and components of unit labour cost in private sector



Note: * Full-time equivalent. Seasonally adjusted data.
Source: MNB calculation based on KSH data CSO

3.6.1. Wages

Last year, labour market tightness moved from its low and in line with that wage dynamics increased to some extent. At the same time, low inflation and more anchored inflation expectations may have been factors why the tightening observed in the labour market resulted in only a moderate acceleration in wage growth (Chart 3-37).

The rate of wage growth in the private sector remained stable in 2014 Q3. The dynamics of both regular earnings and gross average earnings were around 4 per cent. Bonus payments were at the level usual in Q3. Within the private sector, the dynamics of wages in manufacturing continue to be higher than that of market services.

Unit labour cost calculated using full-time equivalent employment increased slightly in Q3 (Chart 3-38). It was mainly the increase in the number of hours worked that contributed to the changes in the dynamics of unit labour cost. A slower increase in added value also resulted in rising unit labour cost. By contrast, the dynamics of per capita labour cost declined slightly in Q3.

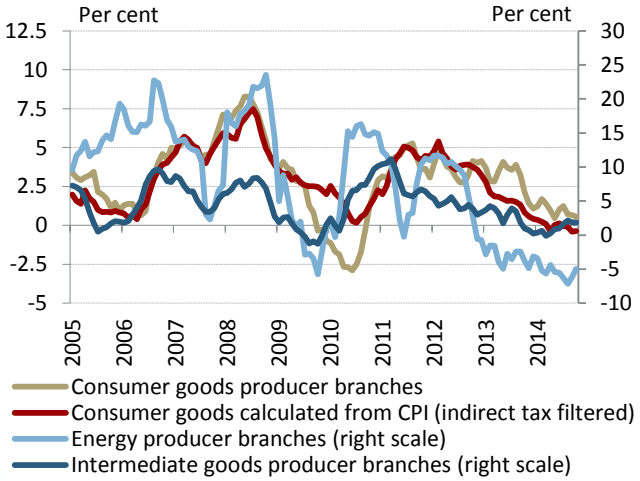
3.6.2. Producer prices

Inflationary pressure from agricultural commodity prices continues to be subdued. Producer prices of agricultural products continued to decline in the past months, which may have been mainly attributable to the favourable harvest results, the price reducing effect of the Russian embargo and the fall in fodder prices. Cereals prices declined slightly during the autumn. The price level of products of animal origin decreased, which is explained by the fall in pork and milk prices.

Industrial producer prices were characterised by moderate dynamics in the past months (Chart 3-39). This may be explained by both subdued demand and low imported inflationary pressure. The prices of sectors producing consumer goods and goods for further processing increased slightly. The prices of energy producing sectors continued to decline compared to the same period of the previous year.

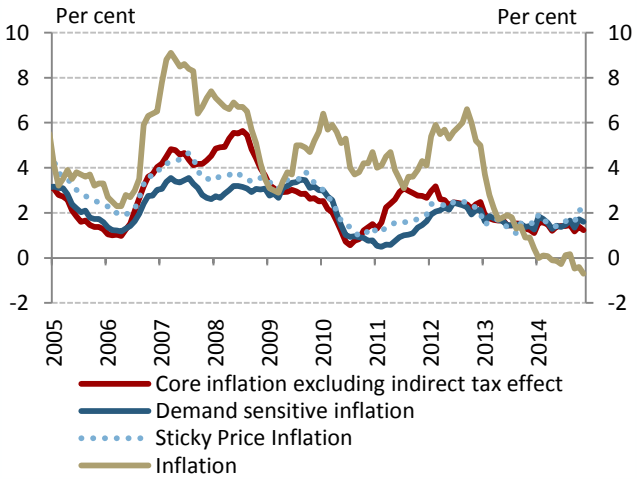
Changes in domestic producer prices were in line with the developments observed in the euro area. The changes in

Chart 3-39: Annual change in industrial producer prices



Source: MNB calculation based on CSO data

Chart 3-40: Development of inflation and underlying inflation indicators



Source: CSO and MNB calculation based on CSO data

producer prices are based on the further decline in energy prices, the subdued demand-side price pressure and unchanged inflation expectations. As a result, low cost-side inflationary pressure continued to be observed in the case of processed products.

3.6.3. Consumer prices

Inflation has stayed in negative territory in the past months. Underlying inflation indicators were around 1.5 per cent in the recent period. The October increase in sticky price inflation is the result of a one-off effect, i.e. the rise in the price of other, not listed financial services. **The subdued level of underlying indices continues to indicate a moderate inflationary environment.** The indicators remain steadily in the positive range, and thus, despite the below 0 per cent inflation, deflation is unlikely to evolve (Chart 3-40).

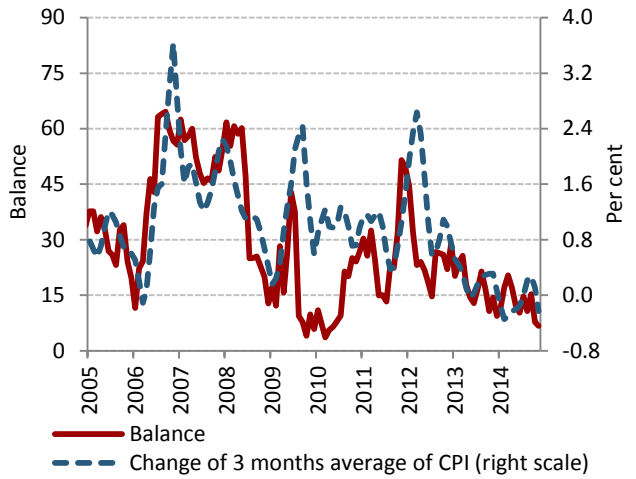
Tradables prices increased slightly in the past period. Changes in the prices of these products may still be explained by weak demand and the price reducing impact of low import prices. Within tradables, changes in the prices of durables remained subdued. The fall in air-ticket prices contributed to the inflation of non-durable goods in the past months, and the prices of other items in this range of products also declined slightly.

The monthly price change in market services has remained broadly subdued. One-off impacts also influenced the prices of market services in October, which is primarily explained by the increase in the prices of other financial services. Some banks changed their fees, which resulted in an increase in the annual inflation of market services. Apart from this effect, however, moderate price increases were observed in a wide range of products. Based on the pricing practice typical of these products, the beginning of next year may determine the developments in market services inflation.

In line with agricultural producer prices, changes in food prices were subdued. The price level of processed food products declined slightly, which may also have been attributable to the increase in supply due to the Russian embargo. A moderate decrease was observed in the price level of unprocessed food.

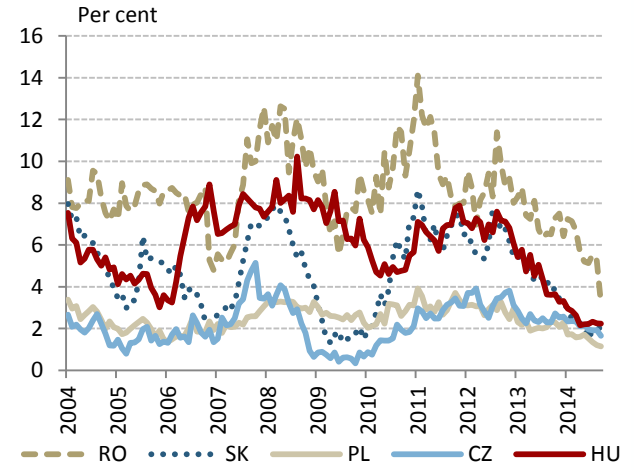
The decline in fuel prices is mainly attributable to the fall in oil prices denominated in USD; its impact was mitigated slightly by the weakening of the forint against the US dollar. Between end-September and early December, the price of Brent crude fell by more than 20 per cent, while the forint depreciated by some 2 per cent

Chart 3-41: Expected changes in retail sales prices in the next 3 months* and actual inflation



Note: * Balance is the difference between the proportion of corporations expecting price increase and price decrease.
Source: GKI and MNB calculation based on CSO data

Chart 3-42: Inflation expectations in the region



Source: MNB calculations based on data of the EU Commission

against the dollar.

Administered prices declined in past months. The autumn (September–October) reduction of electricity and district heating prices appeared in consumer prices as well, resulting in a further decline in the inflation of this product range. Other administrative items showed restrained price developments.

Inflation data for the past period were lower than the central bank's expectations. The difference is primarily attributable to the decline in oil prices. In addition, lower inflation in tradables and food also contributed to the difference.

In summary, recent months have been characterised by moderate inflation. From the cost side, the major decline in oil prices, moderate commodity and import prices as well as the Russian food embargo continued to exert strong disinflationary pressure. At the same time, the gradual pick-up in domestic demand points in the opposite direction.

3.6.4. Inflation expectation

Inflation expectations concerning retail sales prices continued to decline. This may indicate that, overall, cost-side and demand-side factors still do not warrant any significant price increases in the coming months (Chart 3-41).

In the past months, Hungarian households' inflation expectations settled at the level of countries that could earlier be characterised by permanently low inflation expectations (Czech Republic, Poland). This level may correspond to expectations consistent with the inflation target. Households' expectations declined continuously during the last year, in parallel with the decline in inflation (Chart 3-42).

The adjustment of inflation expectations observed in recent years may help align the price- and wage-setting decisions of economic agents with the inflation target over the medium term as well.

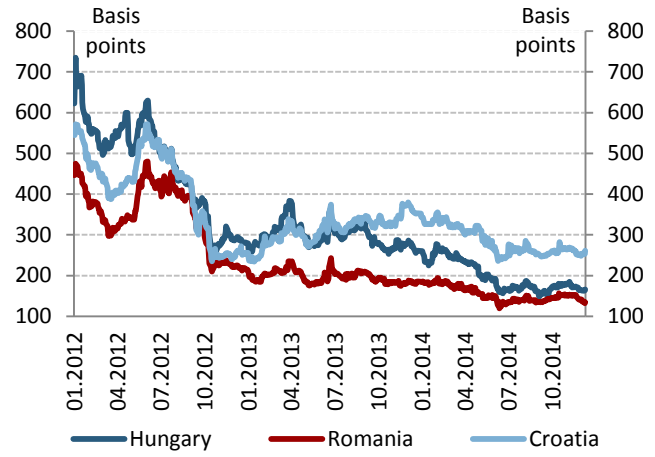
4. FINANCIAL MARKETS AND INTERES RATES

4.1. Domestic financial market developments

Over the past three months, international markets were characterised by persistently high risk appetite and positive investor sentiment overall, although concerns about global growth, the disinflationary environment and oil prices were still perceivable. Driven by the combined effect of several factors, risk appetite faltered in the second half of October, accompanied by a sharp fall in stock exchange indices and increased demand for low-risk, developed market bonds. From the end of October, however, investors' attention shifted to risky assets again, and by the end of the period several developed stock market indices reached historical peaks. Money markets continued to react sensitively to the announcements of developed central banks: the quantitative easing of the Bank of Japan was received favourably by the market, and the upcoming euro-area government bond purchase programme combined with the Japanese stimulus is expected to support global risk appetite over the short term.

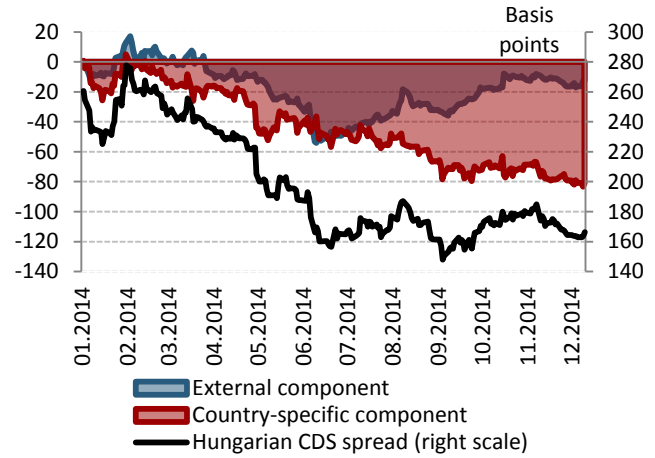
Domestic financial market developments tended to indicate a positive picture. The favourable risk assessment of Hungary was reflected both in the stability of the CDS spread and in the decline in long-term yields. Outperforming its peers in the region, the forint exchange rate strengthened by more than 1.5 per cent against the euro, and even against the US dollar it depreciated to a lesser degree than any other regional currency. In the government securities market, yields on short-term maturities started to inch closer to the key policy rate, while long-term yields declined considerably, which reduced the steepness of the yield curve.

Chart 4-1: 5 year sovereign CDS spreads in the region



Source: Bloomberg

Chart 4-2: Components of 5-year Hungarian CDS spreads



Note: The decomposition method used can be found in the MNB Bulletin: Variance decomposition of sovereign CDS spreads, Kocsis–Nagy (2011).

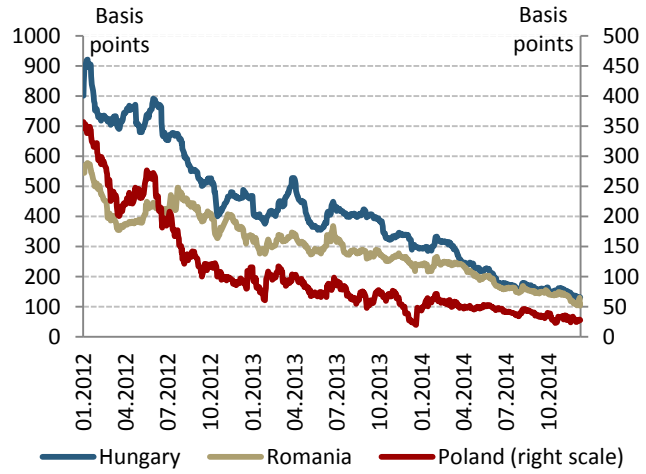
Source: Bloomberg

4.1.1. Risk assessment of Hungary

Hungary's risk indicators have changed favourably since the September Inflation Report. The Hungarian five-year sovereign CDS spread remained practically unchanged compared to the beginning of the review period, while the forint exchange rate strengthened overall as uncertainties about the conversion of foreign currency loans subsided. Government market yields on short-term maturities increased slightly in the first half of the period since September, inching closer to the level of the key policy rate; but they started to decline again at the end of the period, while long-term yields shifted downward markedly by 50-100 basis points. The risk indicators of CEE countries moved in the same direction. Temporary fluctuations in global market sentiment were less perceivable in CEE countries; despite growth concerns and anxiety over the Russia-Ukraine conflict, the assessment of the region remained relatively favourable (Chart 4-1).

