INFLATION
REPORT

JUNE
2016

'... wise is the man who can put purpose to his desires.'

Miklós Zrínyi: The Life of Matthias Corvinus

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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 for Fiscal and Competitiveness 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 Barnabás Virág, Executive Director of the Directorate Monetary Policy, Financial Stability and Lending Incentives. The Report was prepared by staff at the MNB's Directorate Economic Forecast and Analysis, Directorate Monetary Policy and Financial Market Analysis, Directorate for Fiscal and Competitiveness Analysis and Directorate Financial System Analysis. The Report was approved for publication by Márton Nagy, 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 16 June 2016.

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THE MONETARY COUNCIL'S KEY FINDINGS RELATED TO THE INFLATION REPORT

In the Council's assessment, the Hungarian economy is picking up again following the temporary deceleration at the beginning of the year. A degree of unused capacity remains in the economy and inflation remains persistently below the Bank's target. Looking ahead, the disinflationary impact of the domestic real economic environment is gradually decreasing. The strong external financing capacity and the decline in government's foreign currency debt reduce the vulnerability of the country in the coming years.

In recent months global economic growth decelerated, and the inflation rates still fall short of the central bank's target values.

In the first quarter of 2016 global economic growth continued to be moderate under persisting regional differences. In the developed economies the recovery from the crisis continued accompanied by deceleration of growth rates, while growth prospects deteriorated in the emerging regions. Inflation was moderate all over the world. Fragile economic activity and moderate inflationary environment warrant a growth supportive, loose monetary policy stance by the majority of the world's leading central banks for a prolonged period.

Inflation will remain persistently low and it will approach the 3 per cent target, representing price stability, only in the first half of 2018.

According to the incoming data received in recent months the domestic inflation processes were generally in line with the March Inflation Report. In the Council's assessment as a result of the rising household consumption and the acceleration of wage growth in the whole economy, core inflation is gradually rising. Commodity prices, increasing gradually from their initial low level, raise consumer prices; however, the moderate inflation expectations and the generally low level of imported inflation curbs the growth rate of the price level. Looking ahead, as a result of consumption increasing in parallel with rising incomes and the pick-up in lending, inflation will approach the medium-term inflation target in the first half of 2018.

The time profile of this year's economic growth is characterised by duality: following the temporary deceleration in the beginning of the year, economic growth will pick up again, relying primarily on domestic demand items.

After the temporary deceleration of the Hungarian economy early this year, the Monetary Council anticipates a substantial pick-up in economic growth. The continued strengthening of domestic demand will make a more remarkable contribution to growth, where, in addition to consumption and investments, the budget's demand stimulating effects and the central bank's earlier measures may play a dominant role. The adjustment of industrial production and the expansion of the agricultural value added resulting from the base effect will also accelerate the GDP growth rate. The persistent expansion of household consumption is supported, in addition to rising income and the pick-up in lending, by the second-round effects of the housing market programme. In June, the Monetary Council decided to increase the total amount available under the Funding for Growth Scheme by HUF 100 billion in order to provide further support to economic growth. In the Council's assessment, yearly economic growth of around 3 per cent can be maintained as a result of the Bank's Growth Supporting Programme and the steps taken by the Government to encourage home construction and to facilitate a dynamic draw-down of EU transfers. With regards to developments in the corporate loan market, lending to SMEs has been growing dynamically, in line with the Bank's intentions, and this growth has also been supported by the Growth Supporting Programme through the use of interest rate swaps conditional on lending activity. In the case of lending to households, the significant increase in lending for house purchase is consistent with the turnaround in the real estate market.

Hungary's strong external financing capacity and the resulting decline in external debt are contributing to the sustained reduction in the vulnerability of the economy.

The Hungarian economy's external surplus will slightly decrease in 2016-2017 from last year's outstandingly high value of almost 9 per cent of GDP. The decrease is decisively the consequence of the lower inflow of EU transfers, attributable to the EU's new programming period, which will be offset in 2016 only partially by the rising trade surplus arising from the improving terms of trade. Nevertheless, the external surplus is expected approximate 8 per cent of GDP over the entire forecast horizon, resulting in a further decrease in the country's external debt and thereby the continued reduction in external vulnerability. The fall in external liabilities is also supported by the further decrease in government debt, under the fall of the state's foreign currency debt.

In the first half of the past period international money markets were characterised by strengthening risk aversion, followed by gradual improvement, however, risk appetite decreased again in June. Domestic processes were primarily influenced by international money market processes.

After the increase in risk indicators in March, risk aversion gradually eased, the key developed market stock exchange indices slightly increased, which may have been supported by the rise in global oil prices. In the first half of June the intensification of concerns regarding the United Kingdom's EU membership resulted in a deceleration of international money market sentiment. Expectations with regard to the leading central banks' monetary policy decisions remained in the markets' focus. In June the ECB launched its Corporate Sector Purchase Programme announced in March, while the Fed decided to maintain the interest rate. Apart from this, market processes were shaped by the expectations related to the oil price developments in the world market and the growth prospects of the global economy. The Hungarian long-term government bond yields and Hungary's CDS spread slightly increased.

The macroeconomic outlook is surrounded by both upside and downside risks.

In addition to the baseline projection in the June Inflation Report, the Monetary Council also considered four alternative scenarios. A looser-than-expected external monetary policy environment and more subdued growth in Hungary's export markets and the emerging market economies imply a lower path for inflation than the baseline projection, while faster wage growth and more dynamic expansion in consumption as well as the occurrence of financial market turbulences indicate a higher inflation path than in the baseline scenario. A looser-than-expected external monetary policy environment does not significantly influence domestic economic growth. In the case of more subdued growth in Hungary's export markets and the emerging market economies as well as in the case of financial market turbulences, growth will be lower than projected in the baseline scenario, while faster wage growth and more dynamic expansion in consumption imply stronger domestic economic growth than in the baseline forecast. In addition to the key risk scenarios, the Monetary Council identified further, less significant uncertainties, including higher oil and commodity prices, downside risk of second-round inflation effects and a lower investment path.

In the Council's assessment, there continues to be a degree of unused capacity in the economy and inflationary pressures remain moderate for an extended period. The real economy's disinflationary impact is gradually decreasing over the policy horizon.

If the assumptions underlying the Bank's projections hold, the current level of the base rate and maintaining loose monetary conditions for an extended period are consistent with the medium-term achievement of the inflation target and a corresponding degree of support to the economy.

SUMMARY TABLE OF THE BASELINE SCENARIO

(Forecast based on endogenous monetary policy)

	2015	2016	2017
	Actual	Projection	
Inflation (annual average)			
Core inflation	1.2	1.5	2.9
Core inflation without indirect tax effects	1.1	1.4	2.4
Inflation	-0.1	0.5	2.6
Economic growth			
External demand (GDP based)	1.9	1.9	2.1
Household consumption expenditure	3.1	4.3	3.6
Government final consumption expenditure	0.6	1.2	0.5
Gross fixed capital formation	1.9	-2.0	4.8
Domestic absorption	1.9	2.6	3.0
Exports	8.4	6.3	6.4
Imports	7.8	6.6	6.7
GDP	2.9	2.8	3.0
External balance[1]			
Current account balance	4.4	5.6	5.2
External financing capacity	8.8	7.6	7.7
Government balance[1,5]			
ESA balance	-2.0	(-1.6) - (-1.8)	-2.4
Labour market			
Whole-economy gross average earnings	4.3	6.0	6.1
Whole-economy employment	2.9	1.6	0.7
Private sector gross average earnings[2]	3.9	5.3	5.8
Private sector employment	2.5	1.7	1.3
Unemployment rate	6.9	5.8	5.3
Unit labour cost in the private sector[3]	1.9	3.7	3.8
Household real income[4]	3.1	4.3	3.1

[1] As a percentage of GDP.

[2] According to the original CSO data for full-time employees.

[3] Private sector unit labour costs calculated with full time equivalent domestic employees.

[4] MNB estimate.

[5] Preliminary data for 2015. For 2016 values may change depending on the use of the Country Protection Fund while for 2017 the calculation was made assuming the cancellation of the Country Protection Fund.

1. INFLATION AND REAL ECONOMY OUTLOOK

In the first quarter of 2016, there was a temporary slowdown in the performance of the Hungarian economy. In line with our earlier expectations, developments in inflation remain subdued. There was a significant pick-up in wage growth in the private sector in Q1, while the level of employment continued to rise.

According to our current forecast, inflation will remain below the 3 per cent inflation target this year and next year as well, and will only move towards the medium-term inflation target in 2018 H1. The overall upward trend in commodity prices since the beginning of the year points to a rise in inflation. At the same time, inflation expectations continue to be low in historical comparison, and imported inflation has remained subdued, pointing to lower price increases over the long run. According to our forecast, core inflation excluding indirect taxes will gradually rise due to recovering domestic demand and strengthening wage outflows. The price increasing effects of announced excise tax changes will be offset by the VAT cut to be introduced in the case of certain basic food products and services.

According to our expectations, following the temporary slowdown early in the year, economic activity will pick up again, and thus the Hungarian economy will continue to expand. Dynamic growth in household consumption is expected, supported by a gradual increase in willingness to consume, in addition to consistently favourable income developments. The steady improvement in labour market conditions bolsters longer-term income expectations, and thus household sector consumption which was postponed because of the earlier balance sheet adjustment will increasingly materialise. According to our calculations, the investment rate will be stable above 20 per cent in the years to come. Public investment fell early in the year in parallel with the sharp decline in EU fund inflows, but an upturn is expected in H2 in line with the Government's commitment. Growth in private investment is supported by the pick-up in lending resulting from the Growth Supporting Programme as well as by the substantial increase in EU funds that can be drawn starting from the second half of the year. Households' investment activity is bolstered by stable long-term income expectations, the disappearance of exchange rate risk from balance sheets and the home creation package from H2. The contribution of net exports to growth will be subdued, because imports also rise in parallel with the upturn in domestic demand.

In view of the continued growth in private sector labour demand, the level of employment is forecast to keep rising. According to our expectations, the growth rate of participation will be lower than that of labour demand, and thus the unemployment rate will decline further over the forecast horizon. Against the background of tightening labour market conditions, strong wage outflows are expected this year and next year in the private sector. Due to the free capacities in the economy, this year's significant growth in wages will primarily manifest itself in consumption growth. Furthermore, due to the historically low level of inflation expectations and the subdued imported inflation environment, the acceleration in wage growth will only have a modest impact on inflation. In the past years, companies' favourable income position have provided more leeway in decisions on wage increases.

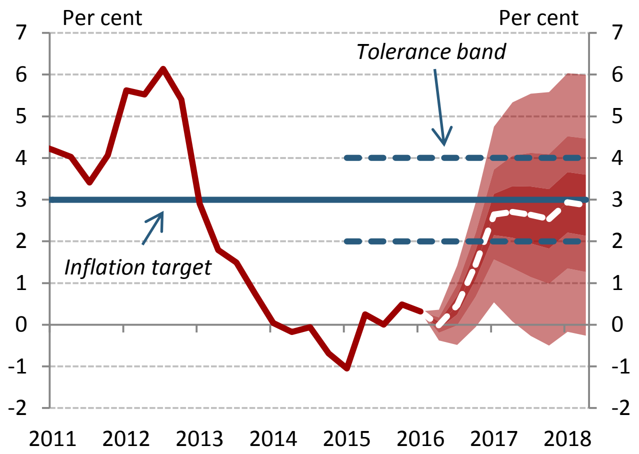
The external financing capacity of the economy is expected to remain consistently high in the coming years as well, contributing to the continued reduction of net external debt and the related vulnerability. Based on current developments, the ESA budget deficit is expected to be in the range of 1.6–1.8 percent of GDP this year. Fiscal policy will have a demand-stimulating effect in 2017, as the deficit is forecasted to increase to 2.4 per cent in 2017. Nonetheless, government debt is projected to decline.

On the whole, the disinflationary effect of the real economy environment will gradually decrease over the coming years. Inflation and core inflation excluding indirect taxes will rise only slowly, indicating that – in the context of the moderate cost environment – the inflation restraining effect of historically subdued domestic consumption remains significant. This effect is declining gradually over the forecast horizon. In our baseline scenario, inflation will move close to the medium-term 3 per cent target only in 2018 H1.

1.1. Inflation forecast

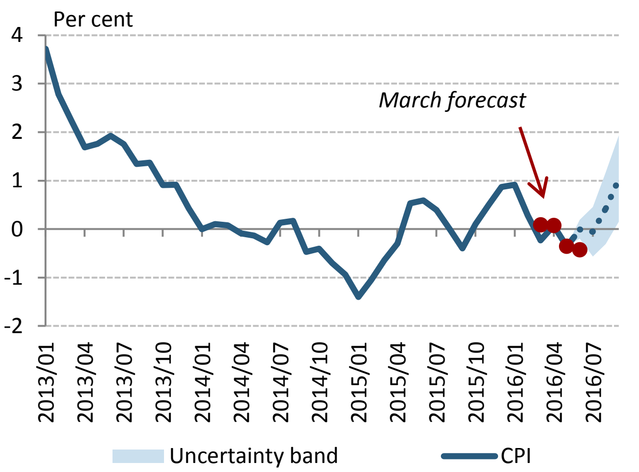
According to our current forecast, inflation will remain below the 3 per cent inflation target this year and next year as well, and will only move towards the medium-term inflation target in 2018 H1. The upward trend in fuel prices since the beginning of the year points to a rise in inflation. At the same time, inflation expectations continue to be subdued, and moderate imported inflation points to persistently low price dynamics. Both recovering domestic demand and accelerating wage growth contribute to the gradual increase in core inflation excluding indirect taxes.

Chart 1-1: Fan chart of the inflation forecast



Source: HCSO, 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

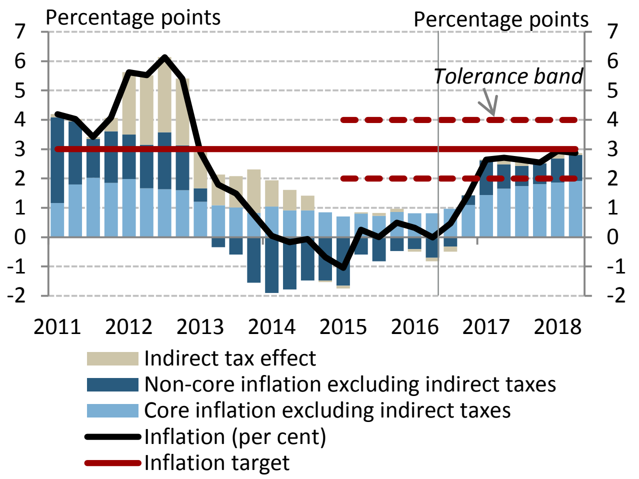
Inflation will fall short of the 3 per cent medium-term target both this year and next year, and will only approach the target in early 2018. The low rate of price increases, which falls substantially short of the level corresponding to price stability, is primarily the result of the price-depressing effect of imported inflation. The cost-side impacts which are significantly restraining inflation are expected to wear off in the second half of the forecast period. In parallel with that, core inflation excluding indirect taxes will rise gradually, supported by favourable income developments as well as a pick-up in consumption resulting from the increase in households' willingness to consume. However, the rate of increase will be dampened by the price-depressing impact of the historically low inflation expectations and the negative output gap (Chart 1-1).

According to our near-term forecast, the annual growth rate of consumer prices will be around zero in the summer months (Chart 1-2). The annual index will be steadily in positive territory again in the autumn months. The increase in inflation at the turn of 2016 and 2017 will mainly result from the drop-out of the earlier decline in fuel prices from the base. Annual average inflation is expected to be 0.5 per cent this year and 2.6 per cent next year (Chart 1-3 and Table 1-1).

Inflation in the euro area, which is Hungary's most important trading partner, is also at subdued levels. It is assumed that the recent fuel price increases will contribute to a rise in euro-area inflation. At the same time, in a historical comparison, imported inflationary pressure will remain subdued over the medium term.

Core inflation excluding indirect taxes is expected to rise gradually over the forecast horizon (Chart 1-3 and Table 1-1), which is explained by a gradual increase in demand, strengthening imported inflation and an increase in wages. The negative output gap is gradually closing over the forecast horizon, and thus the disinflationary impact from the real economy will decline. Unit labour cost will rise in the private sector, as a result of tightening labour market conditions and higher wage growth. The inflationary effect of accelerating wage outflows may be moderate, however, owing to the low labour share, subdued inflation expectations and the negative output gap.