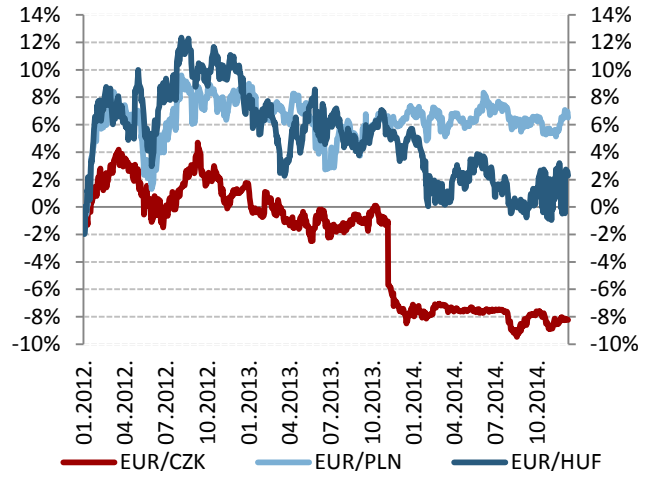
The Hungarian five-year CDS spread did not change overall compared to its level in mid-September. Temporary shifts in global market sentiment were reflected relatively moderately in regional CDS spreads. The Hungarian spread temporarily rose to 180 basis points, before declining to around 160 basis points by the end of the period. Looking at the period as a whole, regional spreads moved in the same direction. The assessment of the region can still be considered favourable throughout the year, as evidenced by CEE spreads, which fluctuated around the lowest values recorded this year.

Chart 4-3: Spreads of CEE sovereign euro bonds maturing in 2018



Source: Thomson Reuters

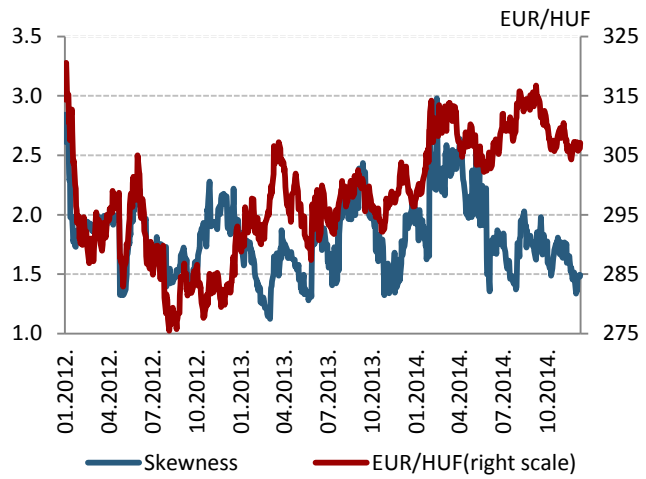
Chart 4-4: Exchange rates in the region



Note: Changes compared to beginning of 2012. Positive values mean an appreciation of the currency.

Source: Thomson Reuters

Chart 4-5: EUR/HUF exchange rate and 1 month skewness



Note: Skewness = Risk reversal/Volatility *10

Source: Bloomberg

Based on our CDS decomposition methodology, the decline observed in the Hungarian CDS spread toward the end of the period can mainly be attributed to country-specific factors, while its rise in the middle of the period reflected both international and domestic factors (Chart 4-2). On the whole, consistent with its peers in the region, Hungary's risk assessment has improved since the beginning of the year, and at the beginning of December the five-year Hungarian CDS spread hovered near its post-crisis low.

Yields on EUR-denominated Hungarian bonds decreased by around 30 basis points during the past three months. Yields declined on other CEE bonds as well, albeit to different degrees (Chart 4-3).

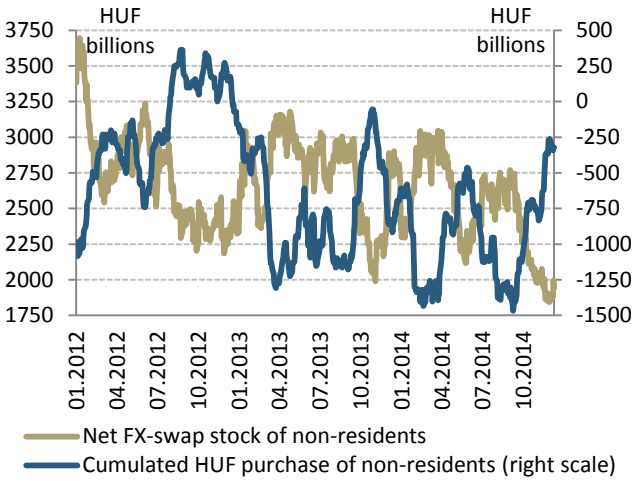
4.1.2. Developments in foreign exchange markets

Compared to the previous quarter, the EUR/HUF cross rate fluctuated within a somewhat narrower range, and at slightly stronger levels between 304 and 312. The forint exchange rate strengthened against the euro by more than 1.5 per cent during the period. The forint exchange rate was favourably affected both by domestic events and the increased risk appetite. With regard to Hungary, the pressure on the exchange rate was eased and previous uncertainties were alleviated by Parliament's decisions regarding the compensation of households indebted in foreign currency and the conversion of foreign currency loans at market rate and by the FX sale tenders of the MNB, intended to provide the banking sector with the foreign currency needed for conversion. Developments in forward-looking indicators (volatility, skewness) at the end of the period pointed to the stabilisation of the forint exchange rate (Chart 4-5).

To a moderate degree, the forint exchange rate was an outperformer compared to its CEE peers in the period since mid-September. Among the regional currencies, only the forint and the Polish zloty appreciated by more than 1 per cent, while the Czech koruna and the Romanian leu weakened slightly against the euro. At the same time, emerging currencies depreciated – albeit to different degrees – against the dollar, due to the steady appreciation of the US currency. In the period since mid-September the Czech, Polish and Romanian currencies depreciated by 4-6 per cent against the dollar compared to the 3 per cent depreciation of the forint (Chart 4-4).

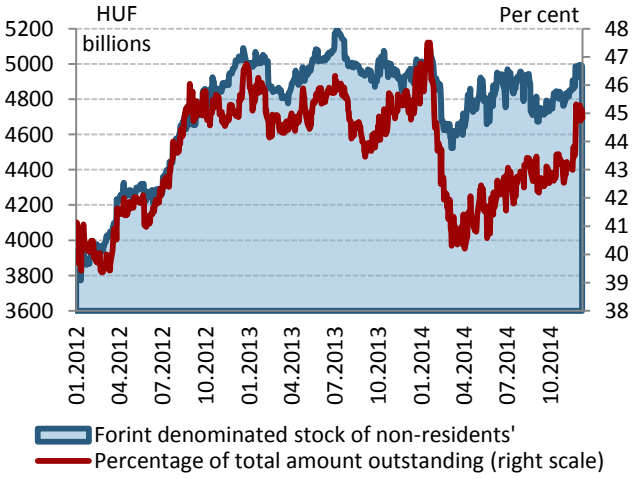
Swap spreads indicated some volatility during the period on short-term maturities (up to a month), typically rising only during the more tense, end-of-month periods. The decline in central bank overnight deposits is another

Chart 4-6: HUF FX Swap stock, and cumulated HUF purchase of non-residents



Note: Cumulated HUF purchase of non-residents: 4 January 2010=0.
Source: MNB

Chart 4-7: Hungarian forint-denominated government securities held by non-residents



Note: The chart shows the stock of T-bills and T-bonds and the amount of government securities held by non-residents; but retail securities are not included.
Source: MNB

indication that the precautionary liquidity management characterising banks during the previous quarter eased somewhat. Swap spreads tended to rise for medium-term maturities (1, 3 and 6-month) at the beginning of the period, which was followed by a gradual contraction. At the beginning of December, quotes with 1 and 2-month maturities stretching over to 2015 hinted at the usual tensions associated with bank's end-of-year balance sheet adjustment. However, the rise in spreads observed until the beginning of December fell short of the levels seen in previous years. Spreads on long-term swaps with maturities of over a year declined across the board.

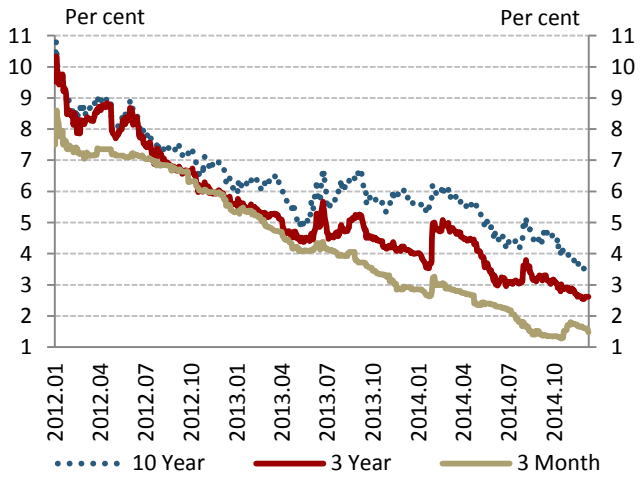
Non-residents' position against the forint declined, in parallel with an increase in their government security holdings. The net FX-swap holdings of non-residents decreased by HUF 635 billion by the end of the period, while their cumulated forint purchases increased considerably by HUF 940 billion. The forint-denominated government securities portfolio of non-residents remained stable in the first half of the period, hovering in the range of HUF 4,700–4,900 billion before embarking on an increase at the end of the period and eventually approaching HUF 5,000 billion. The government security portfolio of non-residents was up HUF 250 billion in total, increasing non-residents' share in the forint-denominated government securities market to 45 per cent from 42.5 per cent (Chart 4-6).

4.1.3. Government securities market and changes in yields

In the primary market of government securities, there was robust demand for long-term bonds, while the generally healthy demand for Treasury Bills weakened in certain cases. Demand for 3-month Treasury Bills amounted to nearly 2.5 times the supply on average. At the same time, the Government Debt Management Agency (ÁKK) was unable to raise the announced quantities in the case of half of the one-year TB auctions. In the last weeks of the year, the ÁKK gradually reduced the announced quantities: by the end of the year the quantity sold at individual auctions amounted to only HUF 30 billion compared to HUF 60 billion in the first half of the year. The average auction yields fell to a historical low, well below the central bank base rate in the first half of the period, before DTB yields moved on a path of slow recovery toward the end of the period. That notwithstanding, yields remained below the level of the key policy rate by 40–50 basis points.

In the primary market of government securities, the robust excess demand for long-term government bonds amounted to 2.5–3 times the supply on average, while

Chart 4-8: Yields of benchmark government securities



Source: ÁKK

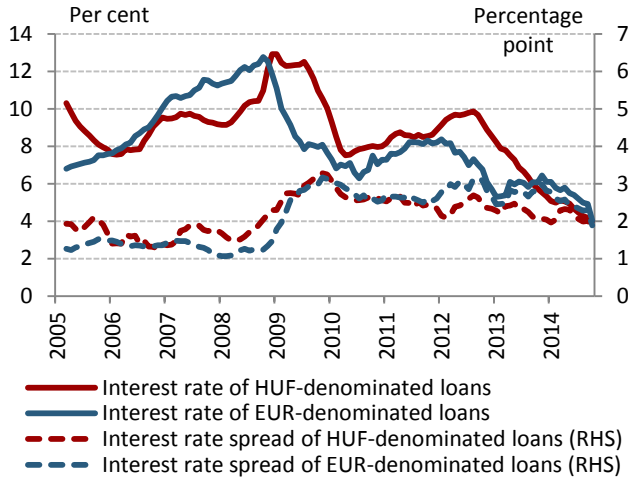
demand for floating rate 3-year bonds exceeded the supply by 4.5 times on average. The issuer was able to sell government securities in the amount of HUF 131 billion more than the announced quantity. By the end of the period, average auction yields were down by 60–100 basis points, pushing down the yield on 10-year papers to around 3.5 per cent.

Secondary market government paper yields increased overall across short maturities, and declined considerably in the case of long-term papers. This reduced the steepness of the yield curve significantly compared to the beginning of the period. Interbank yields saw a decline comparable to that in the government securities market on long maturities, while short-term yields did not change notably, hovering around the level of the central bank base rate (Chart 4-8).

4.2. Credit conditions of the financial intermediary system

Based on actual transactions, the cost of financing decreased in both the corporate and household segment in 2014 Q3. The decline in interest rates exceeded the downward trend in the reference rate, and thus the interest rate spread narrowed in both segments. According to respondents to the Lending Survey, similar to the housing loans of the household segment, banks reported broadly unchanged corporate credit conditions. By contrast, they reported an easing of credit conditions on consumer credit within the household segment. The 1-year real interest rate declined during the quarter due to falling government bond yields.

Chart 4-9: Smoothed interest rates and spreads on corporate loans by denomination



Note: Interest rates smoothed by the 3-month moving average. The spread on the moving average of the 3-month BUBOR and EURIBOR, respectively. Loans with floating interest rates or with up to 1 year initial rate fixation.
Source: MNB

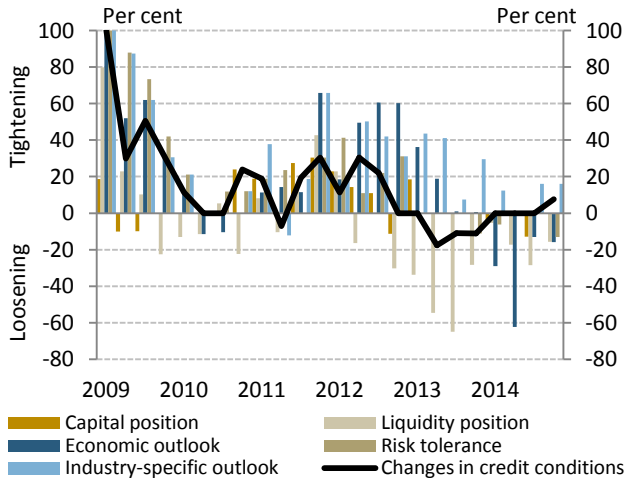
4.2.1. Corporate credit conditions

Corporate lending rates declined further in 2014 Q3. Interest rates on forint loans with floating interest rates, or loans with up to 1 year initial rate fixation,[10] smoothed by the three-month moving average based on contracts realised, dropped from 4.7 per cent to 4.2 per cent in the third quarter before declining further to 4.0 per cent in October (Chart 4-9). Between July and October, the interest rate spread decreased by around 0.2 percentage points. As a result, neither the interest rate level, nor the spread is considered excessive by international standards. Loans disbursed in the context of the extended second phase of the Funding for Growth Scheme still provide the most favourable financing conditions with an interest rate of at most 2.5 per cent for creditworthy small and medium-sized enterprises.

The interest rate level and the spread over the reference interest rate (3-month EURIBOR) on euro-denominated loans both decreased in the third quarter. Between July and October, the interest rate level smoothed by the

[10] The majority of loans granted within the Funding for Growth Scheme are long-term loans, therefore the interest rates reviewed by us mainly reflect market developments.

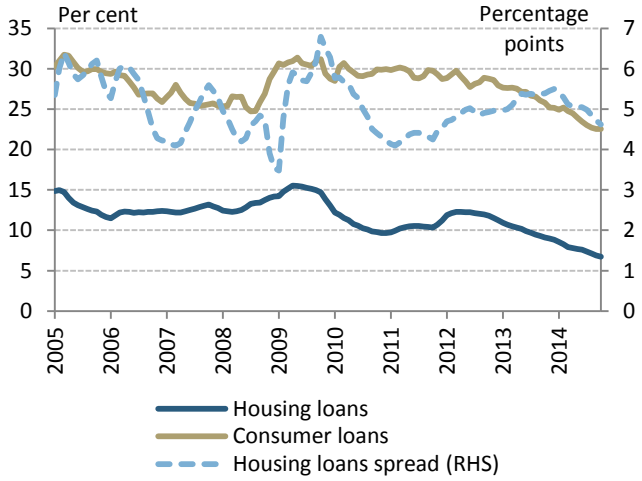
Chart 4-10: Changes in credit conditions and factors contributing to the changes in the corporate segment



Note: Net percentage balance of respondents tightening/easing credit conditions weighted by market share.

Source: MNB based on banks' responses

Chart 4-11: Smoothed annual percentage rate of charge (APRC) and spreads of housing and consumer loans



Note: Interest rates and spread smoothed by the 3-month moving average. Prior to 2009, HUF-denominated mortgage lending was marginal.

Source: MNB

three-month moving average dropped to 2 per cent from 2.6 per cent, while the spread declined to 1.9 percentage points from 2.3 percentage points.

The Lending Survey revealed that corporate credit conditions remained unchanged in 2014 Q3, although banks' liquidity position, the economic outlook and the capital position all pointed to the easing of conditions in the review period. Looking ahead only a low percentage of the banks reported that they would tighten credit conditions in the next 6 months (Chart 4-10).

4.2.2. Household credit conditions

Based on concluded contracts, the annual percentage rate (APR) smoothed by the three-month average on housing loans fell further, standing at 6.7 per cent in October compared to 7.4 per cent in July (Chart 4-11). The decline in the APR exceeded the drop in the 3-month BUBOR during the same period, reducing the spread to 4.6 percentage points from the 5 percentage points observed in July, and thus the downward trend seen since December 2013 continued. The declining APR and spread partially reflect the increasing ratio of floating rate schemes within newly issued loans.

The annual percentage rate smoothed by the three-month moving average on consumer credit continued to fall slightly in the course of the third quarter (Chart 4-11), reaching 22.6 per cent in October compared to 23 per cent in July.

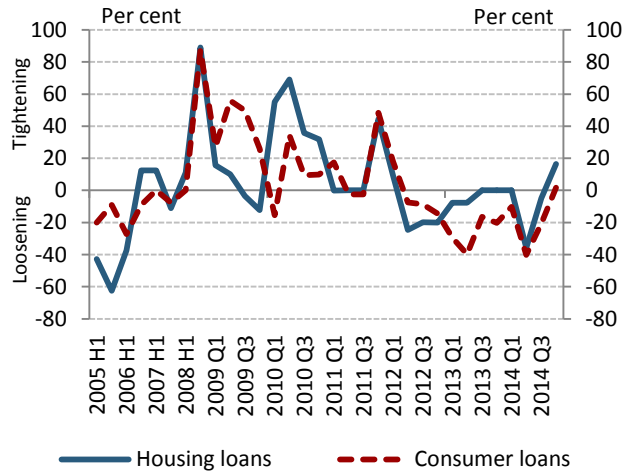
Based on the responses in the Lending Survey, banks eased conditions on consumer credit in 2014 Q3, while leaving conditions on housing loans broadly unchanged. A net[11] 5 per cent of banks surveyed reported easing in the case of housing loans, and 20 per cent reported easing conditions on unsecured consumer loans (Chart 4-12). Owing to the unchanged conditions on housing loans, the average loan-to-value ratio (LTV) of concluded housing loan transactions remained at the level of 57 per cent. Regarding the next six months, 16.5 per cent of banks plan to tighten their conditions on housing loans and intend to leave the conditions on consumer credit essentially unchanged.

4.2.3. Changes in real interest rates

In 2014 Q3, one-year forward looking real interest rates fell continuously based both on the 1-year government bond yield and the banking system deposit rates with maturities of up to 1 year (Chart 4-13). The decline in real

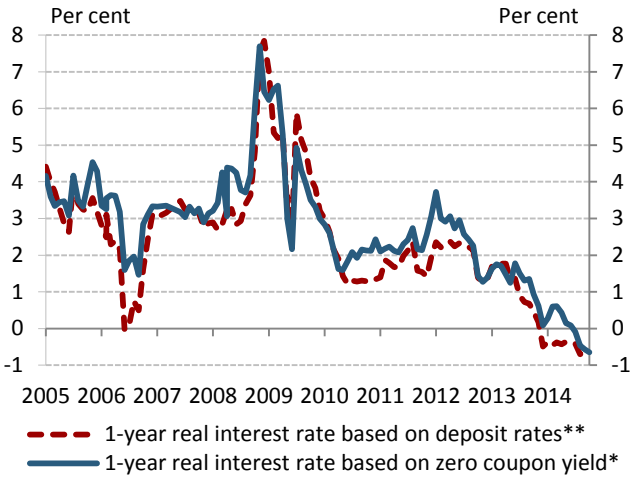
[11] Net percentage balance of respondents tightening/easing credit conditions weighted by market share.

Chart 4-12: 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 4-13: Forward-looking real interest rates



Note: * 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: MNB, Reuters poll

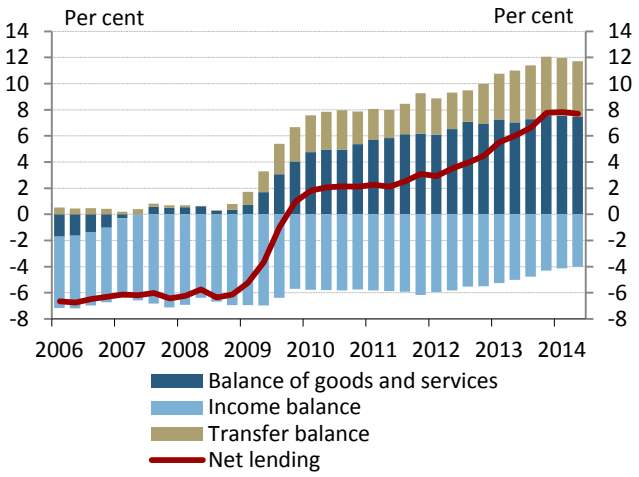
interest rates stemmed from the decrease in zero coupon yields (estimated on the basis of the government bond market yields). The real interest rate reached a historical low in October, standing at -0.65 per cent based on 1-year government bond yields and at -0.8 per cent based on banking system deposit rates with maturities of up to 1 year.

5. THE BALANCE POSITION OF THE ECONOMY

5.1. External balance and financing

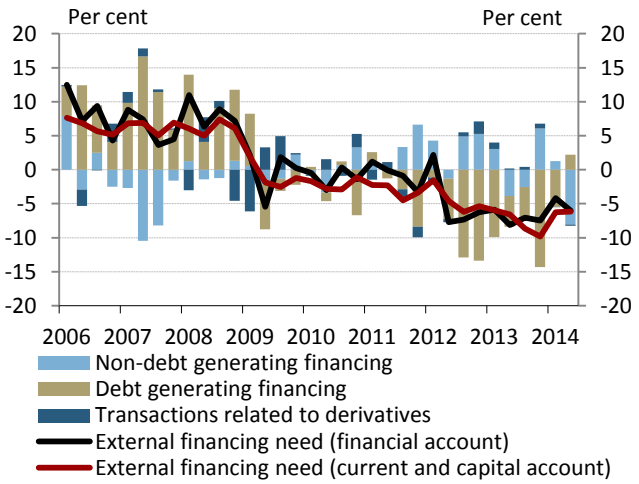
Taking account of the effect of revisions, in 2014 Q2 the four-quarter external surplus of the Hungarian economy settled at a historically high level of close to 8 per cent of GDP. The external surplus remaining at an unchanged level is the result of a slight decline in the trade balance and the transfer balance as well as an equal decline in the income balance deficit. Outflows of funds were observed on the financing side, which were attributable to smaller debt-type fund raising and outflows of non-debt funds due to underlying one-off and seasonal reasons. The foreign debt of the country increased slightly as a result of revaluation effects.

Chart 5-1: Changes in external net lending



Note: Cumulated four-quarter values; as a proportion of GDP
Source: MNB

Chart 5-2: Structure of external financing (transactions as a proportion of GDP)



Note: The net borrowing calculated from financial account side corresponds to the total of the net lending and the net errors and omissions.
Source: MNB

5.1.1. Developments in Hungary's external balance

Four-quarter net lending according to the real economy approach was around 8 per cent of GDP in 2014 Q2, i.e. it remained almost unchanged compared to the previous period (Chart 5-1). The pick-up in automobile manufacturing, which is attributable to new capacities, contributed significantly to the still high **foreign trade surplus** of nearly 8 per cent of GDP. The considerable decline in the **income balance** deficit amounting to 4.1 per cent of GDP contributed significantly to the reduction of the country's external vulnerability. The **transfer balance** continued to keep the country's net lending at a high level. There was a small decline in the four-quarter value of the domestic utilisation of EU transfers, with this value amounting to some EUR 5.3 billion. Based on the monthly breakdown of preliminary balance of payment figures, the external surplus of the economy continued to grow in Q3, primarily as a result of an increase in the transfer balance.

5.1.2. Developments in financing

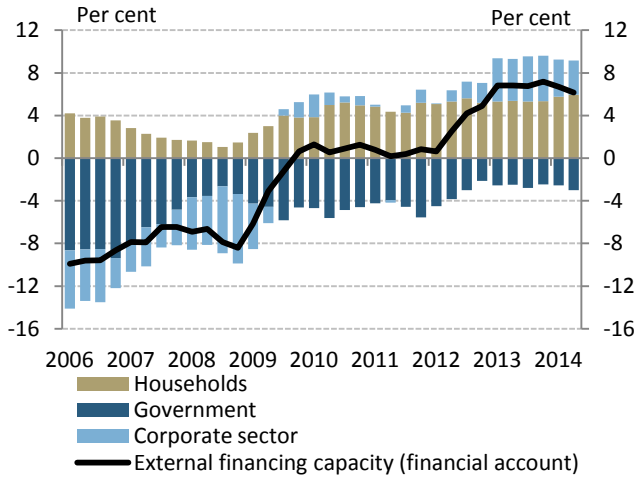
The net savings position calculated from the financing data rose to 6.1 per cent of GDP in Q2 (Chart 5-2). Significant outflows of non-debt type liabilities were observed in Q2, while debt-type net fund raising also took place, primarily owing to the general government sector.

Non-debt type liabilities declined considerably in Q2. Net FDI fell by nearly EUR 2 billion, while net portfolio equity investments remained practically unchanged.

Net FDI fell by EUR 2 billion in Q2, which is partly a result of foreigners' declining equity investments in Hungary (due to purchases by the state). In addition, the decline in FDI was related to the decrease in foreigners' reinvestments as a result of corporate dividend payments. Finally, residents' divestments also contributed to the net outflow of funds. Preliminary monthly data suggest that FDI increased again in Q3.

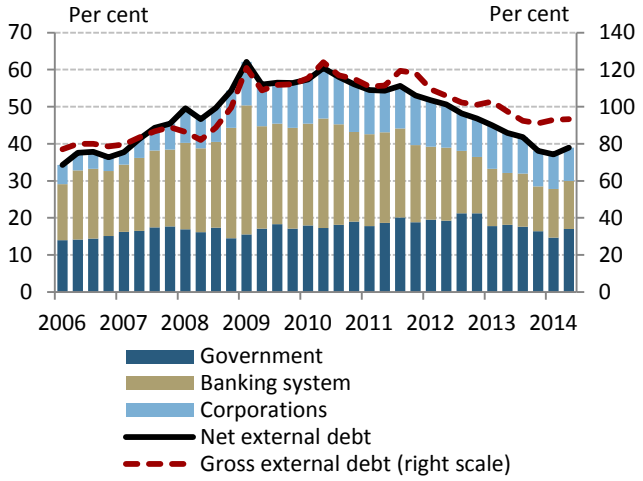
Debt-type liabilities increased slightly, by some EUR 0.5 billion in Q2. The decline in the banking sector's external debt slowed down considerably in the past months.

Chart 5-3: Breakdown of external financing capacity by sectors



Note: Four-quarter cumulation as a proportion of GDP.
Source: MNB

Chart 5-4: Breakdown of net external debt by sectors



Note: Excluding intercompany loans. Values as a proportion of GDP.
Source: MNB

Although following an increase in Q1, banks' net external debt decreased slightly in Q2, its magnitude indicates the continuation of the slower declining trend typical of the past one and a half years. The declining outflow of bank funds may be related to the fall in the household sector's deposits, which may have reduced the banking sector's funds available for debt repayment. Following declines observed in several quarters, in the period under review the consolidated general government including the MNB increased its external liabilities by nearly EUR 1 billion. The increase in non-residents' forint assets was mainly attributable to the growth in their government securities holdings, which was only partly offset by the decline in the stock of MNB bills as a result of the adjustment of the self-financing scheme. The funds pre-financed by the European Commission added to the gross debt of the general government, but did not result in a change in the net indicator, as the transfers also resulted in an increase in FX reserves. Companies slightly reduced their external debt in Q2. According to preliminary monthly data, external debt repayment was significant again in Q3, which was mainly a result of the declining external fund raising of the state.