Chart 1-3: Decomposition of the inflation forecast



Source: MNB

Table 1-1: GDP growth in main economies

		2016	2017
Core inflation		1.5	2.9
Contribution to inflation		*1.0*	*2.0*
Non-core inflation	Unprocessed food	0.1	-0.2
	Fuel and market energy	-5.6	5.5
	Regulated prices	0.2	1.2
	Total	-1.5	2.1
Contribution to inflation		*-0.5*	*0.7*
Inflation		0.5	2.6

Note: The sum of contributions may differ from the aggregated value because of the rounding.
Source: MNB

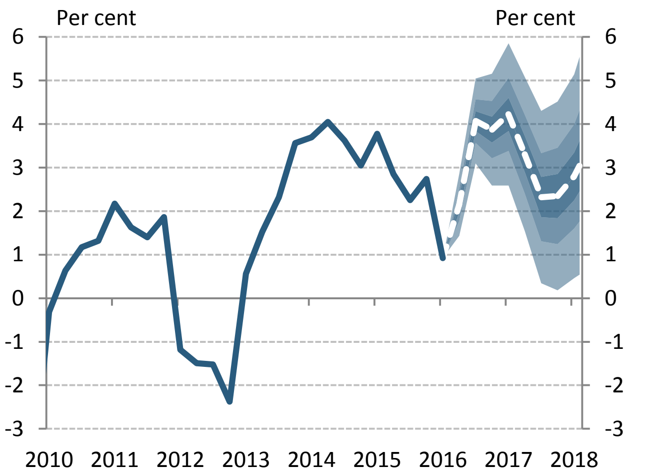
The price index of non-core items is forecast to remain at moderate levels (Chart 1-3 and Table 1-1). Oil prices expressed in euro continue to be at low levels, and futures prices project a modestly rising path. At the same time, as a result of the base effect of the earlier decline in fuel prices, the price index of this product group is expected to rise at the turn of 2016 and 2017, resulting in an increase in the consumer price index as well.

The direct impact of government measures on inflation will remain subdued. The changes in excise taxes on tobacco products stemming from harmonisation with EU legislation point to an increase in inflation. Nevertheless, the consumer price index will be reduced by the VAT cuts at the beginning of next year (internet, eggs, milk, poultry, restaurant services). Our forecast is based on the assumption that regulated energy prices will not change until the end of the forecast period, while only moderate price increases are expected in the case of non-energy regulated prices (Table 1-1).

1.2. Real economy forecast

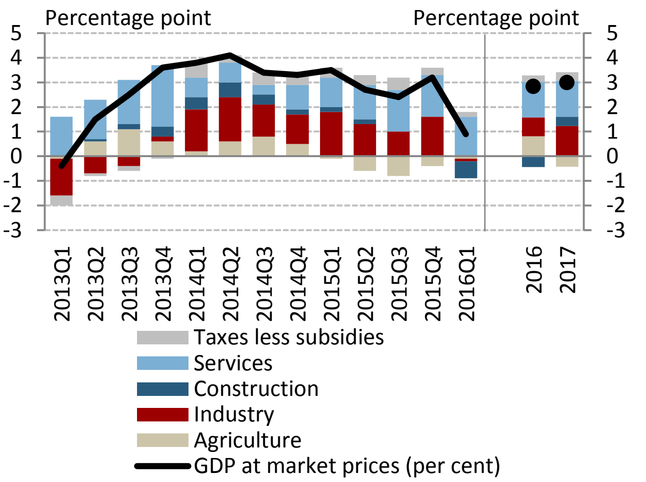
Following the slowdown in the first quarter, economic activity is expected to pick up considerably. Over the forecast horizon, domestic demand contributes to growth for the most part, mainly through a significant upturn in household consumption, which is also facilitated by a gradual increase in the willingness to consume, in addition to favourable income and labour market developments. Moreover, expanding investment will provide support to the improvement in economic activity starting from 2016 H2. At the beginning of 2016, investment was restrained by the sharp decrease in EU funds. Looking ahead, however, public investment is expected to rise in H2. Lending activity, which is recovering as a result of the easing in lending constraints and the Growth Supporting Programme, supports economic growth by stimulating corporate investment. In addition, households' investment activity will also pick up gradually in the second half of the year, due to stable longer-term income expectations, the disappearance of exchange rate risk from balance sheets and the home creation programme.

Chart 1-4: Fan chart of the GDP forecast



Note: Seasonally adjusted and reconciled data. The time series has been seasonally adjusted taking into consideration the forecast data.
Source: MNB

Chart 1-5: Contribution of economic branches to annual changes in GDP



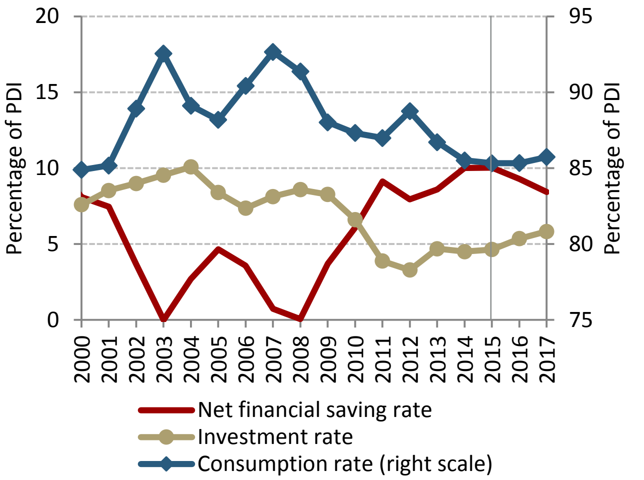
Source: HCSO, MNB

Following the brief slowdown early this year, economic growth is expected to pick up strongly, and thus the Hungarian economy will continue to expand over the forecast horizon. Domestic demand will contribute to growth for the most part, mainly through a robust upturn in household consumption. The strong wage outflows observed at the beginning of the year are expected to continue, facilitating the ongoing upswing in household consumption. In addition, investment is expected to expand dynamically starting from 2016 H2. The contribution of net exports to growth will be subdued, because imports will also rise in parallel with the upturn in domestic demand. Following the negative contribution of agriculture last year, a correction is expected this year, and thus the contribution of agriculture to growth may be positive again. The Hungarian economy is forecast to grow at a rate of 2.8 per cent in 2016 and 3 per cent in 2017 (Chart 1-4, Chart 1-5), and accordingly Hungary's economic convergence, which restarted in 2013, will continue.

The dynamic upswing in household consumption is expected to continue over the forecast horizon, supported by improving income developments and an increasing willingness to consume. High wage outflows, historically low inflation and expanding employment increases households' disposable income. Due to the free capacities in the economy, this year's significant growth in wages will manifest itself primarily in consumption growth. In the second half of the forecast period, this process is also supported by public sector wage increases and the targeted VAT cuts. Favourable income prospects and historically high consumer confidence facilitate the realisation of postponed consumption. Consequently, the financial savings rate is expected to decline from its current high level in the next two years, while consumption and investment rates increase gradually (Chart 1-6).

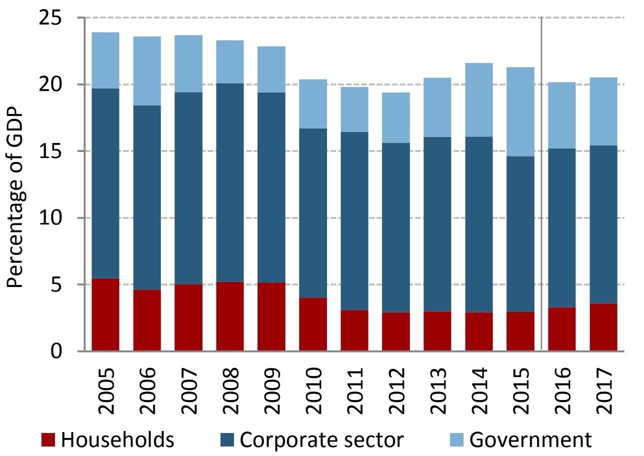
Within output, the share of investment will remain steadily above 20 per cent in the coming years (Chart 1-7). In parallel with the drawdown of EU funds, government investment will

Chart 1-6: Use of household income



Note: As percentage of disposable income (PDI). Net financial savings of households excludes mandatory contributions payable to private pension funds.
Source: HCSO, MNB

Chart 1-7: Breakdown of gross fixed capital formation



Source: HCSO, MNB

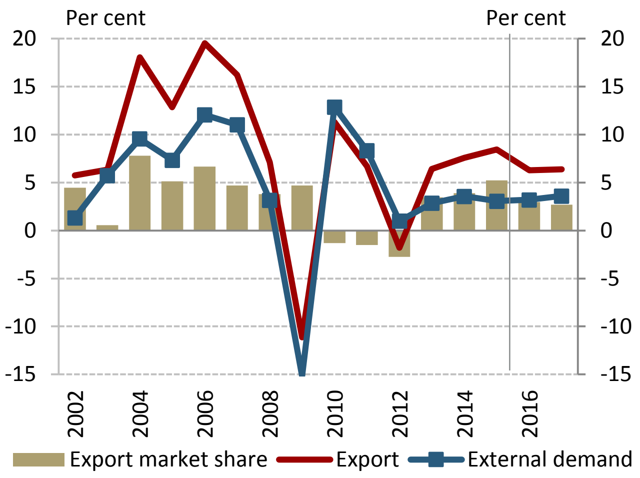
drop sharply compared to the record year of 2015, but looking ahead an upswing is expected in H2 in line with the Government's commitment. Corporate investment is supported by the pick-up in lending resulting from the Growth Supporting Programme and – from the demand side – mostly by the capacity expansion investment of sectors producing for the domestic market, as well as by an accelerated surge in the EU funds available to companies starting from the second half of the year. Household investment will pick up in the second half of the year, thanks to stable longer-term income expectations, the disappearance of exchange rate risk from balance sheets and the home creation programme.

With rising credit demand, outstanding corporate loans are expected to continue increasing substantially over the forecast horizon. The raised amount of the phase-out period for the Funding for Growth Scheme and the Growth Supporting Programme, which intends to stimulate market based lending, supports the expansion of the level of outstanding SME loans. The low interest rate environment also offers an adequate opportunity for commercial banks from the demand side to increase their lending activity. In addition, the gradual phase-out of the bank levy will also stimulate commercial banks' credit supply. As a result of the government measures supporting home construction, the housing market continues to recover, leading to an increase in new property loans.

In parallel with moderately rising external demand, Hungary's export market share will continue to grow over the forecast horizon. In line with emerging countries' weak prospects for economic activity, import demand in Hungary's export markets will expand more slowly, and thus the increase in Hungarian exports will remain slower than in the previous years. Moreover, it may impair Hungarian export prospects that – instead of more import intensive exports – domestic consumption may be the main driver of growth in the euro area. As a result of changes in the growth structure of Hungary's export markets, expansion in the world economy is implemented with lower import demand for production purposes. The rise in Hungarian exports will continue with lower dynamics than in the previous years, and furthermore the contribution of net exports to growth will be subdued because – in parallel with the upturn in domestic demand – imports will also rise (Chart 1-9).

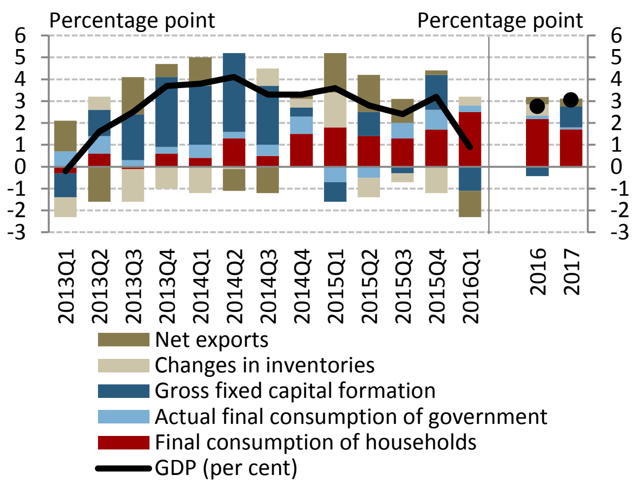
The disinflationary effect of the real economy will decrease gradually over the coming years. In line with the low cost environment and emerging countries' deteriorating prospects for economic activity, the output of Hungary's trading partners may persistently fall short of its potential

Chart 1-8: Changes in export market share



Note: Annual change.
Source: MNB

Chart 1-9: GDP growth



Source: HCSO, MNB

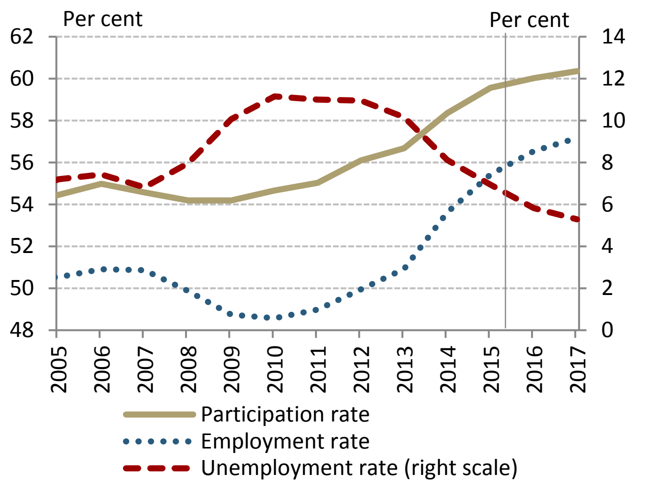
level, which will continue to result in low imported inflation. At the same time, while the recovery in household consumption will remain determinant, as the most relevant factor in terms of the domestic inflationary effects, the level of consumption will only gradually recover from the losses of the crisis. Therefore, the disinflationary effect will gradually decline.

Potential growth will rise over the forecast horizon, primarily due to the increase in labour market activity, and to the investment ratio stabilising at a level above 20 per cent. The increase in capital stock and the dynamic growth in corporate investment for expanding capacities are facilitated by the Growth Supporting Programme, the declining bank levy and the EU funds available for enterprises. The upswing in lending is contributing to productivity improvement. Over the forecast horizon, activity will gradually expand in parallel with the pick-up in private sector investment. In addition to improving demand, investments to expand capacity by firms producing for the domestic market will also contribute to the pick-up in potential growth. Thus, on the whole, economic growth is facilitated by the gradual closing of the output gap and the increase in potential growth.

1.3. Labour market forecast

Whole-economy employment is expanding, mainly due to the increase in employment in the private sector. According to our current forecast, the unemployment rate will drop to near 5 per cent in 2017. As a result of tightening labour market conditions, stronger wage outflows are expected this year and next year. This phenomenon is reinforced by the fact that companies' favourable income position provides more leeway in decisions on wage increases. As a result of all these impacts, nominal wages are expected to rise more strongly than in the previous years. Unit labour cost dynamics will only accelerate at a moderate pace due to improving productivity.

Chart 1-10: Employment, participation and unemployment rate in the national economy

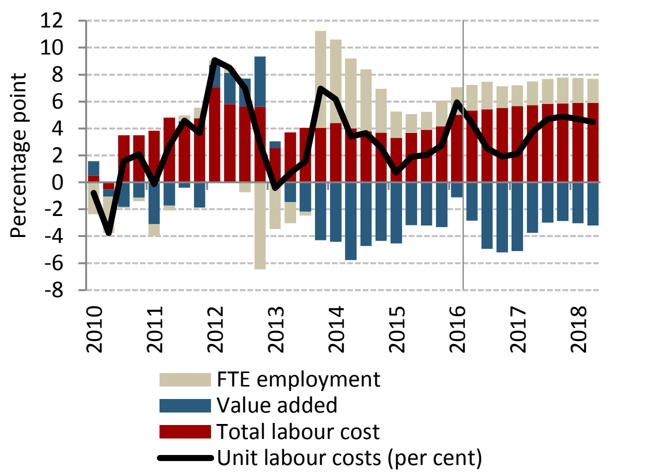


Source: MNB calculations based on HCSO data

Activity will rise slightly in the first half of the forecast horizon and then stabilise at a high level in the second half. The increase in the activity rate is supported by the measures taken since the crisis to boost labour supply and return of 'discouraged workers' to the labour market (Chart 1-10).

Over the forecast horizon, labour demand in the private sector will increase further, in parallel with continued economic growth. Enterprises will respond to improving demand conditions by expanding employment, although the expansion is expected to be slower than observed in the previous quarters. As the increase in part-time employment has stopped in recent years, looking ahead, in parallel with the rise in private sector employment, the ratio of part-time employees to the number of employees will decrease. By the end of the forecast period, the number of hours worked will be close to the pre-crisis level. In addition to rising employment in the private sector, the planned expansion of public employment programmes will also contribute to the rise in the level of whole-economy employment this year. In the forecast, we project that the number of people participating in public employment programmes will rise to nearly 250,000 by end-2016. No further expansion in the public employment programme is expected from 2017.

Chart 1-11: Decomposition of unit labour costs in the private sector



Note: FTE – Full-time equivalent.

Source: MNB calculations based on HCSO data

Against the background of tightening labour market conditions, nominal wage increases are expected in the private sector. This phenomenon is reinforced by the fact that companies' favourable income position allows for higher wage outflows. Pay rises and this year's low inflation result in significant increases in consumers' real wages. Unit labour cost growth is rising at a moderate pace, due to increasing productivity (Chart 1-11).

In the general government, nominal wages are expected to remain unchanged, apart from the wage increases implemented within the framework of the already announced career schemes. The whole-economy wage index is reduced by public employment through the composition effect, due to the low wage level of participants.