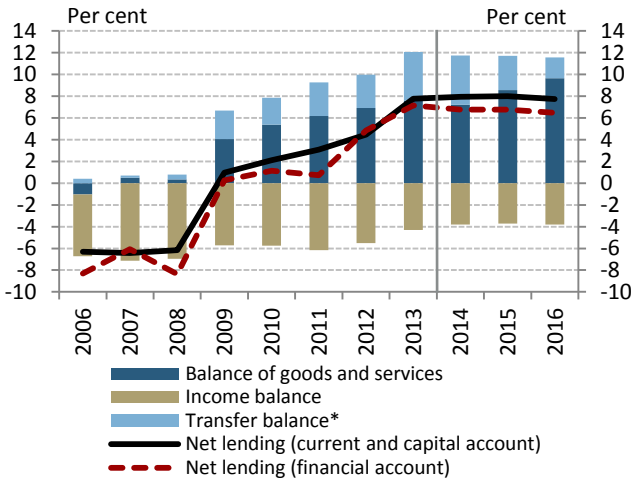
Households' and corporations' net financial savings stabilised at a high level in Q2 (Chart 5-6). Households' four-quarter net lending increased to 6 per cent of GDP, while companies' net lending declined slightly. This latter may be related to utilisation of the Funding for Growth Scheme. Although the net borrowing of the general government was up slightly in Q2, it is still at a low level.

With a minor increase, net external debt of the economy amounted to 39 per cent of GDP at the end of the quarter (Chart 5-7). The rising of the indicator is mainly attributable to the repricing of government securities, as the declining government securities market yields added to the market value of the government securities already in circulation owned by non-residents. The value of the indicator was also affected by the 1 per cent depreciation of the forint against the euro.

5.2. Forecast for Hungary's net lending position

Following this year, Hungary's net lending may stabilise at a high level in 2015 and 2016 as well. After the slight decline due to an increase in investment in 2014, in the coming two years the trade surplus may strengthen considerably as a result of a decline in oil prices and acceleration in external demand. Following this year's historical peak, the transfer balance surplus may decline in 2015, in accordance with the new EU budget period. In parallel with that, the utilisation of EU transfers will contribute significantly to the high net lending of Hungary in the coming years as well. Following this year's slight decline, the deficit of the income balance may remain at an unchanged level as a result of contrasting developments. Looking at the savings position of individual sectors, the net lending of the private sector is expected to remain high, while the net borrowing of the general government will remain subdued. With an expected increase in investment, the corporate net position may decline in 2015 and 2016, while households' fundamental net savings may decrease in parallel with an increase in consumption and investment. However, compared to pre-crisis levels, they may continue to be at a high level. While net lending is expected to remain high, external debt indicators are expected to continue to decline in parallel with the conversion of FX loans into forints.

Chart 5-5: Evolution of net lending (as a proportion of GDP)



Note: * The sum of the balance of the current transfers and the capital account balance.

Source: MNB

In the coming years, Hungary's external balance position is expected to stabilise at a high level, which is the result of two contrasting effects, increasing net export surplus and declining EU transfer utilisation. Although the contribution of net exports to net lending may decline slightly in 2014, due to an upswing in investment, a slowdown in European business activity and the conflict between Russia and Ukraine, the trade surplus may grow again in 2015 as a result of an improvement in the terms of trade following from the decline in oil prices. With an upswing expected in external economic activity, the goods and services surplus as a proportion of GDP may continue to increase. The transfer balance surplus, which is historically high in 2014, may decline next year as a result of the new EU budget period, and may drop considerably in 2016 as well. As a result of contrasting developments, the income balance deficit is expected to stabilise in 2014 and 2015. Partly in view of cheaper oil prices, profits of foreign companies are expected to increase, while declining gross debt will result in lower interest payment. The slightly declining income balance deficit may primarily be explained by falling external debt (Chart 5-5).

Examining developments in the external balance in terms of the net lending of sectors**, the net borrowing of the general government may remain low in parallel with the high net savings of households and corporations** (Chart 5-6).

The net lending of the corporate sector may decline in 2014 as a result of stronger investment activity supported by the Funding for Growth Scheme. Over the forecast horizon, the net savings position of the corporate sector may continue to decline slowly as a result of increasing investment and an expected downturn in EU transfers. Moreover, the impact of the bank settlement due to the unilateral interest rate hikes and the exchange rate

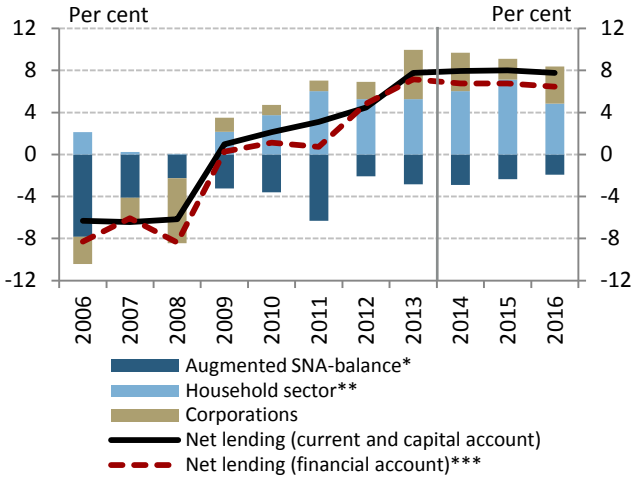
margins may represent an additional effect, which may reduce the sector's net financing capacity by nearly 2 per cent of GDP through banks' losses in 2015.

This year, households' net savings may settle at a high level owing to increasing employment, growth in real earnings and the still predominant precautionary motives. Next year, the impact of the settlement of unilateral interest rate hikes and the exchange rate margins will prevail, which is expected to be reflected in the financial accounts as well. However, on aggregate, it will not have an impact on financing capacity, which reflects the underlying developments. This is related to the fact that, on the one hand, the decline in principal debt amounting to nearly 2 per cent of GDP will result in lower debt repayment, which may add to net borrowing on the liability side. On the other hand, the higher disposable income may result in stronger gross savings on the asset side. In accordance with declining exchange rate risk, precautionary motives may ease going forward. As a result of an increase in consumption and investment, **households' fundamental net financial savings may decline slightly, but remain at high levels in 2015 and 2016** (Table 5-1).

The subdued net borrowing of the general government may, according to the SNA methodology, temporarily and slightly increase in 2014, which is attributable to the accounting of the revenues from telecommunications concessions differently from the ESA methodology. In 2015 and 2016, the net borrowing of the augmented general government is expected to decline considerably, which is attributable, *inter alia*, to the VAT and contribution revenues stemming from the whitening of the economy and the declining weight of social benefits as portion of GDP.

The expectedly high net lending in the coming years may further reduce net external debt, which is of key importance in terms of the vulnerability of the country. The conversion of households' FX loans into forints may reduce gross external debt through banks' balance sheet adjustment. As credit institutions obtain the necessary FX funds mainly through the MNB's liquidity instrument, i.e. the decline in gross external debt entails a decrease in foreign currency receivables, and net external debt is not affected by the conversion into forints. The act on the fair banking system reduces profits by limiting bank interest rates, whereas interest payment also declines through the fall in gross debt. As a result, the income balance may continue to decline in the medium term, which may result in a faster decline in net external debt through the increase in net lending.

Chart 5-6: Changes in savings of sectors (as a proportion of GDP)



Note: * In addition to the central government, the augmented general government includes local governments, MNV Inc., institutions discharging quasi-fiscal duties (MÁV, BKK), and the MNB. The augmented SNA deficit takes into account private pension savings. ** Net financial saving of households consistent with the SNA deficit does not contain the pension savings of those who return to the public pension system. The official net saving (shown in the financial account) is different from the data in the chart. *** We expect that 'Net errors and omissions' (NEO) will return to the historical average.
Source: MNB

Table 5-1: Households' fundamental net lending and net lending according to financial accounts data (percentage of GDP)

as portion of GDP	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
I. Net financial saving in the financial accounts	**5.2**	**5.3**	**5.3**	**6.0**	**7.1**	**4.9**
a) The effect of consumer claims due to settlements of exchange rate margins and unilaterally raised interest rates on savings					-1.9	
b) Portion of real yields expended on consumption	0.3					
c) Rise of net saving due to early repayment	-0.6	-0.7				
d) Other effects		-0.1		-0.3		
II. Net lending capturing basic trends (I.+a+b+c+d)	**4.9**	**4.4**	**5.3**	**5.7**	**5.2**	**4.9**
e) Savings attributed to the disbursement of real yields	0.6					
f) Impact of the early repayment on net savings	0.6	0.7				
g) The effect of consumer claims due to settlements of exchange rate margins and unilaterally raised interest rates on savings					1.9	
h) Other effects		0.1		0.3		
III. Net financial saving consistent with augmented SNA deficit (II.+e+f+g+h)	**6.0**	**5.3**	**5.3**	**6.0**	**7.1**	**4.9**

Source: MNB

5.3. Fiscal developments

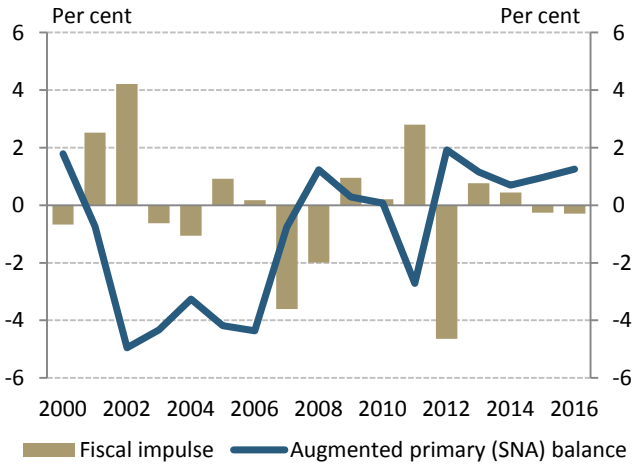
According to our forecast, the ESA deficit of the budget may remain below 3 per cent of GDP over the forecast horizon. With the total cancellation of the available free reserves, a deficit of 2.5 per cent may be achieved in 2014 and 2.4 per cent in 2015. According to our rule-based forecast, the deficit may be around 2 per cent in 2016. Based on the foregoing, the demand-increasing effect of fiscal policy may amount to 0.4 per cent of GDP in 2014, whereas we estimate a demand-decreasing effect of 0.3 per cent in both 2015 and 2016. According to our estimate, from 2015 the cyclically-adjusted augmented SNA deficit (which in an economic sense may also be considered as an approximation of the structural balance) will decrease below 2 per cent of GDP, and thus it may approach the medium-term budgetary objective laid down in the Convergence Programme. The figure for 2013 end-of-year gross sovereign debt as a percentage of GDP calculated at unchanged exchange rates will decrease over the entire forecast horizon, but the actual debt-to-GDP ratio is significantly influenced by the changes in the exchange rate of the forint.

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

	2014	2015	2016
ESA deficit*	–2.5	–2.4	–1.9
Cyclical component (MNB)	–0.6	–0.5	–0.1
Cyclically-adjusted augmented (SNA) deficit*	–2.3	–1.8	–1.8
Fiscal impulse**	0.4	–0.3	–0.3

Note: * Complete cancellation of the available free reserves (National Protection Fund) was assumed upon the calculation of the balance indicators. ** Change in the augmented (SNA) primary balance.
Source: CSO, MNB

Chart 5-7: Fiscal impulse (percentage of GDP)



Note: 1) The fiscal impulse corresponds to the change in the augmented (SNA) primary balance. 2) The positive prefix indicates demand expansion, while the negative prefix implies demand restraint. 3) Assuming the cancellation of the available free reserves in 2014–2016.
Source: MNB

5.3.1. Main balance indicators and the fiscal demand effect

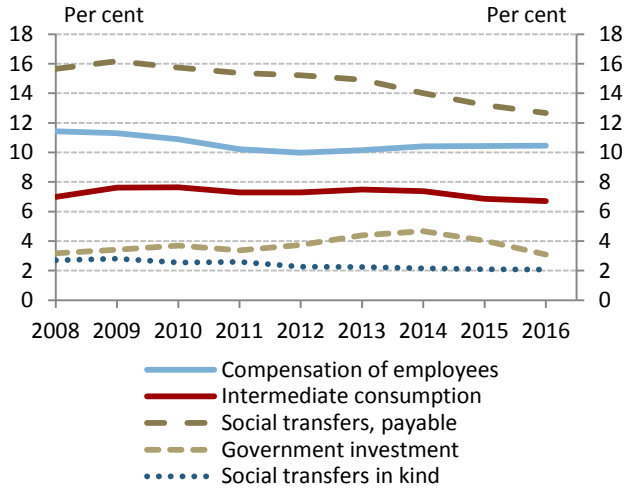
According to our forecast, with the cancellation of the available free reserves (National Protection Fund), the ESA deficit of the general government may amount to 2.5 per cent of GDP in 2014 and 2.4 per cent of GDP in 2015 (Table 5-1), i.e. our deficit forecast has decreased by 0.3 per cent for 2014 and 0.2 per cent for 2015, compared to the September Inflation Report. The change in the cyclical situation of the economy and the closing of the output gap will greatly contribute to the gradual improvement of the balance. According to our estimates, the cyclical situation of the economy contributed to the deficit by 0.6 per cent of GDP in 2014, after this, the cyclical component of the fiscal deficit will also decrease significantly in two years. The estimated cyclical effect increased compared to our forecast, partly because of the change in the details of the output gap, partly because of methodological reasons.

The pick-up in economic performance and the lower-than-expected increases in budget expenditures, based on the 2015 Budget Act, contribute to the gradually improving ESA balance. Moreover, as a result of declining yields in recent years, state interest expenditures have decreased both nominally and as a proportion of GDP.

Following the rise in demand in 2013, fiscal policy again contributes to a rise in aggregate demand in 2014.[12] In 2014, the expansion of demand is implemented with a hardly changing ESA deficit, which is caused by the decrease in the primary surplus, occurring with an improvement of the interest balance. There will be gradual demand restraint in 2015 and 2016, primarily as a result of the continuous reduction of financial transfers of households, in which a role is also played by the effect of

[12] The fiscal impact is quantified by the change in the augmented (SNA) primary balance, which gauges the impact of fiscal measures, fiscal developments and the automatic stabilisers on the income position of the other sectors.

Chart 5-8: Government sector primary expenditures as a percentage of GDP



Source: MNB

Table 5-3: Decomposition of the change in the 2014 ESA balance forecast (compared to the September Inflation Report; as a percentage of GDP)

	Macro data	*Measure*	*Other*
I. Central government revenues	0.0	-	-
Consumption-type tax revenues	-0.1	-	-
PIT, SSC, fees, duties	0.1	-	-
II. Central government expenditures	-	-0.2	0.2
Net expenditures of budgetary organisations	-	-0.2	-
Corrections related to EU-funding	-	-	0.2
III. Further effects	0.1	-	0.2
Balance of local governments	-	-	0.1
Other items	-	-	0.1
GDP-revision	0.1	-	-
Total (I.+II.+III.)	0.1	-0.2	0.4

Note: The positive and negative prefixes indicate deficit-reducing and deficit-increasing effects, respectively.

Source: MNB

increasing the statutory retirement age. This is offset by the decrease in consumption and corporate income taxes as a proportion of GDP, which is explained partly by the consumer price index being lower than the GDP deflator, partly by policy measures. (Chart 5-7).

The expected decrease in the fiscal deficit in the years to come may be caused in large part by the decreasing government sector primary expenditures as a percentage of GDP. Several factors contribute to the decrease in the amount of financial transfers as a percentage of GDP. The strongest of these is that inflation, to which certain expenditures (e.g. pensions) are indexed, is lower than nominal GDP growth. With respect to pensions, the gradual increase in the age limit also has a significant effect. In the case of certain social benefits, we expect nominal fixing, based on the budget projection, and benefits related to unemployment may decrease on the basis of the planned expansion of the public work scheme as well. Public sector wages and personnel costs as a percentage of GDP may remain at an unchanged level. The effect of the generally restrained wage increases are counterbalanced by the gradual fulfilment of the public education career model, the wage increase for law enforcement employees, and the expansion of the public work scheme (Chart 5-8).

The changes in investments follow the changes in the EU budgetary transfers. The drawdown and utilisation of grants accelerated at the end of the previous EU budgetary period, and thus the state investments – financed from own and EU sources reached a historically high value. At the beginning of the new programme period, we expect a decrease compared to this and a return to the past average. According to our forecast, the level of material costs and transfers in kind will not change significantly in the future, and both will remain below their past level.

5.3.2. Budget balance in 2014

According to our forecast assuming the cancellation of the available free reserves (National Protection Fund), the 2014 ESA deficit of general government may amount to 2.5 per cent of GDP, which is 0.3 per cent more favourable than our projection in the September issue of the Inflation Report (Table 5–2). In the central government, we expect revenues of an unchanged amount, but in a slightly different structure. We expect 0.1 per cent of GDP less revenue from taxes on consumption, which is caused by the fact that the amount

Table 5-4: Decomposition of the change in the 2015 ESA balance forecast (compared to the September Inflation Report; as a percentage of GDP)

	Macro data	*Measure*	*Other*
I. Central government revenues	0.2	-	-
Consumption-type tax revenues	-0.1	-	-
PIT and SSC	0.3	-	-
II. Central government expenditures	-	0.1	-0.1
Pension related expenditures	-	-	0.1
Net expenditures of budgetary organisations	-	0.2	-
Corrections related to EU-funding	-	-	-0.2
Public Work scheme	-	-0.1	-
III. Other effects	0.2	-	-0.2
Net interest expenditures	0.1	-	-
Other items	-	-	-0.2
GDP-revision	0.1	-	-
Total (I.+II.+III.)	**0.4**	**0.1**	**-0.3**

Note: The positive and negative prefixes indicate deficit-reducing and deficit-increasing effects, respectively.
Source: MNB

of VAT refunds carried over to next year may be greater than the level previously projected.[13] We expect 0.1 per cent of GDP higher revenues from labour taxes and contributions, together with other household payments, based on the incoming data for the previous months.

On the expenditure side of the central government, we increased the net expenditures of budgetary institutions by 0.2 per cent of GDP, based on monthly data, compared to the previous forecast. It is expected that two-thirds of this will be the result of utilisation of a part of the available free reserves (National Protection Fund), based on the pending amendment of the 2014 Budget Act by the Hungarian Parliament. In relation to the remaining available free reserves (0.2 per cent of GDP), we continue to assume that the government will not spend this. It is expected that the support of local governments will be lower by 0.1 per cent of GDP because of the observed decrease in the normative social expenditures of local governments. The corrections related to EU funds cause a balance improvement of 0.2 per cent, since it is likely that the agreement assumed earlier in the so-called "black-top case" will not be realised this year, and thus the revenue decrease assumed earlier for this year will also not occur.

According to our assumptions, the positive ESA bridge correction related to the state acquisitions of stakes in 2014 may be larger than assumed in the September issue of the Inflation Report. Together with other smaller changes, this larger correction causes a balance improvement corresponding to 0.1 per cent of GDP. Moreover, the GDP revision that occurred since the previous round of the forecast, containing the new method to take into account ESA 2010 as well, decreases our 2014 ESA deficit forecast by 0.1 per cent of GDP.

5.3.3. Budget balance in 2015

According to our estimate, in 2015 the ESA deficit of the general government may amount to 2.4 per cent of GDP, in the case of complete cancellation of the available free reserves, appearing in the budget bill, which is 0.2 per cent more favourable compared to our forecast in September (Table 5-3). The most important new information influencing our forecast is the budget bill, which we took into account on the basis of the uniform bill submitted for the final vote. In our forecast, we disregarded the additional revenue corresponding to 0.1 per cent of GDP expected by the Government from the

[13] Cash-flow VAT revenues have been favourable, but according to our estimate the effect of carry over of VAT refunds may be higher than expected earlier.

extension of the E-toll system, since the details of the measure are not known. The increase in our estimate related to labour taxes and contributions is justified primarily by the increase in our forecast related to the whole-economy wage bill.

Since the details on the significant revenue expected by the Government from the sale of government-owned real estate and other property rights are not known, we increased our forecast related to the incomes connected to state assets by 0.3 per cent of GDP compared to the September Inflation Report, on the basis of the average amount of sales of state real properties and concessions experienced in the previous years; accordingly, this is 0.3 per cent of GDP less than the expectations of the Government. At the same time, we decreased in our forecast the expenditures of the Investment Fund by 0.1 per cent of GDP compared to the budget bill, since, according to the bill, these expenditures would be decreased during the execution of the budget in the case of lower capital incomes.

On the expenditure side, we lowered our forecast for the net expenditures of budgetary institutions in knowledge of the 2015 budget bill, and we reduced our prognosis related to pension expenditures, since the 2015 inflation which appears in the budget bill is lower than our forecast, consistent with the September Inflation Report. However, the budget balance may deteriorate because the number of employees in the public work scheme may be higher than expected. In addition, a part of the financial corrections expected in connection with EU sources may be realised not in 2014, but rather in 2015, in contrast to the earlier expectations.

According to our forecast accrual-based net interest expenditures may be 0.1 per cent of GDP lower compared to our previous estimation in 2015. The reason for the decrease is that, after a significant reduction earlier this year, yields have decreased further. In october and november there was a slight increase in average at the short end of the yield curve, whereas there was a larger decline in the long segment, and thus this change will have a considerable effect on the interest expenditures of the general government in 2015.

The ESA deficit target of the government stipulated in the 2015 budget bill is 2.4 per cent of GDP, which is identical to our forecast (Table 5-5). However, according to our forecast central government revenues may be less than the appropriations in the bill by 0.3 per cent of GDP. Within this, VAT revenues may be lower by 0.2 per cent

Table 5-5: Differences between our forecast and the appropriations set out in the draft 2015 Budget Act (as a percentage of GDP)

	Difference from appropriation
I. Central government revenues	-0.3
Value Added Tax	-0.2
Electronic Road Toll	-0.1
Revenues from state property and related expenses	-0.2
Excise duty and financial transaction duty	0.1
II. Central government expenditures	0.2
Budgetary organisations	0.2
Corrections related to EU-funding	-0.1
Net interest expenditures	0.1
III. Further effects	0.1
Cancellation of the reserves	0.1
Total (I.+II.+III.)	0.0

Note: The positive and negative prefixes indicate deficit-reducing and deficit-increasing effects, respectively, compared to appropriations.
Source: MNB

of GDP, stemming primarily from the fact that, in accordance with our forecast methodology, we do not expect additional income in connection with the measures to be introduced next year, supporting the efficiency of tax collection. Moreover, we expect 0.2 per cent of GDP less income from the sales related to state assets. However, the lower incomes are offset by the fact that our forecast related to the primary expenditures of the budget is 0.2 per cent of GDP lower than the appropriations appearing in the budget bill. The primary reason for this is that, with respect to the EU supports, we project lower support involvement than the bill, and thus according to our forecast less own funds will have to be used for the supports, which will decrease the budget deficit. Furthermore, the difference stems from the fact that we assumed in our forecast that the total amount of the National Protection Fund would be cancelled, which alone would improve the budget balance by 0.1 per cent of GDP.

5.3.4. Budget balance in 2016

Our 2016 forecast using technical assumptions expects an ESA deficit of 1.9 per cent, which represents a 0.5 per cent deficit reduction compared to the preceding year. The following factors contribute to the improvement in the accrual-based balance: tax incomes increasing as a result of the pick-up in economic performance, and the decrease of the primary expenditures as a percentage of GDP based on the budget projection. Moreover, the declines in yields in recent years reduce the implicit interest burden of government debt, and thus state interest expenditures as a percentage of GDP decrease further. In our 2016 forecast, we did not incorporate the balance-deteriorating effects of the introduction of the single rate corporate income tax, for lack of the details of the measure, and the effect of the Tax Decreasing and Development Fund either.

5.3.5. Risks surrounding the baseling scenario

Two main risks may arise in 2014 and both are connected to the ESA corrections modifying the payment balance. On the one hand, the exact accrual-based financial correction of the EU supports is uncertain. On the other hand, in connection with the state acquisitions by the government we assumed that such acquisitions would be recognised as financial transactions, but it may finally occur that a part of these are implemented as expenditures increasing the deficit. Both types of risks point to the direction of larger deficit.

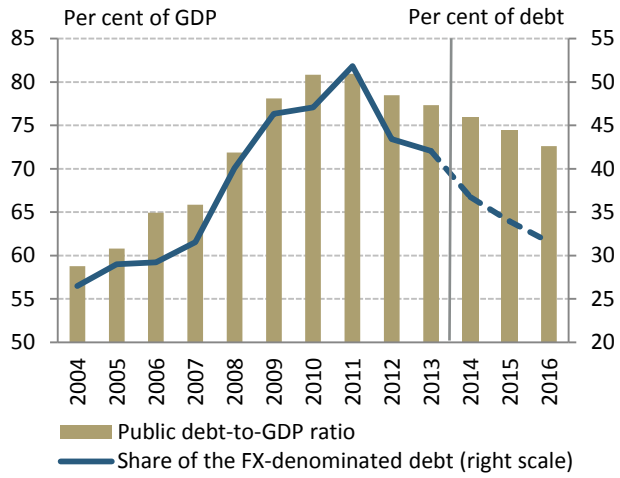
Negative risk constituting 0.1 per cent of GDP may appear

in 2015, if the refunds related to the financial correction of the EU sources turn out to be larger than expected. Another negative risk is if the involvement of EU sources exceeds the level we expect, since in this case the budget's co-financing to be provided for the supported projects increases as well, and thus, this would increase the budget expenditures and the deficit. On the other hand, however, it would have a positive effect on economic growth and the budget would have additional income from this.

5.3.6. Expected developments in public debt

Based on the MNB's preliminary financial accounts data, gross consolidated general government debt amounted to 83 per cent of GDP at the end of 2014 Q3.[14] The debt-to-GDP ratio improved by more than 2 per cent compared to the data of the end of the previous quarter (85.1 per cent). This significant improvement may have been caused primarily by the decrease in liquid state deposits, after their gradual increase of H1. The reason for this is that, with the government securities issued in H1 2014, a large part of the coverage necessary for the subsequent maturity was achieved, which was aided by stable demand and the historically extremely favourable yield environment as well. In addition to the positive effect of financing transactions, the decrease in the debt-to-GDP ratio was also supported by the cash-flow surplus of the central sub-system of general government in Q3, while at the same time the exchange rate change did not have a significant effect.

Chart 5-9: Gross public debt forecast – from 2013 at constant, end-2013 exchange rate



Source: MNB

Regarding the end-of-year data – calculating with the 2013 end-of-year exchange rate – we forecast that the public debt-to-GDP ratio will decrease over the entire forecast horizon, i.e. the government debt rule of the Constitution is expected to be fulfilled (Chart 5-12). Calculating with an unchanged exchange rate, the debt-to-GDP ratio may decrease by 1.4 percentage point in 2014. Owing to the expectably stable GDP growth and the significantly decreasing cash-flow deficit figures, these favourable dynamics may remain until the end of the horizon. However, the actual exchange rate is currently worse than it was at the end of 2013, and thus the revaluation of the foreign exchange debt, in and of itself, has a negative effect on debt. Public debt as a proportion of GDP reacts by 0.1 percentage point to each HUF 1

[14] Moreover, we note that with the GDP calculated according to the new statistical methodology (ESA2010), the debt-to-GDP ratio may have been only approximately 81 per cent in Q3, since the GDP figures according to the new methodology are typically higher in the past than the ones with ESA95.

change of the EUR/HUF exchange rate. With the current exchange rate of EUR/HUF 306, we expect a slight decrease in the debt-to-GDP ratio, calculated according to the Maastricht methodology, compared to the end of 2013; however, this is significantly influenced by debt management processes and, among others, the exchange rate of the USD/EUR as well.