Box 1-1: Main assumptions applied in the forecast

Hungary is a small, open economy, and as such our forecasts for the most important key macroeconomic variables are fundamentally influenced by developments in external factors and changes in the assumptions based on such. The purpose of this brief presentation of the changes in the external assumptions published in the chapter on forecasts is to make the Bank's forecasts more transparent.

Table 1-2: Main external assumptions of the projections

Technical Assumptions	2016		2017		Change	
	March	June	March	June	2016	2017
EUR/USD	1.10	1.11	1.10	1.12	0.9%	1.8%
Oil (USD/barrel)	38.6	45.3	44.4	52.4	17.4%	18.0%
Food prices						
Wheat (USD/bushel)	4.75	4.75	5.19	5.29	0.0%	1.9%
Maize (USD/bushel)	3.72	3.85	3.96	4.05	3.5%	2.3%
Euro area inflation (%)	0.4	0.2	1.2	1.4	-0.2 pp.	0.2 pp.
GDP growth of our main trading partners* (%)	2.0	1.9	2.2	2.1	-0.1 pp.	-0.1 pp.

Note: * Growth rate of Hungary's 21 most important export target countries, weighted by shares in exports.
Sources: CBT, Bloomberg, OECD, Consensus Economics, MNB calculations

In the past months, oil prices expressed in US dollars rose by more than 10 per cent compared to our March assumption. The current oil prices of nearly USD 50 are primarily explained by investors' and market participants' behaviour that they pay increasing attention to the decreasing production at some important oil market players (e.g. USA, Canada, Nigeria), which is also corroborated by the significant decline in market oversupply observed for the first time in several years. These missing production capacities are offset to some extent by production in Iran, which is rapidly approaching past levels, following the lifting of sanctions on this Asian country. The increase in Chinese oil imports may provide stability for the increase. Speculation may be playing a major role in the development of oil prices. Persistently low prices are also justified by the improvement in efficiency and production costs in US shale oil fields as well as their ability to accommodate rapidly, as a result of which they may quickly restart the production of suspended capacities in the case of a possible major oil price increase. On the whole, futures prices continue to point to a moderate increase in the coming period. On the other hand, the uncertainty about expected oil price developments remains high among analysts, and oil prices for break-even points are distributed in a wide band.

In relation to our technical assumption for the EUR/USD cross rate, the euro appreciated against the US dollar in the past period. On the other hand, looking ahead, we assume that the euro will remain persistently weak against the dollar, which is probable in light of the expected difference in the monetary policy stances of the European Central Bank and the Fed.

Compared to the assumption in the March Inflation Report, both wheat and corn prices remained practically unchanged. Due to favourable agricultural yields in the southern hemisphere and the expected large stocks, commodity exchange prices of wheat and corn remained at subdued levels in the past months. Looking ahead, based on futures prices, grain prices are expected to increase slightly.

Global inflation has been at low levels for a long time, and similar subdued price increases are expected in the future as well. Looking ahead, imported inflation will only rise slightly and gradually.

Our assumption for GDP growth in Hungary's export markets is somewhat lower than in our March forecast. In Q1, economic growth in the euro area exceeded the growth rates of previous quarters, but growth then continued at a slower rate than in past quarters in the majority of the countries of the region. At the same time, compared to earlier projections, growth is expected to be slower both in developed and emerging countries. The largest risk to growth is the slowdown in global trade. Prospects for the euro area continue to be negatively affected by the deceleration of emerging countries as well as the impact of the Russia–Ukraine conflict and economic sanctions. Nevertheless, low commodity prices and the weaker euro exchange rate contribute to economic growth in the European area.

Table 1-3: Changes in the projections compared to the previous Inflation Report

	2015	2016		2017	
	Actual	Projection			
		March	Current	March	Current
Inflation (annual average)					
Core inflation	1.2	1.7	1.5	2.4	2.9
Core inflation without indirect tax effects	1.1	1.6	1.4	2.4	2.4
Inflation	-0.1	0.3	0.5	2.4	2.6
Economic growth					
External demand (GDP-based)	1.9	2.0	1.9	2.2	2.1
Household consumer expenditure	3.1	3.5	4.3	2.8	3.6
Government final consumption expenditure	0.6	0.7	1.2	0.5	0.5
Gross fixed capital formation	1.9	0.3	-2.0	4.1	4.8
Domestic absorption	1.9	2.3	2.6	2.5	3.0
Exports	8.4	6.3	6.3	6.7	6.4
Imports	7.8	6.1	6.6	6.7	6.7
GDP	2.9	2.8	2.8	3.0	3.0
External balance[1]					
Current account balance	4.4	5.7	5.6	5.9	5.2
External financing capacity	8.8	7.6	7.6	8.4	7.7
Government balance[1,5]					
ESA balance	-2.0	-1.8	(-1.6) - (-1.8)	-1.7	-2.4
Labour market					
Whole-economy gross average earnings	4.3	4.6	6.0	4.1	6.1
Whole-economy employment	2.9	1.8	1.6	1.7	0.7
Private sector gross average earnings[2]	3.9	4.3	5.3	4.7	5.8
Private sector employment	2.5	1.7	1.7	1.3	1.3
Unemployment rate	6.9	6.5	5.8	6.3	5.3
Private sector unit labour cost[3]	1.9	2.6	3.7	2.6	3.8
Household real income[4]	3.1	3.5	4.3	2.5	3.1

[1] As a percentage of GDP.

[2] According to the HCSO data for full-time employees.

[3] Private sector unit labour cost calculated with full-time equivalent domestic employment.

[4] MNB estimate.

[5] Preliminary data for 2015. For 2016 values may change depending on the use of the Country Protection Fund while for 2017 the calculation was made assuming the cancellation of the Country Protection Fund.

Table 1-4: MNB baseline forecast compared to other forecasts

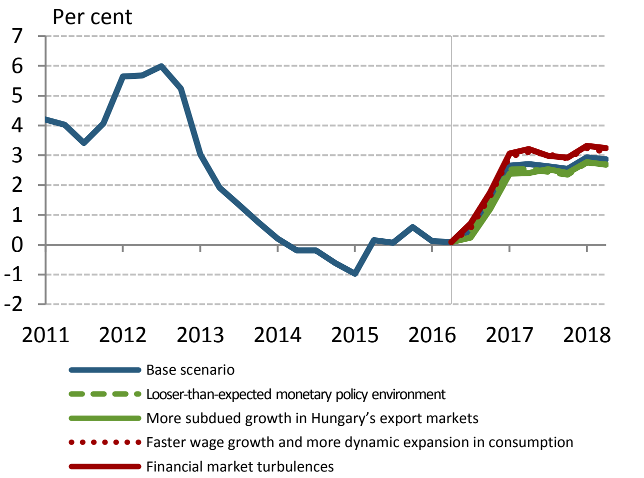
	2016	2017
Consumer Price Index (annual average growth rate, %)		
MNB (June 2016)	0.5	2.6
Consensus Economics (May 2016)[1]	0.2 – 0.6 – 1.1	1.5 – 2.0 – 2.9
European Commission (May 2016)	0.4	2.3
IMF (April 2016)	0.5	2.4
OECD (June 2016)	0.1	1.7
Reuters survey (May 2016)[1]	0.2 – 0.5 – 0.8	1.0 – 1.9 – 2.4
GDP (annual growth rate, %)		
MNB (June 2016)	2.8	3.0
Consensus Economics (May 2016)[1]	2.0 – 2.3 – 2.8	2.2 – 2.7 – 3.2
European Commission (May 2016)	2.5	2.8
IMF (April 2016)	2.3	2.5
OECD (June 2016)	1.6	3.1
Reuters survey (May 2016)[1]	1.5 – 2.1 – 2.5	2.4 – 2.7 – 3.1
Current account balance[3]		
MNB (June 2016)	5.6	5.2
European Commission (May 2016)	5.6	6.3
IMF (April 2016)	5.4	5.2
OECD (June 2016)	4.9	4.6
Budget balance (ESA 2010 method)[3,4]		
MNB (June 2016)	(-1.6) - (-1.8)	-2.4
Consensus Economics (May 2016)[1]	(-2.6) – (-2.0) – (-1.1)	(-2.9) – (-2.2) – (+0.1)
European Commission (May 2016)	-2.0	-2.0
IMF (April 2016)	-2.1	
OECD (June 2016)	-1.9	-2.6
Reuters survey (May 2016)[1]	(-2.6) – (-2.1) – (-1.8)	(-3.0) - (-2.4) - (-2.0)
Forecasts on the size of Hungary's export markets (annual growth rate, %)		
MNB (June 2016)	3.2	3.6
European Commission (May 2016)[2]	4.6	5.5
IMF (April 2016)[2]	4.2	4.9
OECD (June 2016)[2]	5.0	4.0
Forecasts on the GDP growth rate of Hungary's trade partners (annual growth rate, %)		
MNB (June 2016)	1.9	2.1
European Commission (May 2016)[2]	2.1	2.2
IMF (April 2016)[2]	2.0	2.1
OECD (June 2016)[2]	1.9	2.1

[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] For 2016 values may change depending on the use of the Country Protection Fund while for 2017 the calculation was made assuming the cancellation of the Country Protection Fund.
Source: Consensus Economics, European Commission, IMF, OECD, Reuters poll

2. EFFECTS OF ALTERNATIVE SCENARIOS ON OUR FORECAST

In addition to the baseline projection in the June *Inflation Report*, the Monetary Council also considered four alternative scenarios. A looser-than-expected external monetary policy environment and more subdued growth in Hungary's export markets and the emerging market economies imply a lower path for inflation than the baseline projection, while faster wage growth and more dynamic expansion in consumption as well as the occurrence of financial market turbulences indicate a higher inflation path than in the baseline scenario. A looser-than-expected external monetary policy environment does not significantly influence domestic economic growth. In the case of more subdued growth in Hungary's export markets and the emerging market economies as well as in the case of financial market turbulences, growth will be lower than projected in the baseline scenario, while faster wage growth and more dynamic expansion in consumption imply stronger domestic economic growth than in the baseline forecast. In addition to the key risk scenarios, the Monetary Council identified further, less significant uncertainties, including higher oil and commodity prices, downside risk of second-round inflation effects and a lower investment path.

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



Source: MNB

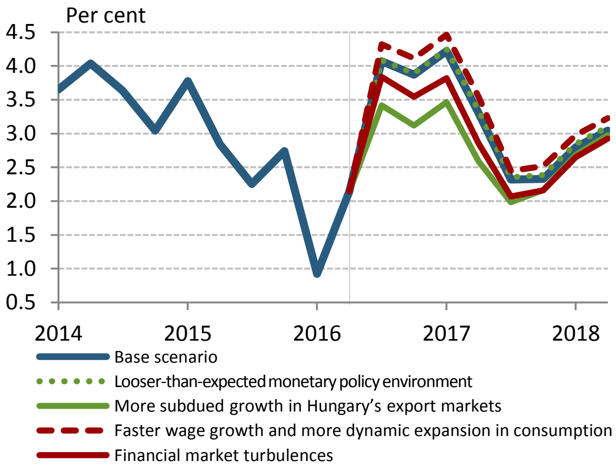
Looser-than-expected external monetary policy environment

The divergence in the monetary policy stances of the world's leading central banks continued in the past quarter. While **the Fed did not change the monetary conditions at its meeting in June**, the **European Central Bank announced a comprehensive easing programme** in March. **In addition, at the April and June meetings it was emphasised that the focus would be on the implementation of the decision regarding unconventional instruments taken at the March meeting.**

If the measures announced at the ECB's rate-setting meeting in March achieve the desired real economy impact more slowly and the ECB takes further measures, it may have a favourable effect on developments in the Hungarian risk premium. The excess liquidity appearing in connection with the ECB's easing programme may generate increasing demand for Hungarian assets due to the increase in the relative yield difference. The major decline in Hungary's short-term external debt observed in the past period, as well as the improving net lending position also helped reduce the risk premium. The decline in risk premium may also lead to a decrease in banks' funding costs. The easing of household and corporate lending conditions may provide further support to economic activity through the pick-up in lending activity.

In this alternative scenario, **the risk premium path is lower** than assumed in the baseline projection, which leads to the easing in lending conditions through decreasing funding costs. All of this **results in lower inflation** (Chart 2-1), and thus **in terms of the monetary policy** the realisation of this risk scenario **points to looser monetary conditions than in the baseline projection**.

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



Source: MNB

More subdued growth in Hungary's export markets

Emerging market economies, which previously exhibited fast growth, have been characterised by decelerating growth dynamics since 2014. At the same time, according to the latest international forecasts, not only emerging countries' growth may be more restrained, but **growth in developed countries may also be slower**.

As a result of more subdued growth in Hungary's export markets and the emerging market economies, demand for Hungarian exports may be more moderate. Weakening demand for exports has an unfavourable impact on domestic economic growth via the expenditure side of GDP (Chart 2-2). The domestic risk premium is not affected by this, as these processes last several quarters rather than appearing as sudden shocks. As a result of the lower growth rate, **achievement of the inflation target is supported by looser monetary conditions than projected in the baseline scenario**.

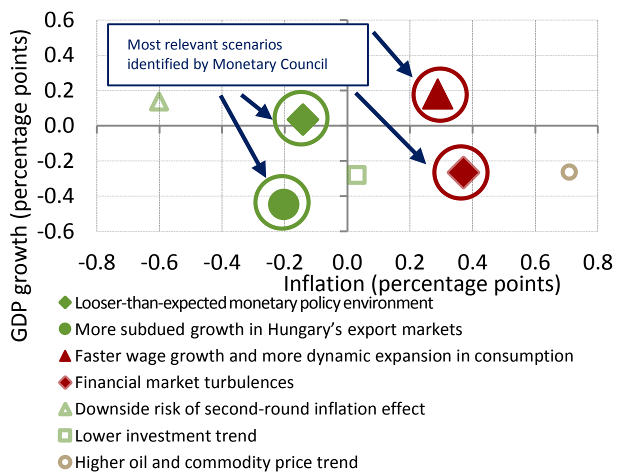
Faster wage growth and more dynamic expansion in consumption

Owing to the adjustment process following the crisis, households' consumption and investment activities declined. At the same time, the key determinants of consumption improved significantly, as a result of which **a gradual increase in consumption has been observed, and thus domestic demand may also increasingly contribute to Hungarian economic growth**. In addition, based on various tightness indicators,[1] **the labour market has become tighter since the beginning of 2013**, which is also corroborated by the labour shortage in some segments. The increase in labour market tightness is reflected by other labour market indicators as well (e.g. increase in the number of overtime hours). **According to the baseline projection**, wage growth in the private sector may increase in 2016, and in parallel with income growth, **consumption may also increase gradually** over the forecast horizon.

The labour market environment, which is tighter than in the previous years**, may force private sector companies to implement higher pay rises.** Companies **may partially pass through these rising wage costs in prices, and thus the tightening of the labour market may be accompanied by higher inflation**. At the same time, the higher nominal wages paid by companies may add to the household sector's consumption expenditures – mainly in the case of

[1] For example, the ratio of the number of available unsubsidised vacancies, which represents the private sector's labour demand to the number of unemployed (as free labour capacity).

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 marker means tighter and the green markers mean looser monetary policy than the baseline forecast.
Source: MNB

those with lower income, due to the higher marginal propensity to consume. The increase in households' disposable income and the sounder balance sheet structure achieved through deleveraging **boost propensity to consume**, which – looking ahead – **may result in a higher consumption path**. Accordingly, **the closing of the output gap may be faster than projected in the baseline scenario.**

Actual wage growth is higher than that assumed in the baseline scenario, resulting in an increase in households' disposable income. Households' improving income position will result in a higher consumption path than projected. **Rising domestic demand entails a more quickly closing output gap and a more moderate disinflationary impact** (Charts 2-1 and 2-2). Overall, **achievement of the inflation target is ensured by a monetary policy that is tighter than projected in the baseline scenario**.

Financial market turbulences

The increasing instability in the financial systems of certain emerging economies in recent year as well as uncertainty about future developments in the relationship between the United Kingdom and the European Union may lead to financial market turbulences. All of this **may result in financial and capital market turbulences** both in emerging and developed economies. The United Kingdom will decide in a referendum on the question of exiting from the European Union. There is considerable uncertainty about the outcome of this vote.

In terms of the functioning of financial markets and the risk appetite of international investors, it is of key importance that the general increase in distrust may result in increasing volatility in regional financial instruments, and may entail further unfavourable economic consequences through a rise in the risk premium. A rise in risk indices may result in an increase in the Hungarian yield level and the credit risk premium. **As a result of mounting inflationary pressure, achievement of the inflation target is ensured by a tighter monetary policy. Rising financial market fears result in unfavourable economic impacts, which may reduce growth prospects over the entire forecast horizon.**

Other risks

In addition to the key risk scenarios, the Monetary Council identified other modest uncertainties. Higher oil and commodity prices result in higher inflation and lower growth. In the case of downside risks of second-round inflation effects, inflation will be lower than in the baseline scenario. The slower drawdown of EU funds than assumed in the baseline scenario points to lower growth.