In our forecast, we expect foreign currency-denominated net debt issuance to be negative, and thus the proportion of foreign exchange debt can decrease, and owing to this, the exchange rate exposure of the public debt and the external vulnerability of Hungary may also decrease further.

6. SPECIAL TOPICS

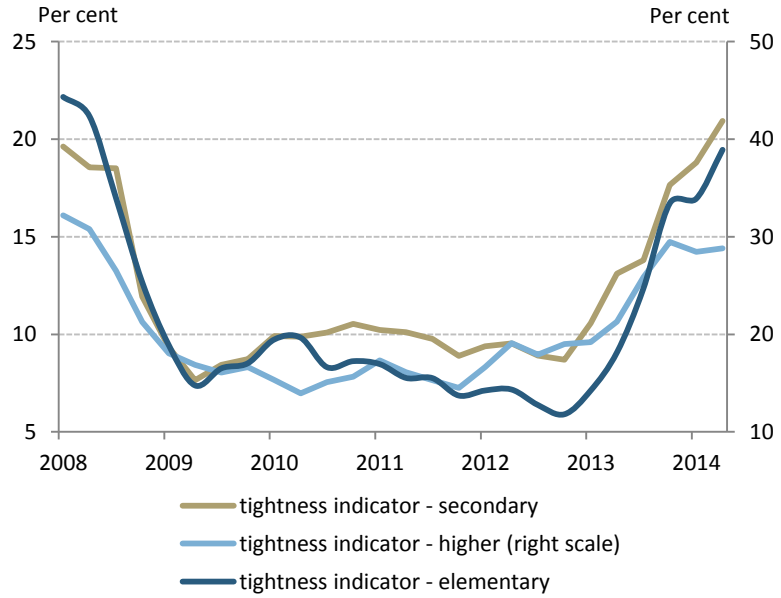
6.1. Impact of labour market tightness on our forecast

Changes in wages constitute a key variable for inflation targeting monetary policy. This is so, because wage increases may become included in the prices of products and services through the growth in corporate costs, thus leading to cost-side inflationary pressure. On the other hand, it may result in demand-side inflationary pressure through the increase in households' income.

Developments in wages in the private sector are primarily determined by the interrelationship of labour demand and labour supply. This can be best captured by labour market tightness, the relative quantity of the private sector's labour demand and unutilised labour capacity. In a tighter labour market environment, fewer people compete for a given job. Consequently, employees have greater bargaining power at wage negotiations, which may result in higher wage growth. Accordingly, **changes in wage dynamics depend on labour market tightness.**

Various statistics are available for determining both labour demand and labour supply. In the most obvious tightness indicator, companies' labour demand is approximated by the number of available, unsubsidised vacancies, whereas unutilised labour capacity is approximated by the number of unemployed. On this basis, **the labour market has continuously become tighter since early 2013**, which, in addition to an increase in vacancies, is primarily attributable to the decline in unemployment (Chart 6-1). Our analyses suggest that the increase in the tightness indicator can be observed at all levels of education (elementary, secondary and higher). It should be noted, however, that in the recent quarters tightness stopped increasing in the case of those with a higher education degree, which was attributable to the fact that the increase in vacancies stopped.

Chart 6-1: Changes in labour market tightness by level of education



Note: The tightness indicator indicates the ratio of available, unsubsidised vacancies to unemployed.
Source: National Employment Service, CSO

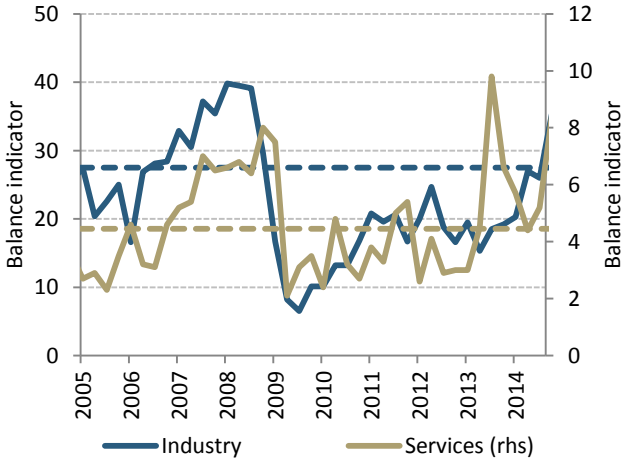
Through the decline in unemployment, the increase in public work programmes since early 2013 may also have contributed considerably to the increase in tightness, mainly among those with elementary and secondary education. However, the analysis of labour market tightness according to qualifications indicates that **the increasing tightness of the labour market does not exclusively stem from the substantial expansion of public work programmes**.

The increase in labour capacity utilisation, i.e. the strengthening of labour market tightness, is indicated by other labour market indicators as well. Firstly, on the basis of the ESI (Economic Sentiment Indicator) survey, an increasing number of companies indicate labour shortage as the main factor limiting production, both in manufacturing and services

sector. Secondly, the number of overtime hours at private sector companies has increased steadily during recent years (Chart 6-2).

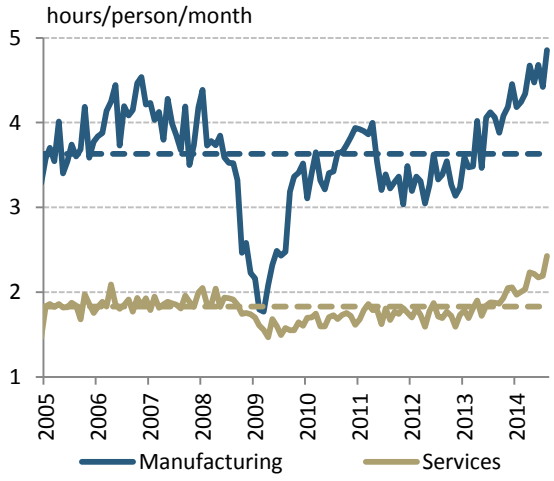
Chart 6-2: Alternative indicators of labour capacity utilisation

Labour shortage as the main factor limiting production



Source: ESI

Overtime hours



Source: CSO

The shift in labour market tightness from its low point was accompanied by a pick-up in private sector wage dynamics as well. Our econometric analyses suggest that there is a significant, simultaneous relationship between labour market tightness and wage-setting.[15] Accordingly, the increase in tightness may already have had an impact on wage-setting, i.e. on the inflationary pressure from the labour market, in the past quarters as well. However, in spite of the fact that labour market tightness is close to its pre-crisis level, wage dynamics have remained moderate for the time being. Accordingly, the main dilemma of our wage forecast is whether a further increase in labour market tightness will result in stronger wage dynamics in the medium term.

6.1.1. Impact of further groups that can be involved in production

Tightness indicators may overestimate labour capacity utilisation, as unemployment does not completely reflect unutilised labour capacity.[16] According to the definition used by the ILO (International Labour Organisation), those persons can be considered unemployed who meet all of the three criteria listed below: they do not have a paid job, would be able to work, and are looking for a job. However, in the assessment of the tightness of the labour market, unutilised labour capacity means all those who can potentially be involved in production in the short run.

Our present view of labour capacity utilisation is strongly influenced by the uncertainty as to whether those who participate in public work programmes can be considered as unutilised labour capacity. Various recent surveys[17] indicate that **most of the participants in public work programmes cannot be involved in private sector production in the near term.** Furthermore, our analysis carried out on the basis of Labour Force Service microdata shows that in every given quarter 40 percent of public workers were inactive in the previous quarter. Accordingly, the majority of public workers cannot be considered as unutilised labour capacity for the time being.

[15] Various tightness and wage indicators were analysed, with similar results:
– Simultaneous correlation between tightness and the wage index is strong, between 0.5-0.7.
– Labour market tightness Granger-causes wage dynamics (i.e. it facilitates its forecasting), while the relationship in the opposite direction is insignificant.
– Finally, the coefficient of tightness was significant in simple regressions that explained the growth rate of nominal wages with the tightness and the developments in productivity and inflation.

[16] For more details see Chapter 6.2 (Measuring labour utilisation) of the June 2014 Inflation Report.

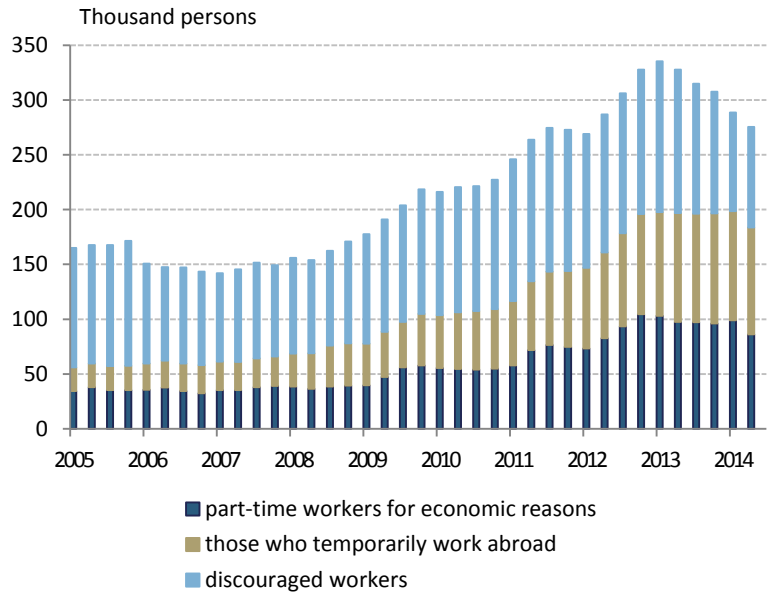
[17] E.g. Bakó T. – Cseres-Gergely Zs. – Kálmán J. – Molnár Gy. – Szabó T. (2014): A munkaerőpiac peremén lévők és a költségvetés. Hungarian Academy of Sciences, Centre for Economic and Regional Studies, Institute of Economics (in Hungarian).

However, beside the unemployed in a narrow sense, there may be significant, potentially available reserves in certain groups of the inactive and the employed. The following groups can also be considered as unutilised labour capacity:

- **Discouraged workers:** Inactive persons who would like to work, but gave up job seeking after shorter or longer unsuccessful periods, and left the labour market. This means they are not looking for a job because they think that they would not be able to find one in the given labour market situation anyway. However, with a pick-up in labour demand they might return to the labour market.
- **Part-time workers for economic reasons:** Part-time employees who say that they would like to be employed in more hours. The fastest way for companies to adjust to the increase in labour capacity utilisation is to raise the number of hours worked by their part-time employees.
- **Those who temporarily work abroad:** People employed abroad for not more than a year who are members of a household living in Hungary. Some of them may work abroad due to cyclical reasons, so they may seek jobs in Hungary again if domestic demand for labour expands in Hungary.

The number of people in these groups became significant following the crisis, amounting to nearly 300,000 at present. At the same time, since early 2013, in parallel with a pick-up in growth and labour demand, their number has declined (Chart 6-3). However, in the case of the discouraged workers, the expansion of public work programmes in 2013 may also have contributed to this considerably.

Chart 6-3: Changes in unutilised labour capacity beyond the standard measure of unemployment



Source: CSO

International as well as Hungarian experiences suggest that **when the labour market becomes tighter, these groups have better chances to be included among domestic job seekers, and thus may ease the increasing labour market tightness.**[18] As a result, wage dynamics may remain moderate even if labour market tightness increases.

[18] This issue is widely dealt with in international literature, e.g. Blundell, R., J. Ham, and C. Meghir (1998): Unemployment, discouraged workers and female labour supply. Research in Economics, 52, 103-131. Similar results were found on Hungarian data by Ónozó L. (2014): The Discouraged Worker Effect in Hungary – the Impact of Job Finding Probability in Labour Force Participation, MA thesis, Dept. of Statistics, Faculty of Economics, Corvinus University of Budapest. Using recent US data, several analysis point out the wage-reducing effect of the labour reserve excluding the unemployed. See e.g. Smith, C. L. (2014): The Effect of Labor Slack on Wages: Evidence from State-Level Relationships, FEDS Notes, June 2, Board of Governors of the Federal Reserve System.

6.1.2. Effect of inflation expectations

In addition to the tightness of the labour market, changes in nominal wages are influenced by inflation expectations as well. Upon specifying their wage demands, trade unions take account of employees' inflation expectations as well. In the case of higher inflation expectations, they strive to attain nominal wages that ensure at least the preservation of the purchasing value of wages. However, due to the increasing wage costs, this may stimulate companies to further increase their prices, which may result in the development of a wage-price spiral.

Inflation expectations have declined considerably following the crisis. The strong negative cost shocks in the past years resulted in a permanent decline in inflation. As a result, inflation expectations, which had been high before, declined to a level consistent with the medium-term inflation target. In the case of the current inflation expectations, which are anchored at a moderate level, the chance of the development of a wage-price spiral may have declined considerably, which may contribute to continued moderate wage dynamics even if the labour market is becoming tighter.

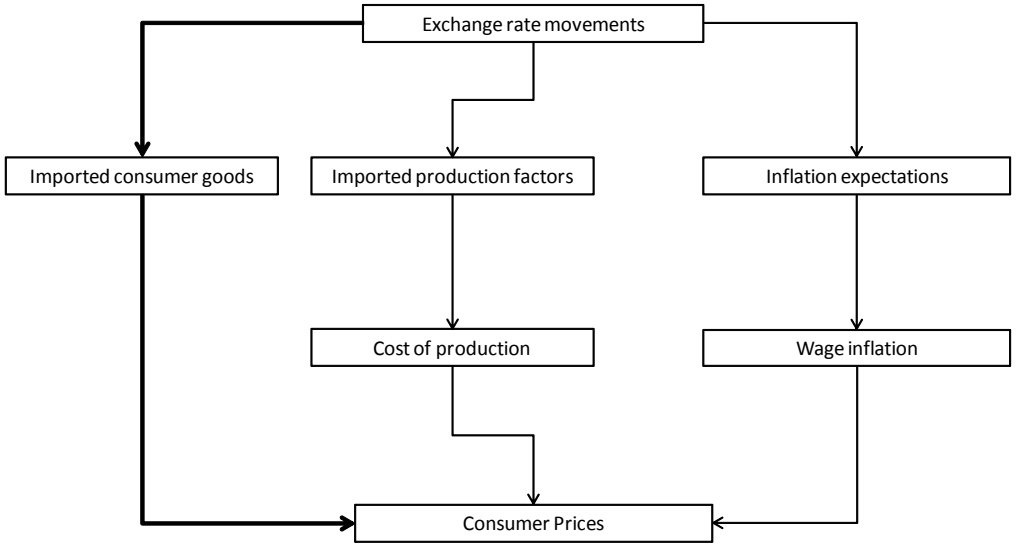
6.1.3. Summary

In conclusion, in the current labour market environment, which is becoming tighter, the groups that became inactive or went abroad following the crisis may return to the labour market. In addition, there are also reserves in increasing the number of hours worked by part-time employees. Accordingly, these groups may ease labour market tightness, which is increasing because of the pick-up in labour demand. As a result, wage dynamics may remain moderate even if labour demand increases. In addition, inflation expectations anchored at a low level also contribute to continued subdued wage dynamics. At the same time, there is a risk that the labour reserves might not be able to satisfy companies' labour demand, for example because of a structural (skills, occupational or geographical) mismatch between labour demand and supply. In this case, the unutilised labour capacity is more difficult to mobilise, and the increasing tightness of the labour market may have a stronger impact on wage-setting.

6.2. Before and after the crisis: the magnitude of exchange rate pass-through in Hungary

In small open economies, changes in the exchange rate influence consumer prices through various channels; therefore, examining the effect of the exchange rate on inflation is an important issue in terms of monetary policy (Chart 6-4). Depreciation of the exchange rate increases consumer prices through the rise in the prices of imported goods. This impact appears directly in the price increase of imported consumer goods, while indirectly influencing inflation through domestic companies' imported factors of production. In addition, it may affect the pricing of domestic products that compete with imported ones. Depreciation of the exchange rate may have second-round effects as well, i.e. feeding through into wages, higher inflation may result in a further increase in the consumer price index.

Chart 6-4: Exchange rate channel in a small open economy



6.2.1. Exchange rate pass-through before and after the crisis

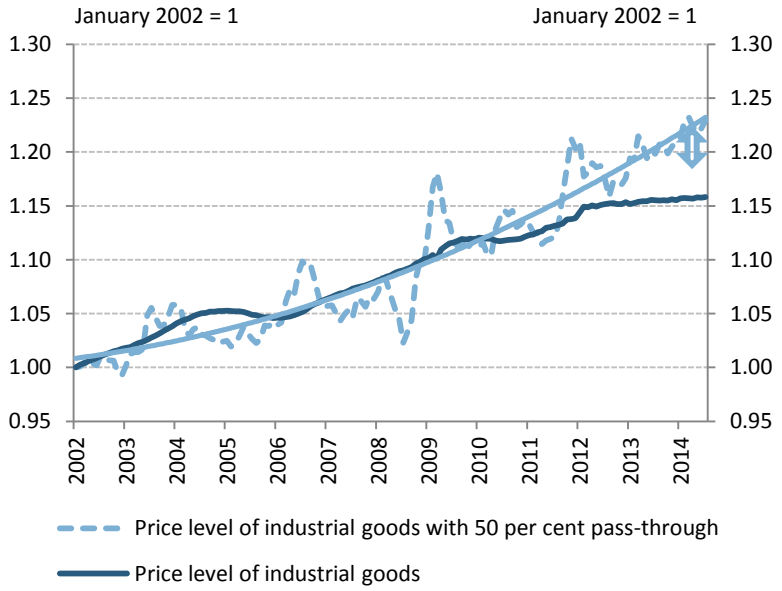
Examining the domestic data, prior to the 2007–2008 crisis approximately 30 per cent of an exchange rate depreciation may have appeared in consumer prices and core inflation over a two-year horizon. This means that over a two-year horizon the price level increased by 0.3 per cent in the case of a 1 per cent exchange rate depreciation. However, it was observed in the recent period that prices increased to a lesser extent following a depreciation of the exchange rate than what would follow from the estimates carried out prior to the crisis. This change had a major impact on the developments in the inflation of tradable goods (Chart 6-5). Therefore, it is worth reinvestigating the degree of exchange rate pass-through. In addition, our analysis[19] examines what factors caused the possible changes in the exchange rate pass-through, and how temporary or permanent they can be.

According to our current estimates, the magnitude of medium-term pass-through declined following the 2007-2008 crisis. A 1 per cent change in the exchange rate over a two-year time horizon may modify consumer prices to an extent corresponding to approximately half of the pre-crisis value (by 0.1-0.2 per cent).[20] The current value is in line with the estimates prepared for other countries of the region, whereas the earlier higher figure was considered elevated by international standards.

[19] This issue is discussed in more detail in a forthcoming MNB study: Hajnal M. – Molnár Gy. – Várhegyi J. (2014): Exchange rate pass-through after the crisis: the Hungarian experience, MNB manuscript.

[20] The extent and the change over time of pass-through into consumer prices were evaluated using various methods. We applied rolling regressions, vector autoregressive and error correction models as well.

Chart 6-5: Price level of industrial goods



Note: Price level of industrial goods in the euro zone adjusted by HUF/EUR exchange rate (assuming immediate, 50 per cent pass-through, blue line) and price level of industrial goods in Hungary (dark line)
Source: MNB calculations based on Eurostat and CSO data

6.2.2. Reasons for the decline in exchange rate pass-through

There are **several explanations for the decline in exchange rate pass-through**:

- As a result of the fall in **aggregate demand** during the recession (and the opening of the output gap in parallel with that), companies were less able to pass on costs related to the exchange rate movements.
- In addition, the decrease in the **general level of inflation** may also have contributed to the decline in pass-through. Households' inflation expectations also adjusted to the lower inflation environment; if this is permanent characteristic of the economy, cost shocks may have a lower impact on inflation.
- Finally, **increased exchange rate volatility** may also affect the degree of pass-through. Prices react to a lesser extent if the exchange rate volatility is higher, as in this case economic agents may deem the shift in the exchange rate as temporary, and therefore companies do not adjust their prices.

We examined the effect of the business cycle and the level of inflation on the exchange rate pass-through in a threshold vector autoregressive (TVAR) model. The essence of the method is that the dynamic relations between variables are estimated, e.g. the relationship between the various time lags of prices and the nominal exchange rate. We assume that there are two regimes, and the value of the threshold variable (q_t) determines in which regime the process is:

$$y_t = \begin{cases} \alpha_1 + A_1(L)y_t + \varepsilon_{1t}, & q_t \leq \gamma \\ \alpha_1 + A_2(L)y_t + \varepsilon_{2t}, & q_t > \gamma \end{cases}$$

The model contains three variables: output, the nominal effective exchange rate and prices. The estimation was carried out on data running from 2001 Q3 (the introduction of inflation targeting) to 2014 Q2.

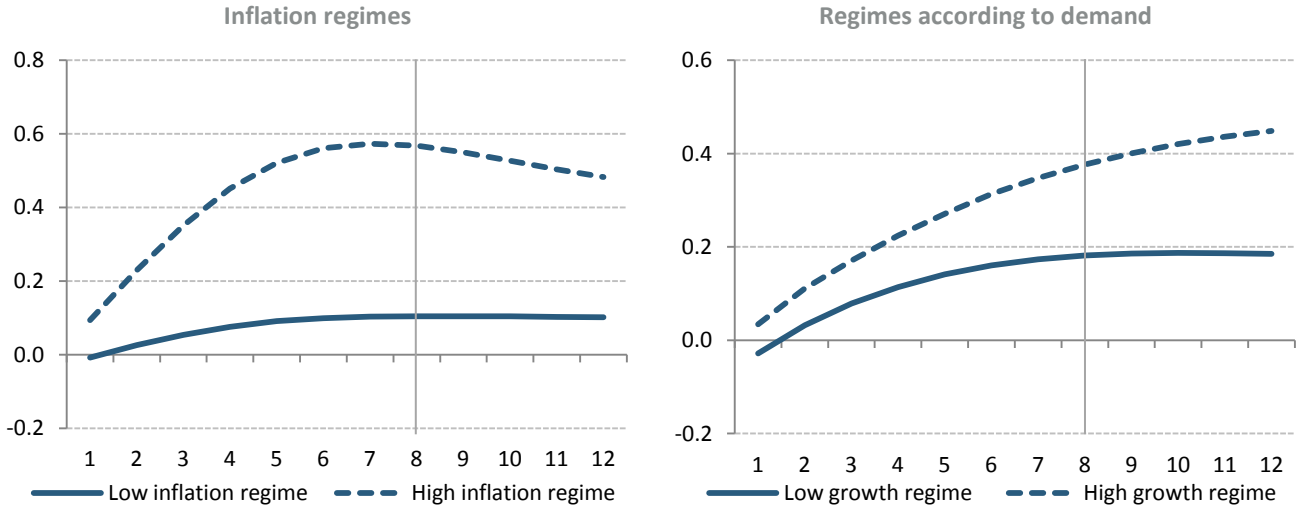
According to the results, when the annual change in core inflation excluding indirect tax changes[21] is lower than 1.8 per cent, the dynamic relationship between the variables changes.[22] Based on the impulse response function of the two

[21] Core inflation excluding indirect tax changes is used as the price variable, i.e. the inflation of market-priced products was taken into account. The effect of the changes in indirect taxes and administered prices as well as the price developments of volatile products are disregarded.

regimes, it can be established that **the level of inflation has a significant impact on the magnitude of exchange rate pass-through** (Chart 3). This finding is in line with those of Taylor (2000), according to which the magnitude of exchange rate pass-through is lower in periods/countries characterised by a persistently low inflation environment. According to the estimation results, inflation in Hungary was below the threshold for a prolonged period of time following the EU accession and around the worst part of the global economic crisis. Inflation also remained moderate in recent quarters. According to our estimates, when inflation is low, in two years roughly 10 per cent of a exchange rate depreciation may appear in core inflation adjusted for indirect tax changes.

We also examined the effect of the business cycle on exchange rate pass-through. Our findings suggest **that subdued aggregate demand may have also contributed to the weakening of the relationship** (Chart 6-6). When economic growth is low (approximately below 2 per cent), the economic relationship becomes weaker, because companies are less able to pass on costs from movements in exchange rates. In line with this threshold, with the recovery that started in the past quarters, demand may have reached a level where companies' once again have the leeway to pass on costs related to exchange rate movements. At the same time, in interpreting the findings, it is worth recalling that upon defining the threshold variable only one of the factors influencing pass-through is controlled for, although the relationship between the variables is the joint function of a number of factors. For example, anchoring of inflation expectations may contribute to the continuation of the low inflation regime that entails lower pass-through looking ahead as well.

Chart 6-6: Exchange rate pass-through, conditional on regime and threshold variable



Note: Threshold variable: Core inflation adjusted for indirect taxes
Source: MNB

Note: Threshold variable: GDP
Source: MNB

6.2.3. Summary

Based on the analysis, it can be concluded that the magnitude of medium-term pass-through (over a 2-year horizon) of a change in the exchange rate into consumer prices has declined following the crisis. Cyclical reasons may also be identified behind the decline. Therefore, **in the medium term, with the closing of the output gap, the magnitude of exchange rate pass-through may be in the upper half of the currently estimated 0.1-0.2 per cent range**. Our findings are in line with recent estimates prepared for other countries in the region. However, it is important to keep in mind that the degree of pass-through may continue to change over time.

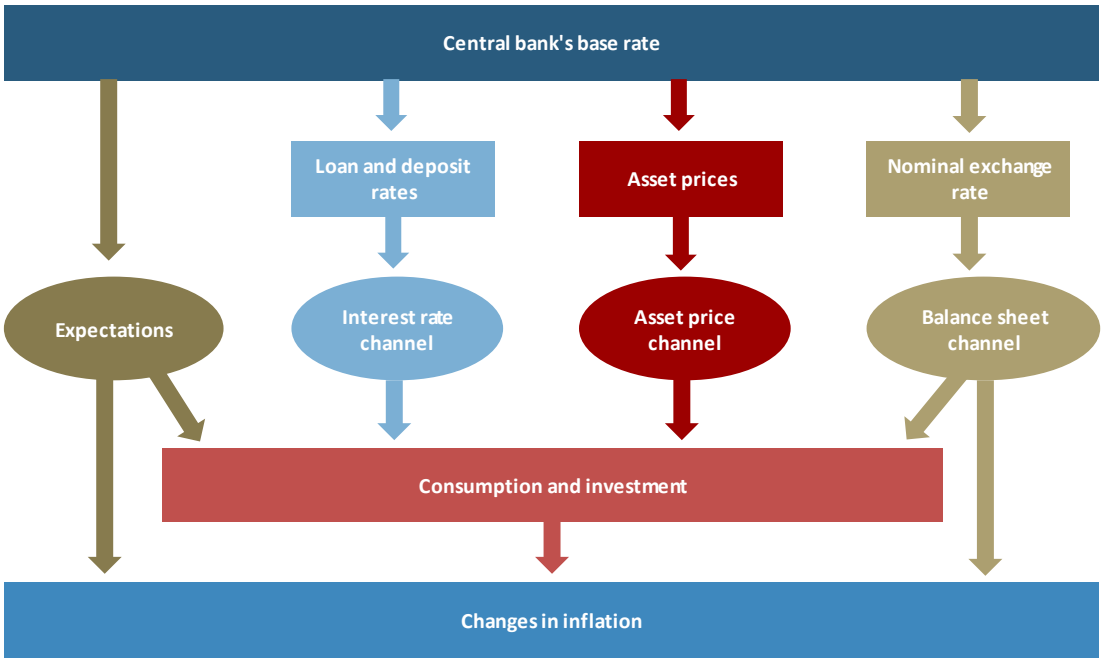
[22] As quarter on quarter changes are extremely volatile, four-quarter moving averages of the original variables are taken as the threshold variable. However, the original variables are used in the estimation of the model.

6.3. Conversion of household FX loans into forints and changes in monetary transmission

Monetary transmission is the process through which **the monetary policy steps of the central bank** (primarily the changes in the base rate) influence the consumption and investment decisions of the private sector, i.e. the aggregate demand **through various channels**, and thereby, eventually, **influence the development of inflation.** Proper functioning of the monetary transmission mechanism **is of primary importance for the central bank**, since anomalies make difficult for the central bank to achieve its primary goal, price stability.