3. MACROECONOMIC OVERVIEW

3.1. International environment

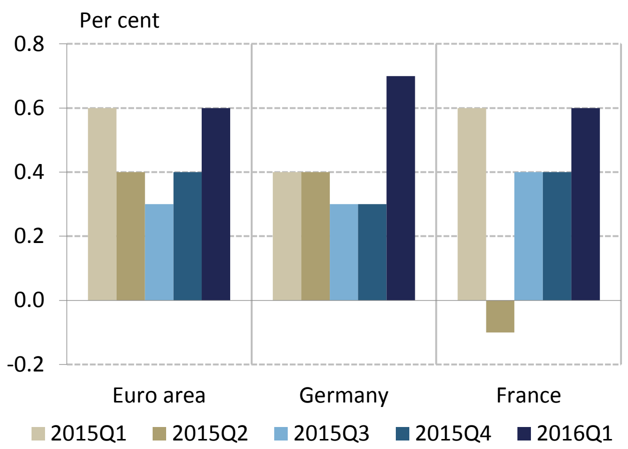
Global economic growth slowed in 2016 Q1 and remains fragile. Considerable growth disparities continue to exist across regions. The slow recovery from the crisis continued in the developed countries, but the rate of growth slightly declined. Growth conditions deteriorated somewhat in the emerging regions as well. Inflation rates remained moderate. Monetary conditions in the case of the world's leading central banks are still very accommodative.

Table 3-1: GDP growth in main economies

	Q2-2015	Q3-2015	Q4-2015	Q1-2016
Japan	0.7	1.8	0.8	0.0
United Kingdom	2.4	2.2	2.1	2.0
United States	2.7	2.1	2.0	2.0
Euro area	1.6	1.6	1.7	1.7
China	7.0	6.9	6.8	6.7

Note: Annual change, per cent.
Source: OECD

Chart 3-1: Quarterly GDP growth in euro area



Note: Seasonally adjusted series.
Source: OECD

3.1.1. Developments in global economic activity

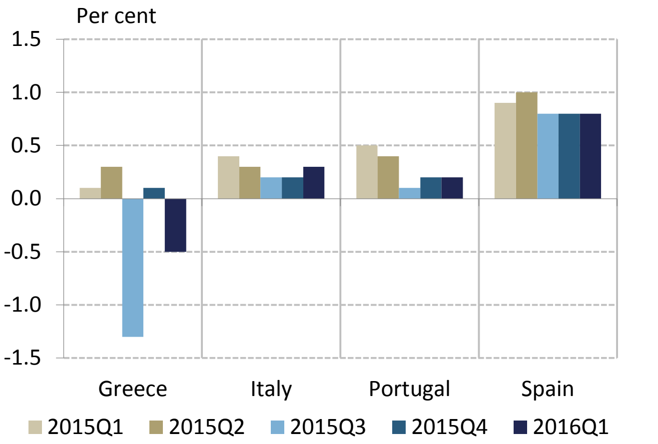
In a historical comparison, global economic growth was subdued in 2016 Q1, and considerable growth disparities continue to exist across regions. In 2016 Q1, euro-area economic growth somewhat exceeded analysts' expectations, while year-on-year growth in the United States did not change compared to the previous quarter. Emerging economies, which had been the driving force behind growth in the past years, continued to slow further, and downside risks in relation to the growth path strengthened. On the whole, the global growth situation deteriorated slightly compared to the previous quarter, while regional disparities persist (Table 3-1).

In the first quarter, euro-area growth accelerated compared to the previous quarter (Chart 3-1). Growth in Germany, which is Hungary's most important trading partner, amounted to 0.7 per cent compared to the previous quarter. In parallel with an upswing in domestic consumption and investment, subdued performance in industrial production and exports were observed in Germany in the first three months of the year. On a quarterly basis, France and Spain recorded higher-than-expected growth of 0.6 and 0.8 per cent, respectively, while overall economic expansion in the periphery countries remained subdued (Chart 3-2). Despite low world oil prices and the ECB's expanded asset purchase programme, the pick-up in euro-area domestic demand is still moderate.

Forward-looking indicators of economic activity have improved slightly in the past months and point to moderate growth (Chart 3-3). Following the decline observed at the beginning of the year, both the business confidence index capturing the euro-area outlook (EABCI) and expectations for the German economy (Ifo) have improved slightly in the past months. In the case of Germany, industrial production was subdued again in recent months, following a substantial rise in January. At the same time, the export performance improved somewhat following the fall at the end of last year.

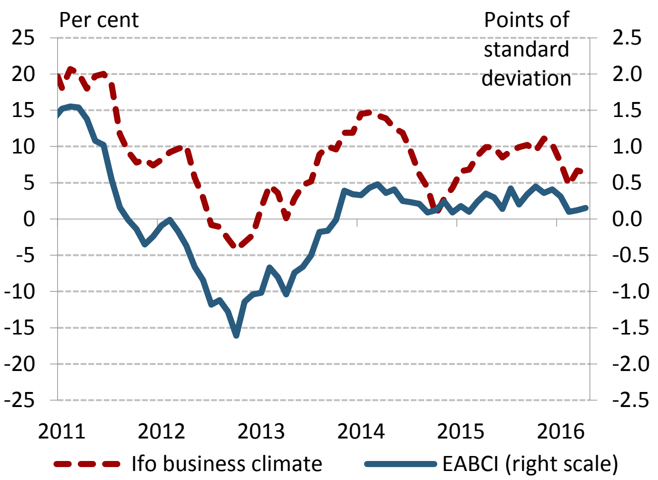
Average growth in the Central and Eastern European region was more restrained than in the previous quarter, but the overall performance of the region continues to be

Chart 3-2: Quarterly GDP growth in the euro area periphery



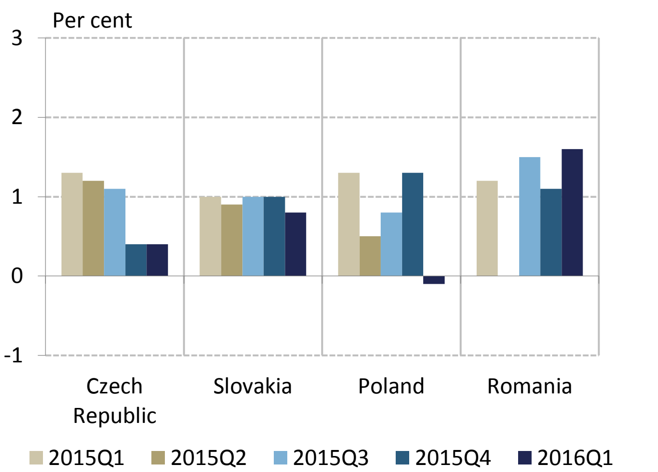
Note: Seasonally adjusted series.
Source: OECD

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



Source: European Commission, Ifo

Chart 3-4: Quarterly GDP growth in CEE countries



Note: Seasonally adjusted series.
Source: Eurostat, OECD

favourable in Europe (Chart 3-4). In Poland, the economy shrank by 0.1 per cent compared to the previous quarter, but expanded by 2.5 per cent compared to the same period of the previous year. Economic growth decelerated slightly in Slovakia, and accelerated significantly in Romania in Q1. In the Czech Republic, gross value added increased by 0.4 per cent compared to the previous quarter and by 3.1 per cent compared to the same period of the previous year.

Based on the quarterly dynamics, further deceleration of economic growth was observed in the United States in 2016 Q1. The lower growth rate was primarily attributable to household consumption, which was weaker than in the previous quarter, and to the further decline in investment and exports. Moderate oil prices continue to have a dual impact on the US economy: on the one hand, they restrain the investment dynamics of the energy sector; on the other hand, they add to households' disposable income.

In 2016 Q1, 2.0 per cent year-on-year growth was observed in the United Kingdom, while compared to the previous quarter the economy expanded by 0.4 per cent. Growth was strongly supported by recovering domestic demand in Q1, while exports and business investment declined; the latter was mainly due to the uncertainty related to EU membership. Following the continuous decrease observed in the past years, the unemployment rate stabilised at around 5 per cent in the previous quarter.

Exceeding analysts' expectations, the Japanese economy expanded by 0.4 per cent compared to the previous quarter, but was stagnant in Q1 compared to the same period of the previous year. Household consumption, government expenditures and a pick-up in exports were the main contributors to the expansion.

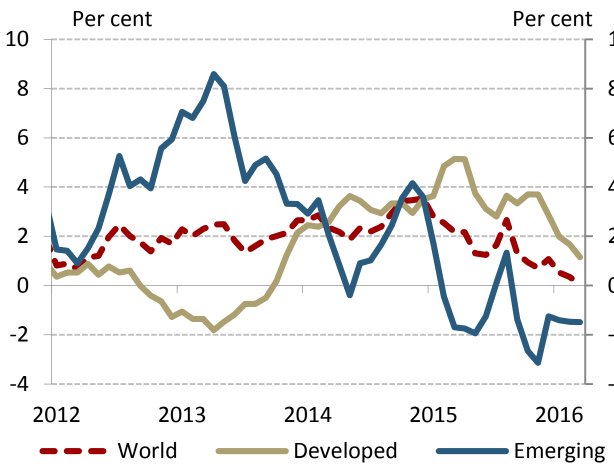
Looking at the main emerging countries, economic growth in China continued to decelerate in 2016 Q1, it expanded by 6.7 per cent year-on-year, and by 1.1 per cent compared to the previous quarter. The recorded growth rate was below analysts' expectations (1.5 per cent), and marked another historical low. Growth in the financial sector slowed further, but the increase in retail sales and industrial production exceeded expectations in March, and exports also picked up considerably. However, in April and May export declined and domestic consumption was below expectations. In some analysts' opinion, the fiscal and monetary stimulus have stabilised the economy, and thus they consider the 6.5–7 per cent growth rate determined by the government achievable. Analysts expect 6.5 and 6.3 per cent growth rates for 2016 and 2017, respectively (Table 3-2).

Table 3-2: Growth forecast in BRICS

	2015	2016	2017
Brazil	-3.8	-3.7	0.7
Russia	-3.7	-1.2	1.0
India	7.5	7.6	7.7
China	6.9	6.5	6.3
South-Africa	1.3	0.9	1.7

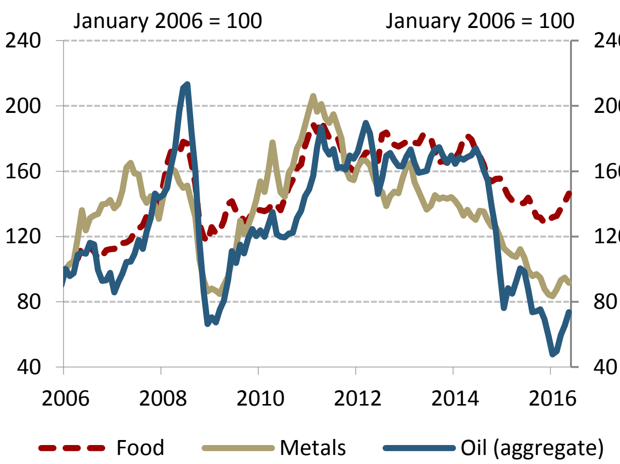
Note: Annual change, per cent.
Source: Consensus Economics

Chart 3-5: Changes in imports in some regions



Note: Annual change of 3-month moving average.
Source: Centraal Planbureau

Chart 3-6: Major commodity price indices



Note: Calculated from prices in USD.
Source: IMF

Economic growth is expected to be subdued in other emerging economies as well. Accordingly, their moderate import demand will result in a slowdown in world trade. Low commodity prices, slackening investment, high USD-denominated debt and uncertainty in domestic politics have unfavourable impacts on the Brazilian economy. Consequently, analysts forecast economic contraction of more than 3.5 per cent this year and a slight growth next year. In India, economic growth is expected to remain above 7 per cent, but the risks to growth are mainly on the downside. In South Africa, analysts' expectations were lowered for both this year and next year. **Regarding Hungary's main emerging export markets, analysts continue to expect a downturn in the Russian economy this year**, mainly due to the still moderate oil prices, economic sanctions and geopolitical tensions (Table 3-2).

In terms of the development of exports, a further decline was observed in both the developed and emerging regions in the past months (Chart 3-5).

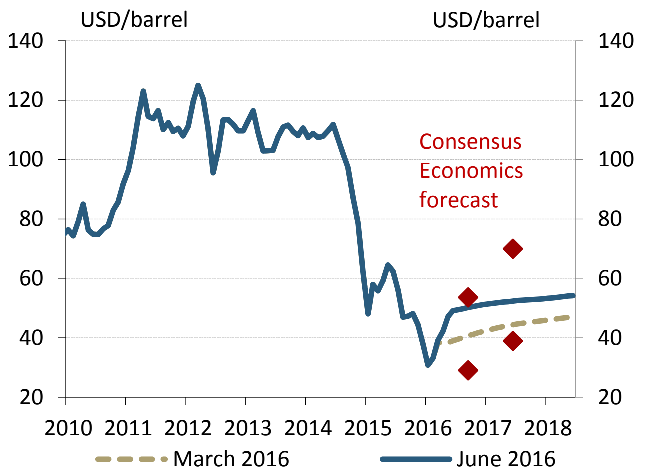
3.1.2. Global inflation trends

A major correction in commodity prices was observed in 2016 Q1 and in April (Charts 3-6 and 3-7). After bottoming out below USD 30 per barrel at end-January, the average world market prices of Brent and WTI crude has risen considerably in the past months, with the prices of both types stabilising at levels around USD 45–50. Improving financial market sentiment and news related to limitations on production quantities both contributed to this increase in oil prices. In addition, price increases were also attributable to the gradual decline in US crude oil reserves, the decrease in oil production in the USA and unexpected production losses in some petroleum exporting countries (Canada, Nigeria and Venezuela).

World market prices of metals and agricultural commodities also rose considerably in the past period. The increase in agricultural commodity prices was primarily due to the decline in supply due to unfavourable weather conditions, while metal price rise was explained by an increase in demand and slightly lower supply.

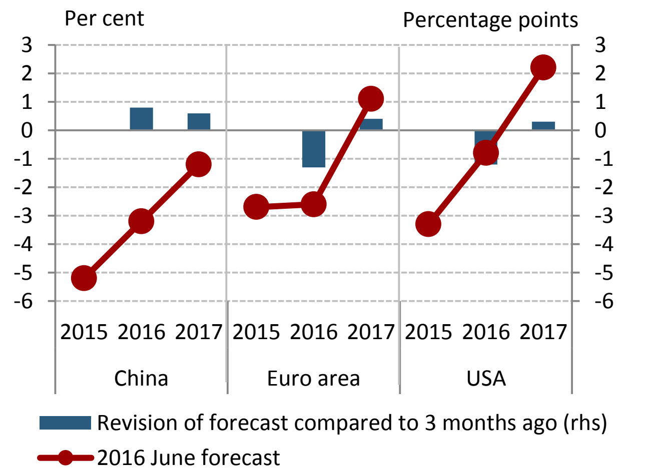
As both commodity prices and demand remain subdued, global producer price developments are restrained. Projections for this year also indicate low producer prices (Chart 3-8). The decline in producer prices decelerated in China in the past months, with the producer price index at -3.4 per cent in April. Producer prices continued to decline in the euro area, and analysts' expectations indicate a

Chart 3-7: Change in oil price assumptions



Note: The chart shows the maximum and minimum of the individual forecasts in the Consensus Economics poll.
Source: Bloomberg, Consensus Economics

Chart 3-8: Development of producer prices



Note: Annual change.
Source: Consensus Economics

negative value for 2016 as a whole. The producer price index was around 0 per cent in the United States in Q1.

The rate of increase in consumer prices remained below the central bank targets in most developed countries (Chart 3-9), and in many cases central bank forecasts project the rate to remain below target for a prolonged period. Average inflation in the emerging countries remains low. Developed countries are still generally characterised by negative output gaps and moderate demand-side inflationary pressure. **In the United States, the annual consumer price index increased considerably in January, before reaching 1.1 per cent in April, following declines in February and March.** The price index for personal consumption expenditure (PCE) – a measure relevant in terms of monetary policy – showed similar dynamics in Q1. **In the euro area, after reaching 0.3 per cent in January, the annual consumer price index sank into negative territory in February and then in April again, while core inflation also declined slightly.** Among the developed countries, a gradual increase was observed in the annual consumer price index in the United Kingdom in Q1. Inflation declined further in Japan in Q1.

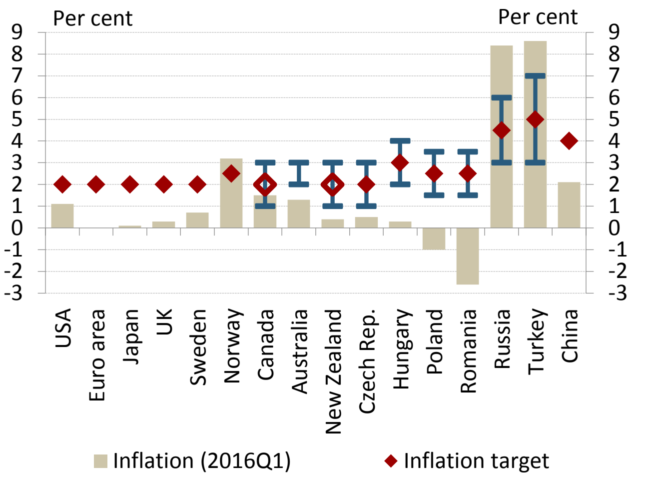
Inflation remained low and was below central bank target levels in the Central and Eastern European region (Chart 3-10). **Average inflation is still in the negative domain across the region.** The growth rate of prices continues to be low in Poland. Domestic demand is rising at a moderate rate, and according to the Polish central bank's estimate the output gap remains negative. Inflation in Slovakia has also been in negative territory for more than a year, reaching -0.8 per cent in May. Inflation rose in the Czech Republic in Q1. Partly as a result of the VAT cut in January 2016, inflation remained negative (-3.5 per cent in May) in Romania, and is expected to rise to the tolerance band around the inflation target only with the end of the temporary disinflationary effect of the VAT cut in early 2017.

Inflation in China increased to 2.3 per cent in Q1. Inflation **in Russia** slowed considerably from the 12.9 per cent rate observed at the end of last year, as the consumer price index fell to 7.3 per cent in March.

3.1.3. Monetary policy and financial market developments

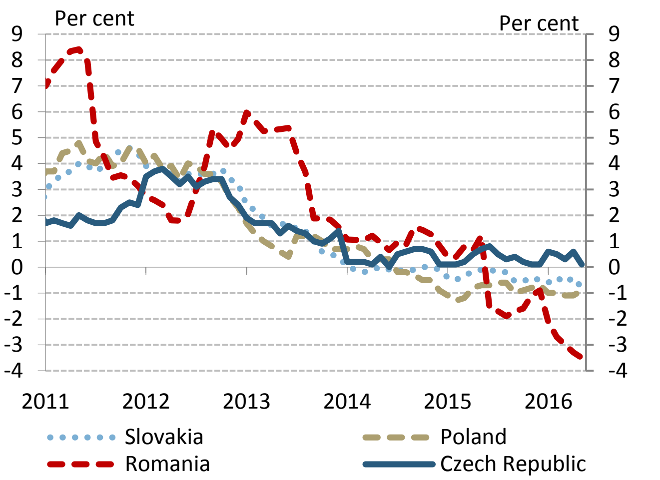
The central banks which are monitored have not changed their monetary policy strategies in recent months. Achieving and maintaining price stability remain the primary goal of the central banks of global importance, while divergence in terms of monetary conditions increased gradually. **Most countries still do not exhibit any inflation or capacity utilisation trends pointing to monetary**

Chart 3-9: Inflation targets of central banks and actual inflation



Note: The blue lines represent the inflation target ranges in Australia, Canada and New Zealand, while in other countries they mark the permissible fluctuation band. In Canada and New Zealand, the mid-point of the target band is the focus, which is marked by an empty diamond.
Source: Databases of central banks, OECD

Chart 3-10: Inflation in CEE countries



Note: Annual change.
Source: OECD, National Institute of Statistics of Romania

tightening in the short run, and real interest rates continue to be negative in developed economies (Chart 3-11). The Fed did not change its interest rate conditions in June 2016. The rest of the central banks which are monitored continued to reduce or did not change the base rate in the past months.

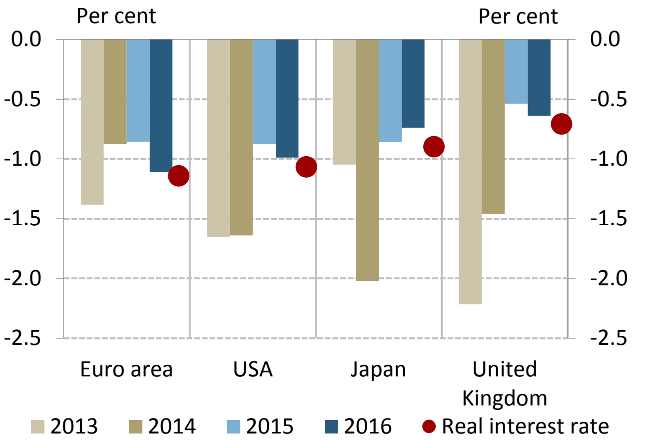
At the meeting in June, the Committee of the Federal Reserve decided to maintain the federal funds rate. According to the decision and the communication of the Fed, the number of members who expect only one interest rate hike this year have increased. The Statement gives a mixed picture about the economy: while economic activity picks up, the improvement on the labour market have slowed. Members of the FOMC continue to assess, that economic processes will warrant only gradual increases in the federal funds rate.

At its meeting in March, the Governing Council of the ECB decided on a comprehensive easing programme. Following that, at the press conference after the April meeting, ECB President Mario Draghi indicated that the interest rates may remain at the current low level or – if necessary – may even be reduced, well beyond the period of the asset purchase programme as well. The March decision, the Corporate Securities Purchase Programme detailed in April as well as the announcement of the targeted longer-term refinancing operation (TLTRO II) starting in June indicate that the ECB will pay greater attention to further improving the efficiency of the lending channel. At its June meeting, the Governing Council decided not to change the monetary conditions, and in June the ECB started its Corporate Securities Purchase Programme announced in March.

Overall, the USD has depreciated against the euro since the beginning of the year. In spite of the ECB's monetary easing measures in March, the euro appreciated against the USD in the first half of Q2. Following that, as a result of the communication of the Fed's decision-makers concerning the possibility of an interest rate increase in June, the exchange rate of the USD first strengthened, then after unfavourable labour market data, the exchange rate of the dollar weakened in parallel with interest rate expectations shifting to a later date (Chart 3-12).

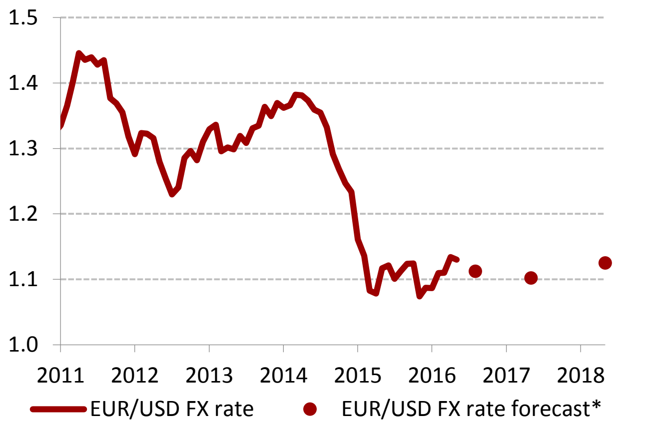
The Bank of Japan did not change its interest rate conditions in Q1, and at the same time it continued its Quantitative and Qualitative Easing Programme at an unchanged pace. In March, the central bank specified the operational scope of the programme and signalled that the interest rate payable on newly placed excess reserves may be decreased further if necessary. **For the time being, the**

Chart 3-11: Real interest rates in developed economies



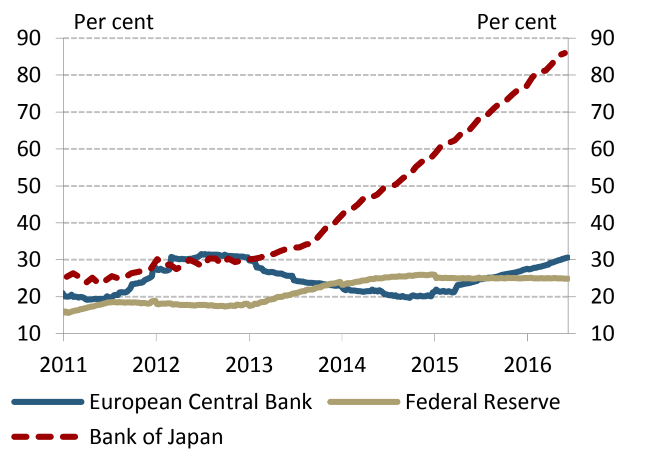
Note: The real interest rate is an annual average. The one-year ex ante real interest rates are calculated as difference of one-year bond yields and market actors' one-year inflation expectations.
Source: Consensus Economics, Bloomberg

Chart 3-12: Changes in the EUR/USD exchange rate



Note: * May 2016 Consensus poll. Higher values mean euro appreciation.
Source: ECB, Consensus Economics

Chart 3-13: Central bank balance sheet totals in developed countries (as a percentage of GDP)



Source: Databases of central banks, IMF, Eurostat

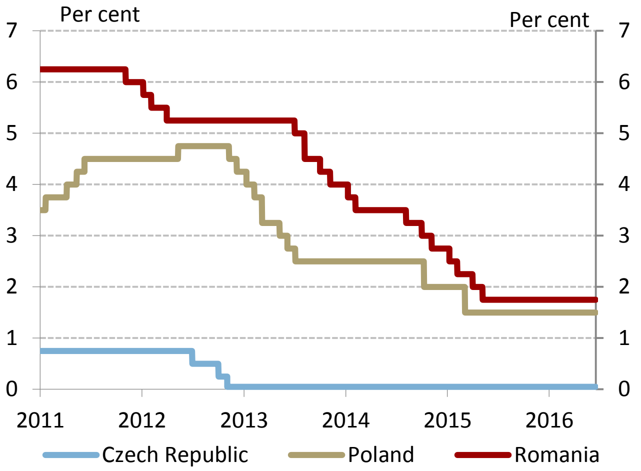
Bank of England has not started to gradually raise the base rate, but decision-makers consider it more likely than not that an interest rate increase may take place in the forecast period. The central bank has also not amended the amount available for the asset purchases.

Looking at the central banks in the emerging countries, the People's Bank of China reduced the minimum reserve requirement by 50 basis points to 17 per cent at the end of February. According to the central bank, reducing the reserve ratio helps to ensure adequate liquidity and an adequate increase in credit supply, and fosters the financial circumstances necessary for structural reforms. In addition, the central bank also continued its other, liquidity providing measures in the past months. **The Russian central bank reduced its key policy rate by 50 basis points to 10.5 per cent in June**, as inflation and inflation risks eased.

Central banks in the Central and Eastern European region maintained loose monetary conditions (Chart 3-14). Policymakers at the **Czech central bank** kept the key policy rate at 0.05 per cent and maintained their commitment to the continued use of the koruna exchange rate as a monetary policy instrument, which they will not abandon – according to the central bank's latest guidance – before 2017. Accordingly, the exchange rate cap may be cancelled in mid-2017. The **Polish central bank** has left the key policy rate unchanged in recent months. Decision-makers suggest that the inflation will remain negative in the coming quarters, while stable economic growth will also be supported by a pick-up in consumer demand. According to the latest press release, the present level of the base rate ensures sustainable growth and macroeconomic stability. The **Romanian central bank** also did not reduce the base rate further in the past months and did not change the minimum reserve ratio for RON or FX funds.

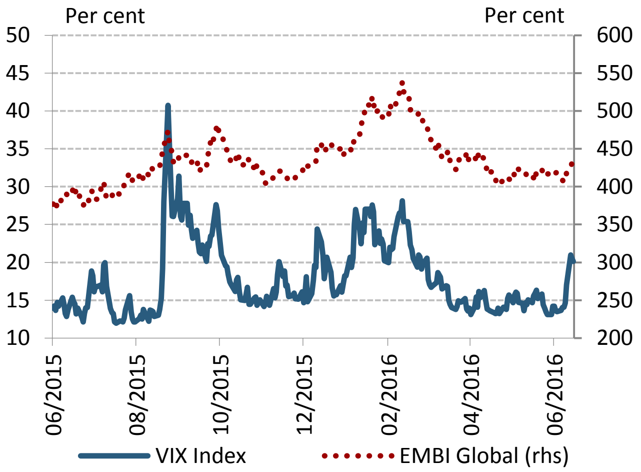
The first half of the past period was characterised by slightly strengthening risk aversion, followed by a gradual improvement in investor sentiment from mid-April. However, from June investor sentiment worsened again as concerns about the British referendum intensified (Chart 3-15). Risk indicators for developed stock market volatility fluctuated at a relatively low level during the period, in line with the increase in the main developed stock market indices, which may also have been related to the stabilisation and increase in oil prices. However, from June stock market volatility increased, and developed stock market indices fell. Overall, emerging stock markets fell, due to the deterioration in global investor sentiment at the end of the period.

Chart 3-14: Central bank rates in other CEE economies



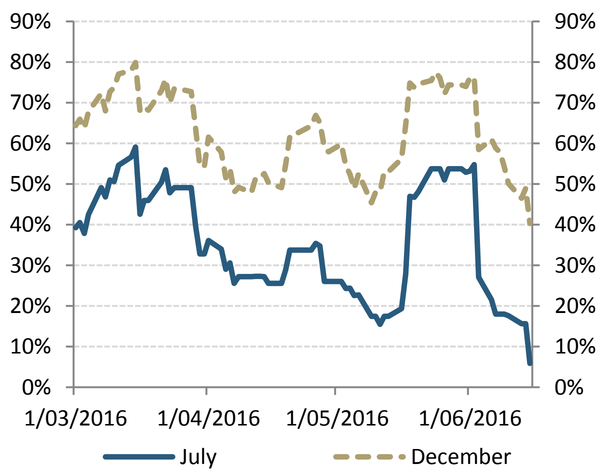
Source: Databases of central banks

Chart 3-15: Risk indicator developments



Source: Bloomberg

Chart 3-16: Cumulated probability of interest rate increase expectations in the USA according to market pricing



Note: Between March and middle of June 2016.
Source: Bloomberg

Risk indicators for developed and developing bond markets fell, after increasing at the start of the period. However, at the end of the period risk indicators increased again. In parallel with this, developed bond yields – which can be considered as safe haven assets – decreased significantly, and the 10-year German bond yield dropped to a historical low level, falling into the negative domain. Leading central banks' monetary policies continued to be at the centre of market interest: the fact that the easing expected from the Bank of Japan did not take place resulted in a 4–5 per cent fall in the Japanese stock exchange and temporary appreciation of the yen. In the USA, after the strengthening and then unfavourable labour market data, expectations concerning an interest rate increase decreased, which led to a depreciation of the US dollar against the major currencies, although there was a correction at the end of the period.

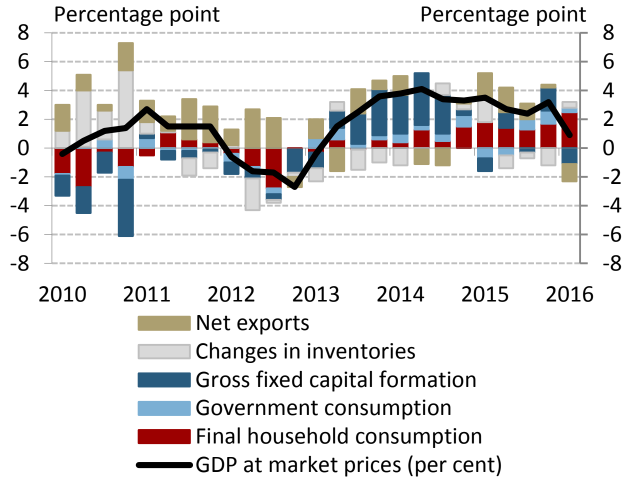
International market sentiment was also affected by the news related to Brexit (Great Britain's possible exit from the EU): preliminary opinion polls from the middle of the period suggested that the ratio of those voting for staying may slightly exceed the ratio of those voting for exit, but at the end of the period the polls showed the opposite result. This underlined market sentiment and increased the volatility of the British pound and exchange rates in emerging economies, and led to appreciation of the Swiss franc and Japanese yen, which can be considered safe haven assets.

The change in expectations concerning a US interest rate increase had a moderate impact on investor sentiment. In March and April, the prospect of a possible rate hike in the summer was still declining gradually, and market participants expected the Fed to increase the interest rate in December at the earliest. By contrast, this picture was fundamentally changed by the Minutes of the Federal Reserve's April meeting published some weeks later as well as the May statements of the Fed's decision-makers, and the chances of a next rate hike in the summer months increased considerably. At the end of the period, following the release of the labour market data in early June, market expectations of the US rate increase shifted to the end of the year again (Chart 3-16). However, the increase and later the decrease of expectations concerning the US rate hike had a moderate impact on general risk appetite.

3.2. Aggregate demand

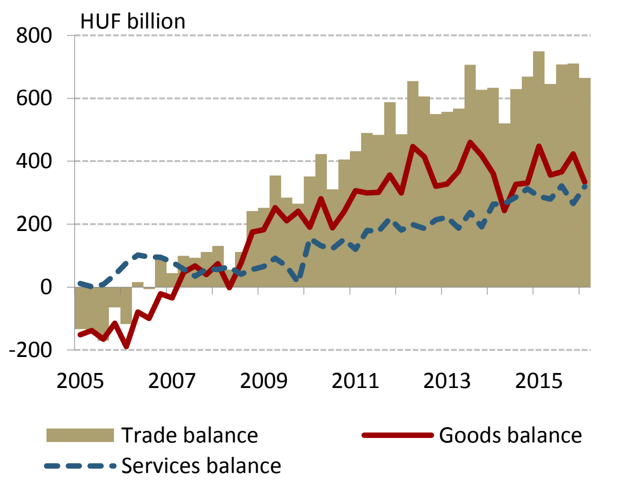
In 2016 Q1, the Hungarian economy grew by 0.9 per cent year on year. On quarterly basis, GDP declined by 0.8 per cent. The moderate growth, which was lower than in the previous quarters, is attributable to strong one-off effects. However, consumption expenditures (private and public expenditure) increased markedly, supporting economic growth. Net exports made a negative contribution to growth.