The foreign exchange debt accumulated in the years preceding the crisis increased the exchange rate exposure of households, which, on the one hand, **changed the mechanism of monetary transmission** and, on the other hand, constituted a considerable financial stability risk. The financial stability risk only became evidently manifest for everyone after 2008, but the change in the transmission mechanism **narrowed the room for manoeuvre of monetary policy even before 2008**.

Chart 6-7: The effect of central bank's rate on houshold consumption



Source: MNB

The **accumulation of household foreign exchange debt hindered the central bank** in influencing the consumption behaviour of households, because **this segment of monetary transmission weakened.** As shown in Chart 6-7., the central bank base rate fundamentally influences the consumption of households in three ways. Among them, the asset price channel is less important in Hungary; monetary policy can primarily influence consumption through the **interest rate channel** and the **balance-sheet channel**. Of these two channels, the **interest rate channel** has a **more direct** effect, because loan and deposit rates of interest follow changes in the central bank base rate relatively quickly. On the other hand, over the short run the relationship between the **base rate** and the **exchange rate is less strong**. Over the long run, the path of the base rate determines the changes in nominal exchange rate through uncovered interest rate parity. Over the short run, however, other factors, such as the fluctuation of risk premium, may significantly deflect the exchange rate from this path.

Based on these facts, it can be seen how the **spread of foreign currency-denominated loans weakened monetary transmission:** the interest rates relevant for households with foreign currency-denominated loans (EUR, CHF, JPY) were not in any relationship with the central bank base rate. By contrast, **households became much more sensitive to the exchange rate,** but the monetary policy was less able to influence the exchange rate of forint.

The **crisis of 2008 considerably narrowed the room for manoeuvre of monetary policy**, as in the period after the crisis, reductions to the central bank base rate entailed a large financial stability risk: in the nervous financial environment with short liquidity, due to the reduction of the base rate, there was a large risk of depreciation of the exchange rate that

would have adversely affected households and, through the rise of non-payment risk, also the banking system. As a result of consolidation of the international money markets, an interest rate reduction was later possible; furthermore, **the introduction of the one-time early repayment and then, that of the exchange rate cap increased the room for manoeuvre of monetary policy.**

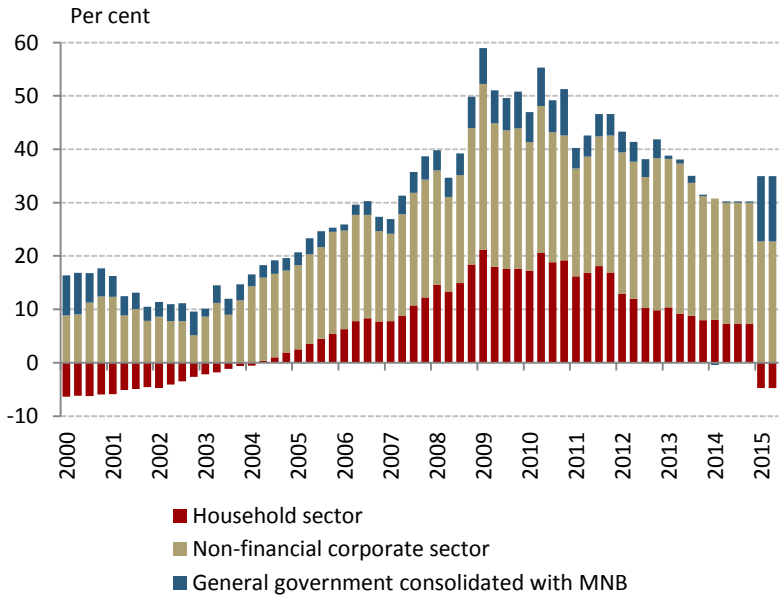
Thus, the early repayment scheme and the exchange rate cap, simultaneously with gradual deleveraging of debt of households since the crisis, was able to considerably contribute to the reduction of the exposure of households to exchange rates, although they did not end this exposure totally. However, a **great majority of the foreign currency and foreign currency-based mortgage loans of households will be converted into forints, as a result of which the exposure of households to exchange rates will almost fully disappear; what is more, the open FX position of households will be negative;** see Chart 6-8.

As a consequence, **the interest rate channel of monetary transmission will be stronger:** after conversion of foreign currency loans into forints, the future interest rate policy of the MNB will have **much more direct influence on the consumption and saving decisions of households** than at the time when households still had foreign currency loans. HUF deposit and loan interests will play a more important role in the consumption decisions of households than the exchange rate of the forint. As a result, **the development of central bank base rate will have a more direct influence on aggregate consumption and through it, on inflation** than in the past few years, because the HUF interest rates follow the changes in the base rate more closely than the nominal exchange rate.

Conversion into forints may influence the consumption and saving decisions of households in two other ways:

- On the one hand, the measures related to FX loans influence the wealth of households. Although the debt of households will be converted into forint at the current market exchange rate, consequently it will not significantly influence the extent of their debt denominated in forints, but, **due to the accounting of the exchange rate gap and the unfair contract amendments,** the banks will compensate the households.[23] **After the exchange rate gap and the unfair contract amendments have been accounted, the stock of FX loans will decrease by approximately 500-600 billion forints.** This **will effectively improve the wealth of households.**

Chart 6-8: Open FX position of the main sectors in the balance sheet as percentage of GDP



Source: MNB

[23] For the debtor, conversion into forints means actually the realisation of the FX loss suffered on the existing principal amount, which, theoretically, may mitigate the intent to take part in the Scheme. However, the absence from the Scheme may effectively hinder the fact that, according to current information, debtors who do not want to convert their loan into forint must comply with the rules on the payment-to income ratio as well as the loan-to-value ratio, in effect from January 2015. Based on this fact, the group of households remaining absent from the Scheme may range between 10-20 percent of the stock.

- **On the other hand, as a result of conversion into forints, the instalments of indebted households will change. The extent thereof depends on the relation between the HUF and FX interest rates.** Besides the presumable value of the change in instalments, it is an important question how the uncertainty about the future instalments will change. In respect of foreign currency loans, the major uncertainty factor arises from the volatility of exchange rates. As conversion into forints will terminate this factor and the HUF interest rate of the loans will be fixed thanks to the regulation on the fair banking system, **the uncertainty of households will decline considerably.** All of this will likely influence their consumption in a positive way. At the same time, the **balance sheet channel of the monetary transmission will weaken** because the future exchange rate changes influence the consumption of households less: for instance, the consumption restraining (and through that, the inflation mitigating) effect of devaluation will ease.

Exact quantification of the above-mentioned effects **is more difficult** because households do not respond to the effects in the same way. On the one hand, not every household is affected by conversion into forints. On the other hand, even the households with foreign currency-denominated loans **respond differently**, depending on **their wealth** and **their risk aversion attitude**.

Although **the accounting of the exchange rate gap and the unfair contract amendments** represent a significant burden for the banking system, the conversion of FX loans into forints **creates a more predictable environment** for the banks as well. Because even though the **exchange rate risk** of the FX loans was **borne primarily by households**, **the losses arising from loans becoming non-performing** due to the unfavourable exchange rate movements **were charged to the banks**. As the changes in the HUF exchange rate will not have any impact on the performance of mortgage loans after conversion into forints, **the banking system will also be freed of this risk**, as a result of which their interest policy can be better planned, which, in the long run, **will have a favourable impact on monetary transmission**.

Finally, it should be mentioned that **at national economy level, the open FX position of households will naturally not disappear, it will be assumed by the national budget**. However, due to both its size and its wider possibilities, the national budget **can manage the risks of this open position much more efficiently** than individual households.

7. BREAKDOWN OF THE AVERAGE CONSUMER PRICE INDEX FOR 2014 AND 2015

Table 7-1: Decomposition of inflation to carry over and incoming effect

	Effect on CPI in 2014			Effect on CPI in 2015		
	Carry over effect	Incoming effect	Yearly index	Carry over effect	Incoming effect	Yearly index
Administered prices	-1.0	-0.2	-1.3	-0.3	0.2	-0.1
Market prices	-0.2	0.7	0.5	-0.8	1.7	0.9
Indirect taxes and government measures	0.7	-0.1	0.5	0.0	0.2	0.1
CPI	-0.6	0.4	-0.2	-1.0	2.0	0.9

Note: The tables show the decomposition of the yearly average change of the consumer price index. The yearly change is the sum of the so-called carry over and incoming effects. The carry over effect is the part of the yearly index, which can be explained by the preceding year's price changes, while the incoming effect reflects the changes in the recent year. We decomposed these indices to the sub-aggregates of the consumer price index, and we calculated inflationary effects of the changes in the indirect taxes, the administered prices, and market prices (not administered prices excluding indirect tax effects). The subgroups may not sum to the aggregate figure due to rounding.
Source: MNB

Table 7-2: Detailed decomposition of our inflation forecast to carry over and incoming effects

	2014					2015				
	Average carry over effect	Carry over indirect tax effect	Average incoming effect	Incoming indirect tax effect	Yearly index	Average carry over effect	Carry over indirect tax effect	Average incoming effect	Incoming indirect tax effect	Yearly index
Food	-1.8	0.0	1.2	0.0	-0.7	-1.4	0.0	3.4	0.0	1.9
non-processed	-6.0	0.0	2.6	0.0	-3.6	-2.8	0.0	5.9	0.0	2.9
processed	0.2	0.0	0.5	0.0	0.7	-0.8	0.0	2.2	0.0	1.4
Traded goods	0.1	0.0	0.2	0.0	0.2	0.1	0.0	0.8	0.0	0.9
durables	-0.6	0.0	0.1	0.0	-0.5	-0.8	0.0	-1.8	0.0	-2.6
non-durables	0.3	0.0	0.2	0.0	0.5	0.1	0.0	2.0	0.0	2.0
Market services	1.1	1.0	2.0	-0.8	3.4	1.4	-0.1	2.5	0.0	3.8
Market energy	-0.6	0.0	-0.7	0.0	-1.3	0.6	0.0	1.5	0.0	2.1
Alcohol and Tobacco	0.0	4.9	0.9	0.3	6.2	0.5	0.0	1.8	1.6	4.0
Fuel	-1.8	0.0	-0.4	0.0	-2.2	-10.4	0.0	2.8	0.0	-7.9
Administered prices	-5.4	0.0	-1.2	0.0	-6.6	-1.4	0.0	0.9	0.0	-0.5
Inflation	-1.2	0.7	0.5	-0.1	-0.2	-1.0	0.0	1.9	0.2	0.9
Core inflation	0.4	1.0	1.0	-0.2	2.2	0.4	0.0	1.8	0.2	2.4

Note: The tables show the decomposition of the yearly average change of the consumer price index. The yearly change is the sum of the so-called carry over and incoming effects. The carry over effect is the part of the yearly index, which can be explained by the preceding year's price changes, while the incoming effect reflects the changes in the recent year. We decomposed these indices to the sub-aggregates of the consumer price index, and we calculated inflationary effects of the changes in the indirect taxes, the administered prices, and market prices (not administered prices excluding indirect tax effects). The subgroups may not sum to the aggregate figure due to rounding.
Source: MNB

LIST OF CHARTS AND TABLES

List of charts

List of tables

Mátyás Hunyadi

(23 February 1443 – 6 April 1490)

He ruled from 1458 to 1490 as King of Hungary, and had been Czech king from 1439 and Prince of Austria from 1486. Hungarian tradition regards him as one of the greatest Hungarian kings whose memory is preserved in many folk tales and legends. He is also known as Matthias Corvinus, King Matthias the Just or officially as Matthias I, but commonly he is simply denoted as King Matthias.

His father, János Hunyadi, the regent of Hungary, was one of the most outstanding military leaders and strategists in the country's medieval history who triumphed at the Battle of Nándorfehérvár in 1456. Matthias' mother was Erzsébet Szilágyi, and he had an elder brother, László Hunyadi. The future king was brought up by his mother and nurse until the age of six, and was subsequently placed under the supervision of his tutors. János Hunyadi did not have a chivalrous education in mind for his son: first, it was a Polish humanist, Gergely Szánoki who introduced him to the realm of knowledge, then this task was assigned to János Vitéz. Mátyás was brought up and educated in a humanistic spirit to become a versatile and curious-minded person who had been taught canon and constitutional law, arts and Latin. In addition to Hungarian, he also spoke German and Czech.

After the death of László V, his uncle, Mihály Szilágyi, and the armed forces supporting Hunyadi exercised pressure to have Matthias crowned as King of Hungary on 24 January 1458. Even in the early years of his reign Matthias had troubles both with the magnates of the country and Emperor Frederick III of the Holy Roman Empire. As the king was still a minor, parliament appointed Mihály Szilágyi to act as regent on his behalf. However, Matthias did not tolerate any guardianship and pushed his uncle to the background who devised a plot against the king in response. Returning from battle with the Turks, the king had the rebels captured and he imprisoned his uncle in the castle of Világos.

Upon his ascension to the throne the annual income of the treasury hardly exceeded 110 to 120 thousand forints. During his rule spanning thirty-two years the king managed to multiple revenues from taxes. Considering the average of the taxes levied, less the revenues from the Czech and Austrian provinces, this yearly amount approximated 628,000 forints and may as well reached 900,000 gold forints in the most prosperous years. This was still much less than the annual revenue of the western powers of the age. In order to raise the low income of the treasury, reform-like and comprehensive financial actions were needed. Matthias recognised that a centralised, nationwide financial system was the only solution to the problem, and that the royal revenues had to be directed to a single person, the treasurer. The reforms of Matthias were adopted by parliament and his decrees were promulgated on 25 March 1467.

We can get a glimpse of the cultural life in the royal court, which represented the elite of European civilisation at the time, at the partly reconstructed Royal Palace in Visegrád. The most distinguished pieces of the cultural legacy of Matthias are the Corvinian books, richly illustrated volumes of the former royal library.

INFLATION REPORT

December 2014

Print: Prospektus–SPL consortium

H-8200 Veszprém, Tartu u. 6.

H-1054 BUDAPEST, SZABADSÁG TÉR 9.

mnb.hu