Chart 3-17: Contribution to annual GDP growth



Source: HCSO

Chart 3-18: External trade in goods



Note: Seasonally adjusted data, in 2005 price.
Source: HCSO

In early 2016, the Hungarian economy recorded 0.9 per cent growth compared to the same period of the previous year. This moderate growth rate was attributable to strong temporary one-off effects, and the subdued economic performance was mainly caused by the weak performance of industry and construction. Domestic demand was driven by consumption, while the contribution of net exports to growth was negative (Chart 3-17). Compared to 2015 Q4, GDP declined by 0.8 per cent.

3.2.1. External trade

Net exports made a negative contribution to growth in Q1. In line with the slowdown in industrial production, goods exports declined compared to the previous quarter, and thus a substantial deceleration in export growth was observed. The slowdown in industrial production was primarily related to lower production at one of the major car factories. The subdued import growth was attributable to the decline in private investment as well as the slowdown in reexport at the beginning of the year, while on the other hand the rapidly expanding demand for consumer loans – and within this import-intensive durable goods purchases – offset these negative effects (Chart 3-18).

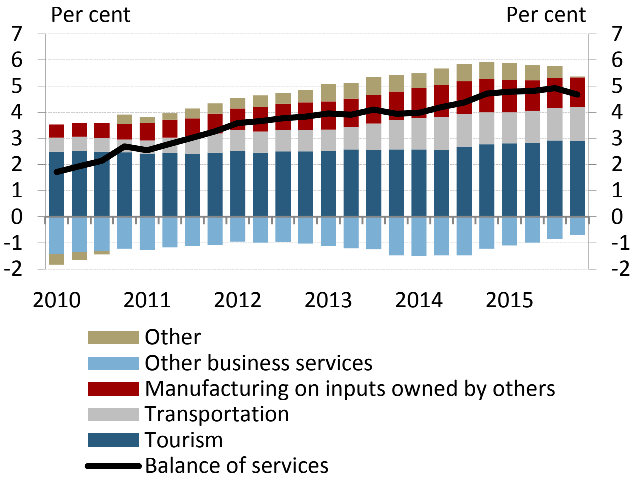
The development of Hungary's trade surplus was driven by the reduction in the goods balance and the increase in the services balance. The slower growth rate of exports of machinery and transport equipment was the main contributing factor behind the decline in the balance of goods. The services surplus is mainly attributable to tourism and transportation services, but computer technology and information services also contributed to the increase in the services surplus (Chart 3-19).

In the first quarter of 2016, the year-on-year improvement in the terms of trade continued, primarily reflecting the positive contribution of low oil prices as well as trade in other products.

3.2.2. Household consumption

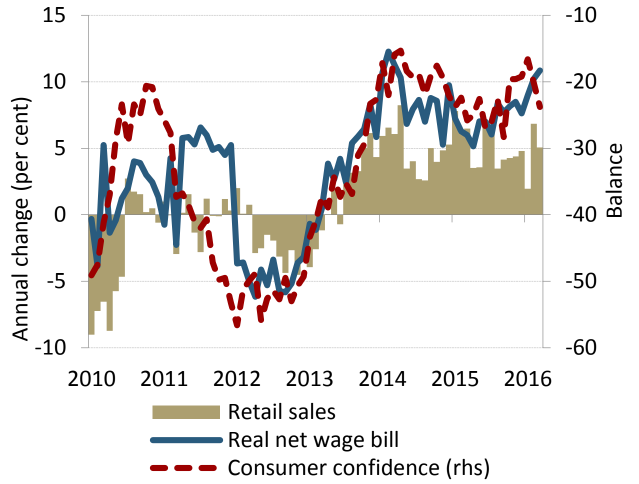
In early 2016, household consumption expenditures continued to increase. The dynamic rise in consumption was mainly supported by improving labour market developments and increasing real wages in a low inflation environment. Household demand for durable goods and services expanded significantly. In Q1, the volume of retail sales rose

Chart 3-19: Key items of the balance of services



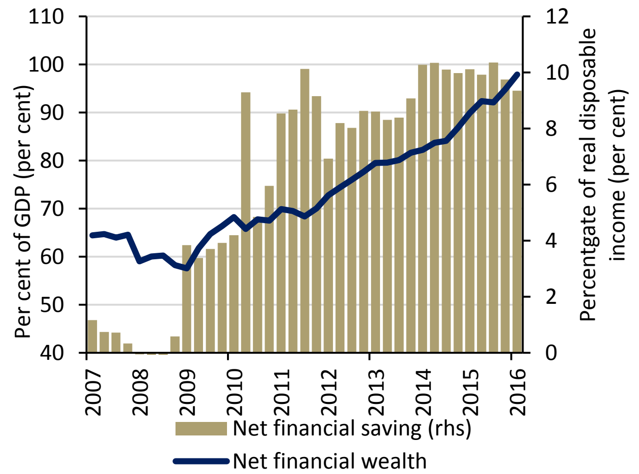
Note: Four-quarter values as a percentage of GDP.
Source: MNB

Chart 3-20: Developments in retail sales, income and the consumer confidence index



Source: ESI, HCSO

Chart 3-21: Savings and assets of households



Source: MNB calculation

by 4.6 per cent year on year (Chart 3-20). Data from the beginning of the year show that the rapid growth seen last year is continuing. The rise in propensity to consume is also corroborated by the sharp decrease in household savings at the beginning of the year.

Households' net financial wealth continued to increase in the first months of the current year, but the growth rate of financial wealth declined compared to previous quarters. In line with the gradual transformation of households' consumption and saving decisions, and in parallel with the rapidly expanding consumption path, the saving rate declined compared to the average for 2015, but remained at a historically high level (Chart 3-21).

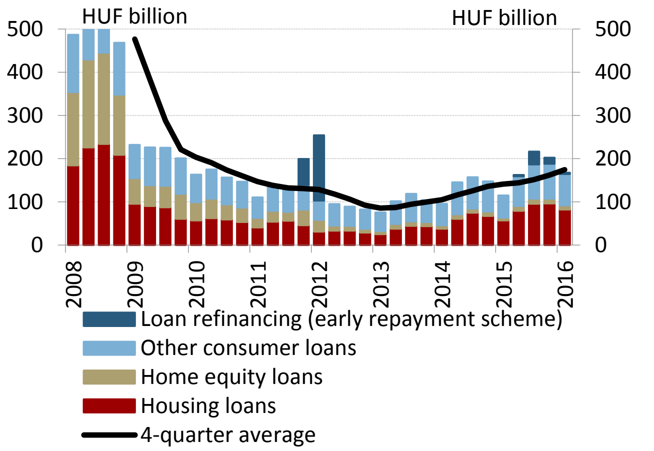
The volume of new loans continued to expand in parallel with an increase in household credit demand. In 2016 Q1, outstanding household loans of the financial intermediary system declined by HUF 58 billion, affecting both the housing loan and other consumer credit portfolios. The volume of new lending, however, was characterised by an ongoing upturn: the annual average increase in credit institutions' new household loans amounted to 24 per cent (Chart 3-22). Contract values increased to the greatest extent in the housing segment in the period under review, rising by an annual average of some 36 per cent. The pick-up in housing loans continues to be primarily attributable to the expansion in demand, while supply conditions were typically unchanged in the period under review. Of the factors supporting demand, previously postponed home purchases and renovations played the primary role, supported by real wage increases and favourable financing costs. Looking ahead, the preferential loans accessible within the framework of the family home creation programme are expected to significantly stimulate households' loan demand.

3.2.3. Private investment

In 2016 Q1, whole-economy investment declined by 9.6 per cent year on year. The slowdown was primarily attributable to the fall in government investment financed from EU funds at the beginning of the year. In parallel with that, the investment of the quasi-fiscal sector strongly affected by the drawdown of EU funds (transportation and warehousing, water supply) also declined considerably. Similarly to the previous quarters, corporate investment activity continued to be restrained, while household investment was stagnant compared to the same period of the previous year (Chart 3-23).

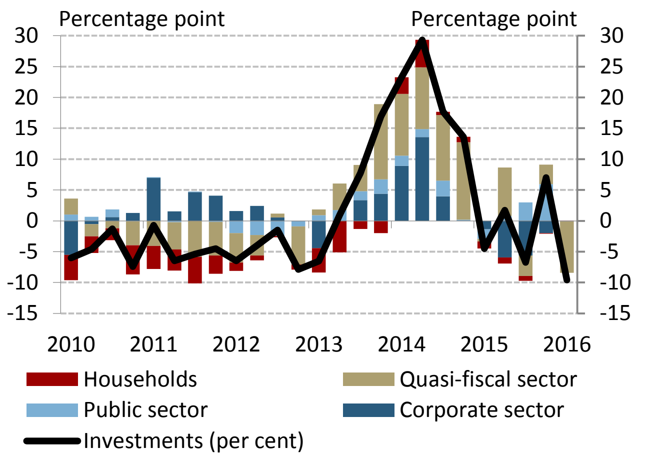
The **moderate corporate investment activity** is mainly attributable to the weakening activity of companies that

Chart 3-22: New household loans in the credit institution sector



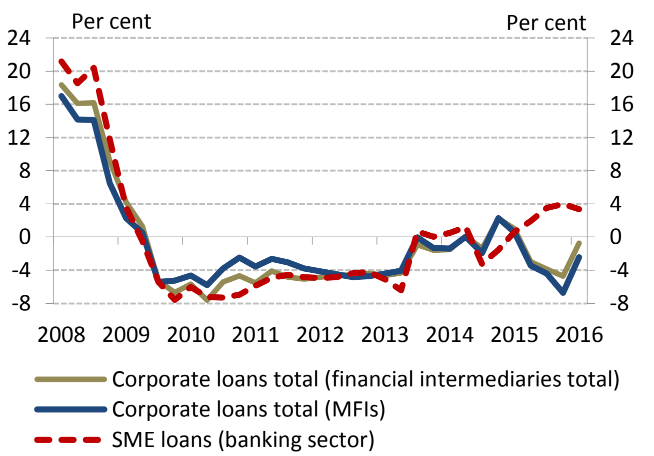
Source: MNB

Chart 3-23: Contribution of key sectors to annual change in national investments



Source: HCSO

Chart 3-24: Annual growth rate of lending to non-financial corporates and SMEs



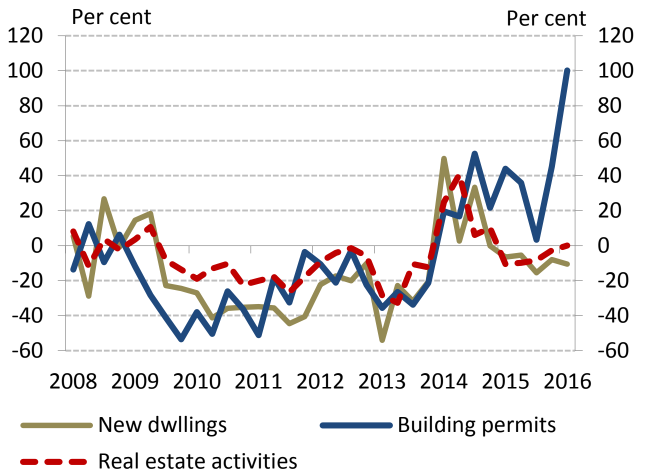
Note: Data for corporate loans total are based on transactions. For SME loans, estimated transaction are applied as of Q4 2013.
Source: MNB

produce for the external markets. By contrast, the investment activity of sectors producing for the domestic market (mainly service providers) increased. In the case of agricultural sector investment, the decline is caused by the high base created by the investment related to the Funding for Growth Scheme (FGS) implemented in the previous years. Demand conditions continue to support expansion investments. Although the banking sector's willingness to lend improved compared to the previous quarters, based on the Financial Conditions Index (FCI) calculated by the MNB, its contribution to the growth rate of investment continues to be negative on the whole.

In the first quarter, outstanding SME loans increased significantly compared to previous year. In 2016 Q1, non-financial corporations' outstanding loans vis-à-vis the domestic financial intermediary system expanded by some HUF 102 billion in total. Nevertheless, overall corporate lending still declined by a total of 0.7 per cent year on year, mainly due to the effect of one-off large corporate transactions in 2015 (Chart 3-24). As opposed to the decline in total corporate loans, the SME sector's outstanding loans increased by a total 3.4 per cent year on year, with a significant contribution from the Funding for Growth Scheme. From the supply side, the easing of lending conditions also facilitated the rise in outstanding loans. On the demand side, in parallel with the slowdown in the dynamics of whole-economy investment, banks tended to perceive a pick-up in the case of short-term loans. The third phase of the Funding for Growth Scheme was characterised by adjustment to and preparation for the new conditions on both the demand and supply sides. The slower running-in of the programme was also attributable to the fact that now it can only be used for investment financing, which is also characterised by stronger seasonality in general. According to the majority of banks, in the next period the driving force behind the expansion in demand will be the increase in borrowers' investment in tangible assets. Risks associated with investment activity of the economic environment may be further reduced due to the HUF 100 billion increase of the third stage of FGS's framework.

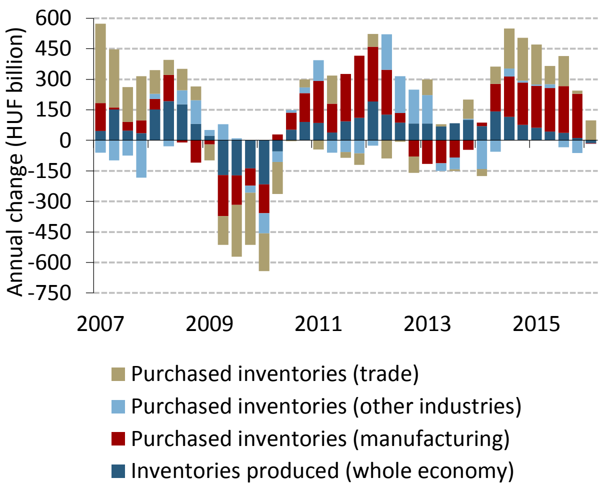
Housing prices are on an upward trend, in line with the pick-up in housing market transaction turnover. Although during last year, as a result of a pick-up in demand, the prices of used and new homes increased by 12 per cent and 7.3 per cent, respectively, they are still below pre-crisis levels. In the first quarter of the year, the number of homes sold was up 3.7 per cent on the same period of the previous year. In early 2016, new home construction was subdued: 1,407 completions were recorded in Q1, down 10 per cent less on

Chart 3-25: Evolution of housing starts, building permits and development of real estate investments



Source: HCSO

Chart 3-26: Changes in inventories



Source: HCSO, MNB

the same period of last year. Although new housing starts declined early in the year, the dynamic growth in the number of building permits issued continued. During this period 4,765 building permits for homes were issued, which is 100.1 per cent more than a year before (Chart 3-25). Based on the processing time for home building permits, the steady rise in the number of building permits issued points to a pick-up in new home construction in the second half of this year and at the beginning of next year.

3.2.4. Government demand

Government consumption increased compared to the low base of the same period in previous year, based mainly on expansion of government wage expenditures. Volume of government's in-kind transfers remained essentially unchanged.

The fall in government investment was mainly related to the decline in the drawing of EU funds. In the government sector in a narrow sense, investment in the public administration, health and education sectors declined, but in the case of other services medical bath renovations and reconstruction works of church buildings added to the investment activity of the state. Investment in the quasi-fiscal sector fell considerably, justified primarily by the moderate performance of the sectors affected by the utilisation of EU funds (transportation and warehousing, water supply) at the beginning of the year (Chart 3-23).

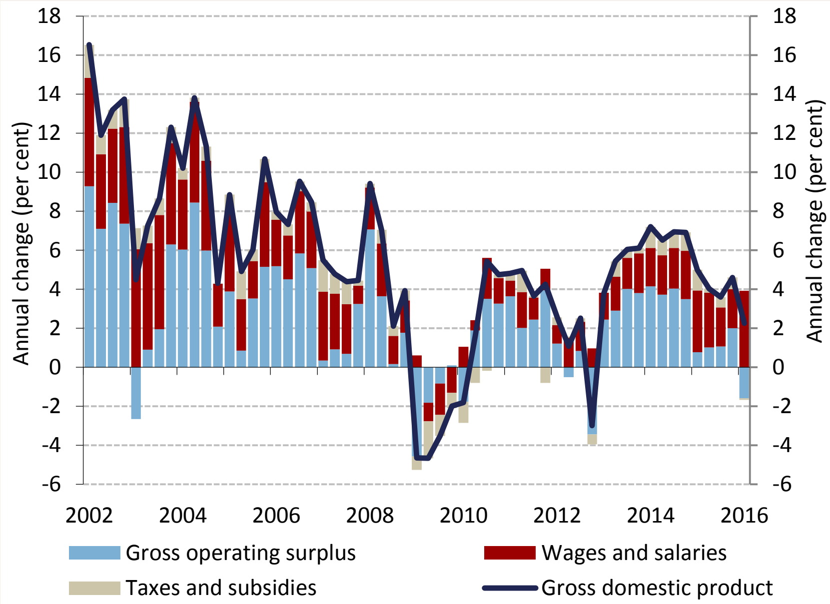
3.2.5. Changes in inventories

In the first quarter of 2016, changes in inventories made a positive contribution to growth. The changes in the volume of inventories were primarily attributable to the increase of the purchased stocks of the commercial sector. The self-produced stocks and purchased inventories of manufacturing sector as well as other economic sectors declined early in the year (Chart 3-26).

Box 3-1: Assessment of income side developments in Hungarian economic growth

The evolution of GDP is most frequently examined from the production and expenditure sides. At the same time income side analysis also provides important information about the growth processes. The decomposition of the changes in GDP from the side of incomes shows the extent to which the factors of production (capital and labour) and the state, through taxes, contributed to economic growth. The HCSO decomposes the value added of individual production side sectors into employee income and operating profit/loss, which allows for the evaluation of **how the changes in GDP affected the income of economic agents** (Chart 3-28).

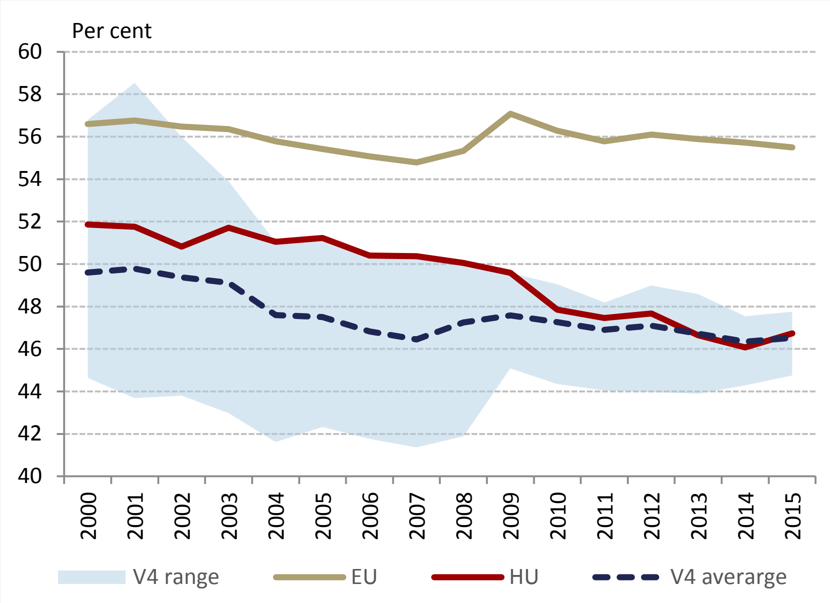
Chart 3-27: Income side decomposition of current-price changes in GDP



Source: HCSO, MNB

In 2013, the share of capital increased markedly, but apart from that, both factors of production contributed to economic growth. **In 2014, the share of labour grew dynamically, in line with the steady improving labour market.** The data suggest that profitability started to improve from 2013 Q1, also entailing strengthening labour demand in the subsequent quarters. By improving the prospects for economic activity, the sustained pick-up in domestic demand resulted in an expansion in the production capacities of the corporate sector. **The improvement in growth prospects was coupled with an increase in the ratio of both capital gains and earned incomes.** In 2014, both gross wages and employment increased significantly, and thus the whole-economy wage bill also grew considerably. On the other hand, by examining the international context of evolution of the wage share of the national economy, we see that after the crisis the Hungarian wage share declined similar to the countries in the region. So in this respect there is space for companies wage increases.

Chart 3-28: Development of wage share in the total economy



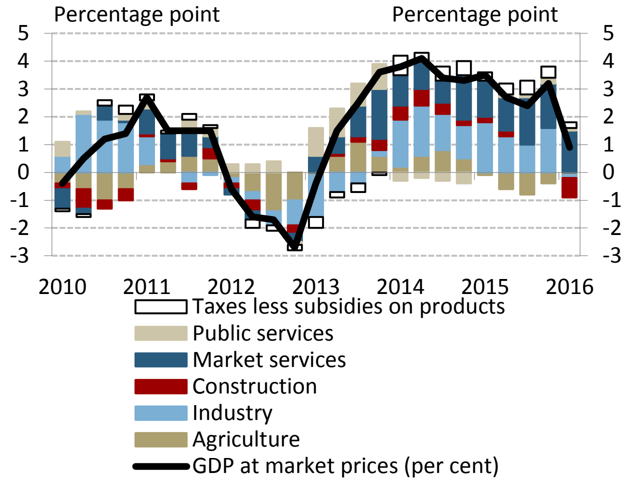
Note: Adjusted wage share. V4 countries: Czech Republic, Hungary, Poland and Slovakia.
Source: Ameco

Based on the income side structure of GDP – similarly to the developments observed on the absorption side – **economic growth has become more balanced in recent years**, and the household, corporate and government sectors have also participated in the additional income produced in the Hungarian economy. The favourable trend is supported by the pick-up in domestic demand, mainly as consumption demand, as well as the capacity expansion of the corporate sector, which – in addition to the improving of profitability – creates additional demand for labour as well. The position of all three income owners has improved recently.

3.3. Level and structure of output

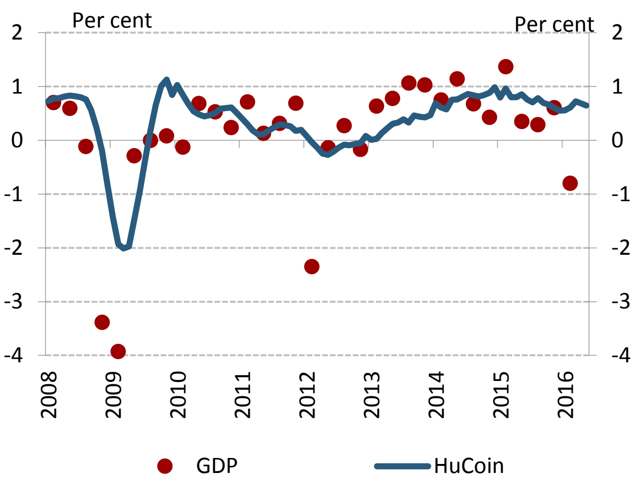
Economic growth decelerated in 2016 Q1, due to temporary effects. The construction output fell in parallel with the declining use of EU funds, along with a slight decline in the performance of the industrial sector, as a result of one-off effects related to vehicle manufacturing. At the start of the year, the slowdown was mitigated by improving performance in the services sector.

Chart 3-29: Output contribution of the main sectors of the national economy to GDP growth



Source: HCSO

Chart 3-30: Evolution of HuCoin indicator



Note: Due to the revision of GDP, the past values of the HuCoin indicator have also changed.
Source: HCSO, MNB calculations

In 2016 Q1, economic growth decelerated compared to the previous quarter, as a result of a temporary slowdown in construction and industry (Chart 3-29). The HuCoin indicator, which captures the underlying trends in economic growth based on a broad range of indicators, remained stable, also indicating that a recovery is expected again, after the temporary effects (Chart 3-30).

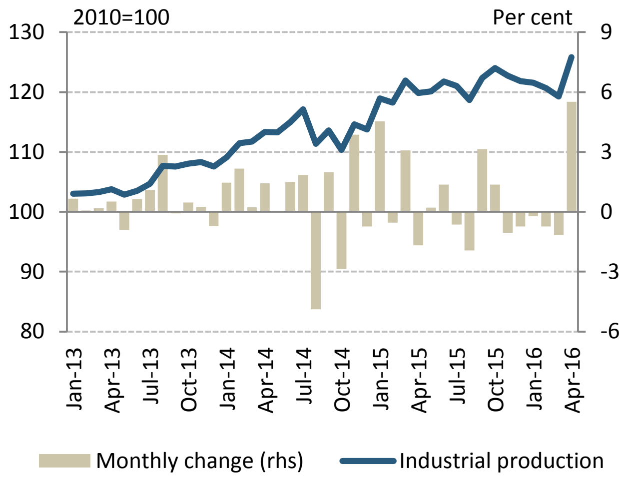
The dynamic growth in industrial production seen in the previous quarters stopped, mostly due to temporary factors. In the first months of the year, production slowed as a result of factory stoppages in the vehicle manufacturing subsector and related supply chain performance. Industrial production in 2016 Q1 was below the level of 2015 Q4 by 2.4 per cent. However, in April industrial output showed a correction following the downturn at the beginning of the year (Chart 3-31). Output increased in most sectors, and there was a significant increase in vehicle manufacturing, which is the most strongly weighted subsector.

Overall, forward-looking short-term indicators point to a rise in industrial production. The ESI index, which captures the prospects of Hungarian industry, and the Ifo indicator, which gauges economic activity in Germany, both improved after falling at the beginning of the year. Domestic manufacturing new export orders rose slightly (Chart 3-32). At the same time, slower German export growth compared to previous periods may remain a risk to Hungarian industrial production prospects, due to the slowdown in global trade and the changing structure of German growth.

Construction output dropped in 2016 Q1, which is attributable to the gradual ending of investment implemented with EU funding. In addition, new housing construction has not yet picked up. Construction contracts increased compared to the low point observed at the middle of last year, but last year's high base has still not been reached (Chart 3-33).

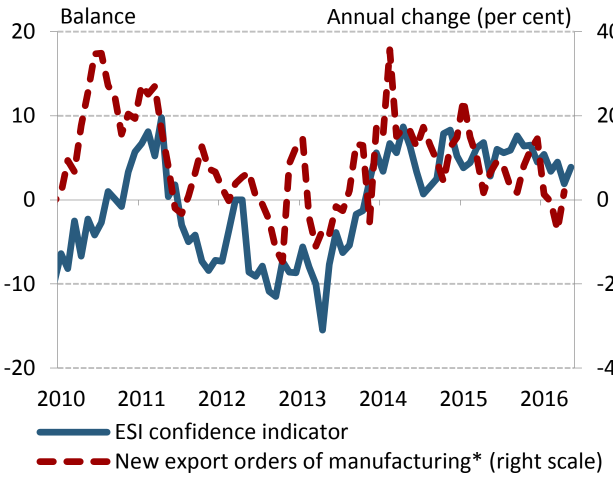
Value added in agriculture fell slightly compared to the same period of the previous year, due to statistical and technical effects. This year's harvest results will only be available in the second half of the year, and based on this data the HCSO may revise agriculture's Q1 contribution to growth. **According to our expectations, agriculture will substantially support domestic GDP growth this year.**

Chart 3-31: Evolution of industrial production



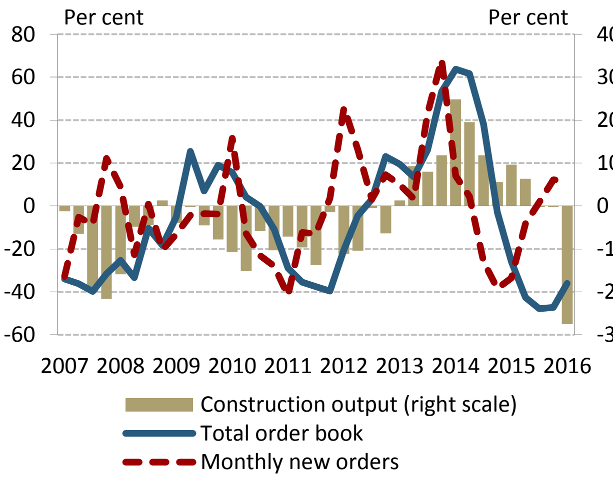
Note: Seasonally adjusted data.
Source: HCSO

Chart 3-32: Industrial business climate indicators



Note: * Three-month backward-looking moving average.
Source: European Commission, HCSO

Chart 3-33: Annual changes in construction output, orders and new orders



Source: HCSO

Value added in market services continued to increase in Q1, with a general expansion observed in the subsectors. This expansion was supported by the stable growth in consumption demand.

The stable increase in retail sales continued in Q1. The volume of retail sales grew by 4.6 per cent compared to the first quarter of the previous year, as sales increased for a broad range of products. In the context of low inflation and rising real incomes, household consumption continued to increase.

Value added in the catering and tourism sectors continued to grow in Q1, and the number of tourism nights spent increased. The buoyant demand in domestic tourism is attributable to the improving income position of households and the increased utilisation of fringe benefits aimed at boosting domestic tourism ('Széchenyi Card'). In addition, overnight stays by foreign tourists also increased.

The performance of the financial sector decreased slightly in year-on-year terms. Growth in the real estate sector is mainly attributed to the upswing in the market of pre-owned homes.

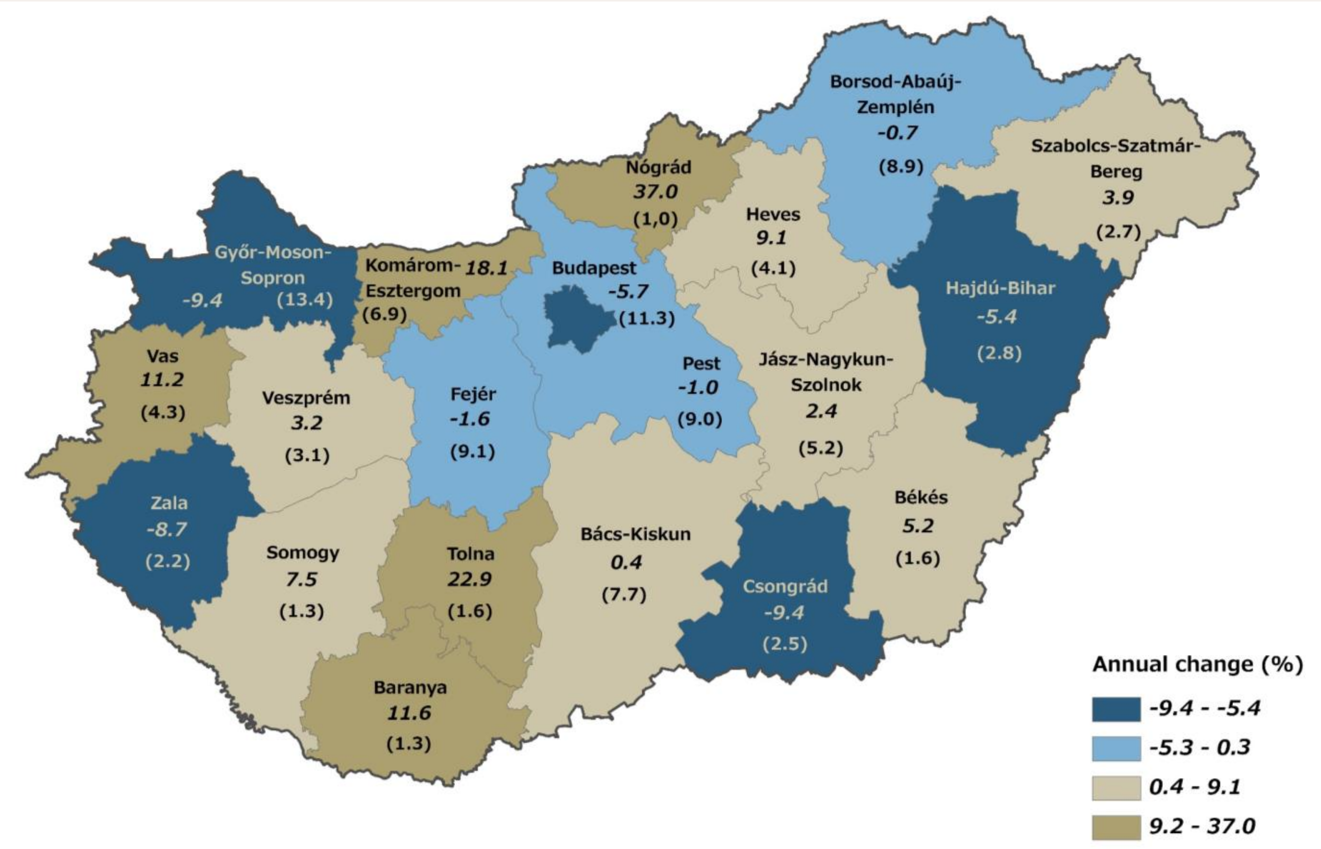
In parallel with rising demand, potential growth also may pick up in 2016. Better employment prospects may foster the increase in activity. In addition to facilitating capital accumulation, the easing of financial constraints could support the improvement in productivity as well.

Box 3-2: Causes of GDP deceleration in the first quarter

According to the HCSO's detailed release, in 2016 Q1 Hungary's gross domestic product grew by 0.9 per cent year on year. Based on seasonally adjusted data, GDP contracted by 0.8 per cent relative to the previous quarter. In the MNB's view, the contraction can be basically attributed to temporary effects In addition, the expansionary phase of the business cycle continues. **The slower growth due to one-off effects at the beginning of the year may be followed by renewed growth in the coming quarters**. Economic growth was supported by final consumption expenditures on the expenditure side (household and public consumption) and by services related to domestic demand on the output side.

Value added in industry contracted mildly in Q1, mainly as a result of temporary factors primarily affecting the automotive industry and the supplier network (Chart 3-34). According to press reports, model changeover at one major automotive factory led to a slump in production, which is also confirmed by national-level industry statistics (Chart 3-34). Based on the MNB's estimate, the direct effects of the downturn in automotive industry output at the start of the year lowered Q1 GDP by 0.6 percentage points. The spillover effects were calculated by input-output models.[2] Based on the results, the indirect effects amounted to around another 0.4 percentage points via the supplier network. The MNB expects this effect to be temporary only, and the recovery in factory output will have a beneficial effect on the supplier sectors as well; consequently, the MNB anticipates a sharp rise in industrial production and value added in the coming quarters. This hypothesis is supported by industry statistics for April, which point to an adjustment following the slowdown observed at the beginning of the year.

Chart 3-34: Annual change in industrial production in Q1



Note: The values in brackets indicate the share of individual counties in industrial production.
Source: HCSO

[2] Input-output tables describe intersectoral production relationships in the national economy, as well as the structural relationship between production and final use. They include intersectoral intermediate consumption, which can be used to estimate the spillover effects of a given economic event on the total economy.

As projects implemented from EU funds tapered off at the beginning of the year, construction industry production fell markedly in the first quarter. Payments under the 2007–2013 budget cycle will continue to decline until the middle of the year, while transfers from the new budget cycle may only accelerate toward the end of the year. According to the MNB's estimates, the tapering-off of EU funds lowered Q1 growth by 1.3 percentage points.

Table 3-3: Temporary factors affecting GDP growth in Q1 2016

The decline of EU-funds	-1.3%
Direct impact of production stoppages in automotive industry	-0.6%
Indirect impact of production stoppages in automotive industry	-0.4%

Note: Annual change.
Source: MNB calculation

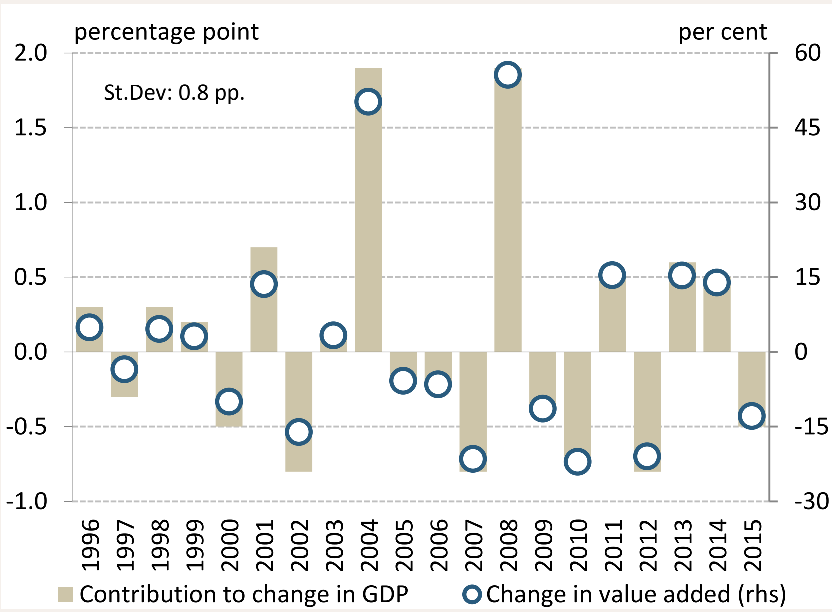
The GDP deceleration observed in the first quarter can be largely attributed to temporary effects, and with the disappearance of these factors, growth will pick up again in the second half of the year.

Box 3-3: Agriculture may provide considerable support to economic growth in 2016

Due to significant fluctuations in performance, changes in domestic agricultural output have a significant impact on developments in GDP.[3] In certain years, the sector's contribution to GDP reached as much as nearly 2 percentage points (Chart 3-35.). According to our current forecast, **agriculture may provide substantial support – amounting to as much as 0.5–1 percentage point – to the expansion of the economy in 2016.**

Several factors contribute to the increase in the value added of the sector this year. The rise in agricultural value added is also impacted by a statistical effect this year. In 2015, agriculture reduced domestic GDP growth by 0.5 percentage point; therefore, the related **base effect** points to an increase in agricultural value added. This is corroborated by earlier observations that **weaker agricultural years were followed by favourable periods**.

Chart 3-35: Changes in agricultural performance



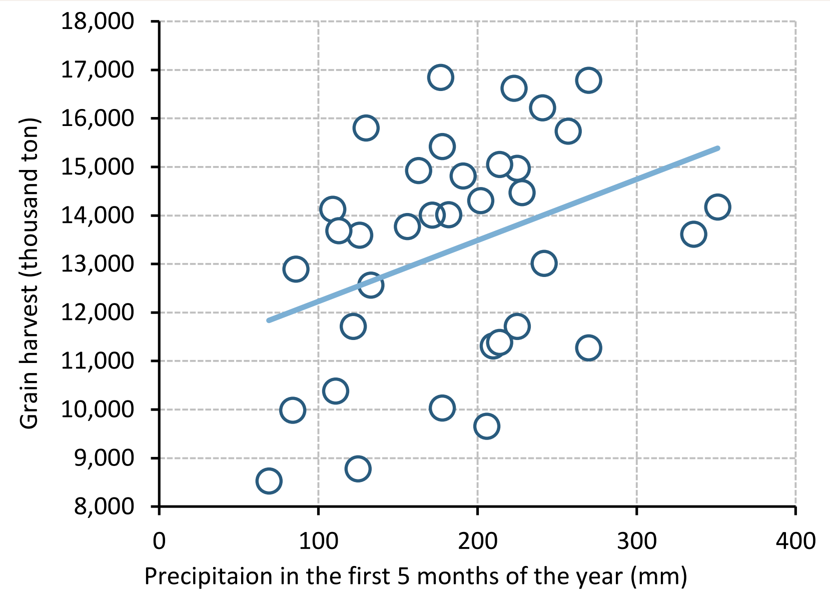
Source: HCSO

As the weight of cultivation – and field growing of plants in particular, which are the most exposed to weather conditions – is significant in Hungary (60 per cent), weather conditions have a major impact on agricultural production. With regard to

[3] The volatility, which is significant compared to other EU Member States as well, is attributable to various factors, which have been dealt with in more detail in Box 3-3 of the March Inflation Report.

the developments in the value added of the sector, mainly the grain crop (wheat and corn) of the given year provides information. Preliminary crop results are available as of the second half of the year; conclusions concerning agricultural performance may only be drawn on the basis of other indicators in the first half of the year. Based on empirical experiences, **co-movement can be observed between the amount of precipitation and the grain crop of the given year**. In the first months of this year the quantity of precipitation exceeded the historical average, signalling a significantly favourable grain crop for this year (Chart 3-36).

Chart 3-36: Link between precipitation and grain harvest



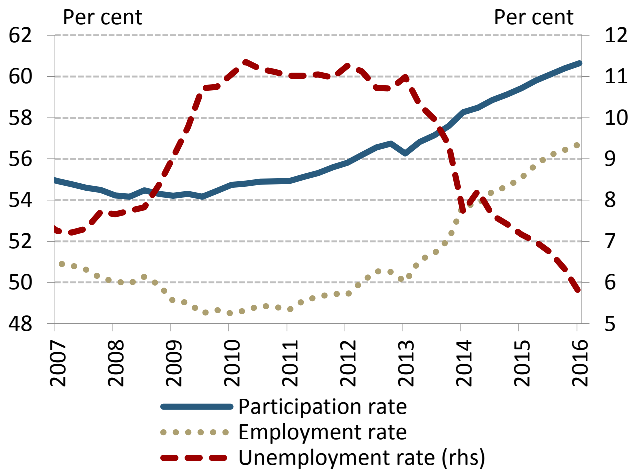
Source: HCSO, VáraljaMet

The sector's supply of an adequate quantity and quality of physical capital as well as with technological development has a significant impact on the performance and competitiveness of agriculture. Development of the equipment stock is possible through modernising investment, which has a high financing requirement. Accordingly, agricultural performance is significantly influenced by the **financing situation of the sector**. **Expansion in investment has been observed** in domestic agriculture **since 2010**, which in recent years has been primarily supported by the **improvement in the financing environment as a result of the Funding for Growth Scheme**, in addition to the comprehensive subsidy system for the sector. **An increasing portion of the implemented investment was related to investment in machinery** in the past years. Accordingly, looking ahead, development of the equipment stock may add to the productivity of the sector.

3.4. Labour market

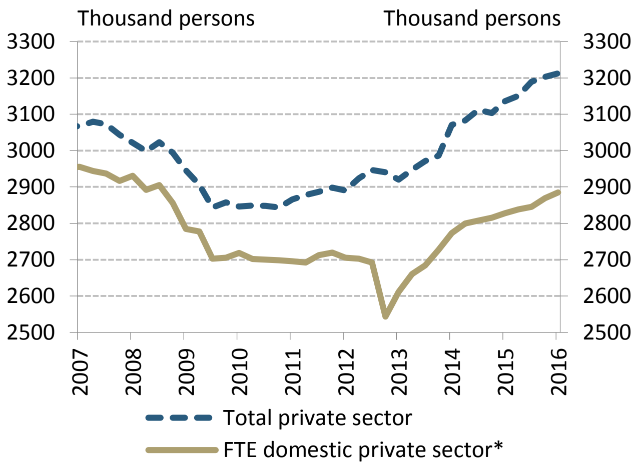
In 2016 Q1, the number of employees working in the private sector did not change significantly. A moderate increase was observed in the number of employees in both manufacturing and market services. The unemployment rate stood at 6 per cent in Q1. The increase in labour market tightness continued.

Chart 3-37: Participation, employment and unemployment rate, total economy



Source: HCSO

Chart 3-38: Evolution of employment in the private sector



Note: * Full-time equivalent without workers employed abroad.
Source: HCSO

In 2016 Q1, the number of active employees did not change significantly, and the activity rate for the 15–74 age group was 60.3 per cent (Chart 3-37). This ratio was 69.2 per cent for the 15–64 age group.

Based on seasonally adjusted data, **whole-economy employment continued to grow modestly at the beginning of the year**, with contributions from the increase in labour demand in both the private and public sectors. The rise in the number of those employed in the general government took place in parallel with a decline in the number of people in the public employment programme.

Employment in the private sector increased slightly. Within the private sector, a moderate increase was observed in the number of employees in both manufacturing and the market services sector. In terms of the hours worked, there was no major change in the weekly average number of hours worked by part-time and full-time employees. In parallel with that, the ratio of part-time work declined, due to the fall in the number of part-time employees and the increase in the number of full-time employees. As a result of the above effects, the number of full-time equivalent employees adjusted for hours worked increased moderately in Q1 (Chart 3-38).

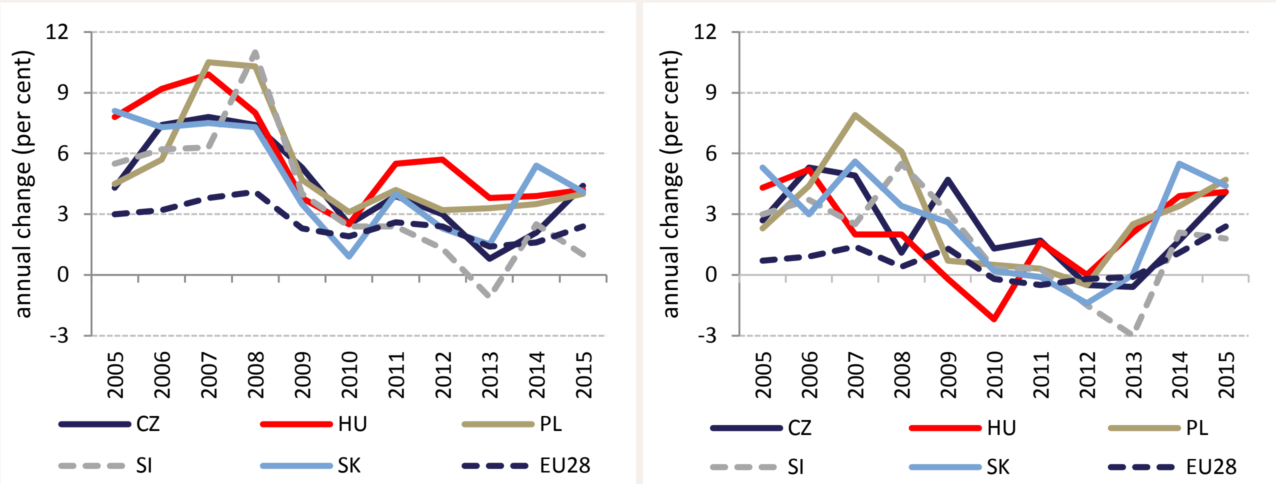
The unemployment rate declined in 2016 Q1, standing at 6 per cent. Compared to the previous quarter, there was no major change in the number of non-subsidised new jobs reported in Q1 and in the number of non-subsidised vacancies at the end of the quarter. Tightness indicators calculated on the basis of various statistics indicate the continuous tightening of the labour market during the past years (Chart 3-38).

Box 3-4: Private sector wage growth in regional comparison

High wage growth, which was typical in the mid-2000s, came to an end with the outbreak of the crisis, and there was a significant adjustment in the labour market. Slower wage growth was an important channel of the adaptation to weak demand. It lessened the decline in labour demand in the recession, temporarily improved the country's competitiveness and helped the employment upswing in the catching-up phase of the cycle.

Lower nominal wage growth compared to pre-crisis levels is generally observed in the region (Chart 3-39), but the strongest adaptation of real wages occurred in Hungary. In the past period, in parallel with strengthening economic activity, the labour demand of the private sector has increased steadily, and unutilised labour capacity has declined gradually. **Based on our tightness indicators, the labour market has become increasingly tight in recent years, compelling private sector companies to implement higher pay rises.**

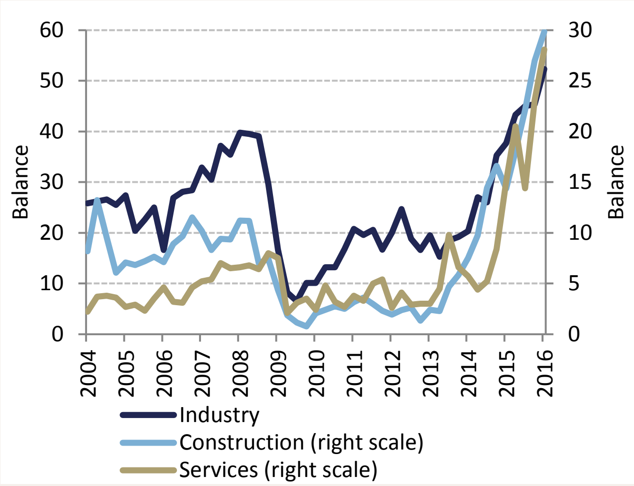
Chart 3-39: Changes in private sector nominal wages (left panel) and real wages (right panel) in the region

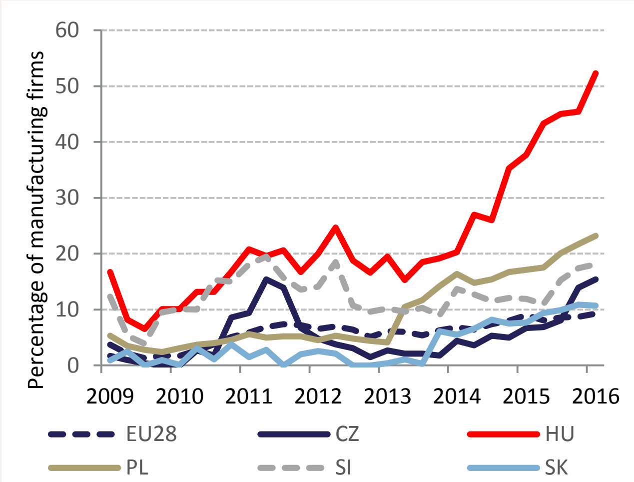


Source: Eurostat, MNB calculation

The tightening domestic labour market conditions are shown by the fact that according to the ESI (Economic Sentiment Indicator) survey, in recent years an increasing number of companies have indicated labour shortage as the main obstacle to production in industry, construction and the services sector (Chart 3-40, left panel). Accordingly, finding adequate workforce is increasingly difficult for companies. Firstly, one underlying reason is that – due to the technological changes taking place in the economy – for the performance of tasks that require higher-level, more comprehensive skills, the quality requirements vis-à-vis labour are increasing even in lower-level jobs. Secondly, as Hungary's wage level is low compared to Western European countries and the increase in labour force demand can be observed in the neighbouring countries as well (Chart 3-40, right panel), there is strong competition between domestic employment and working abroad.

Chart 3-40: Labour shortage as main obstacle to production in Hungary (left panel) and in the countries of the region (right panel)



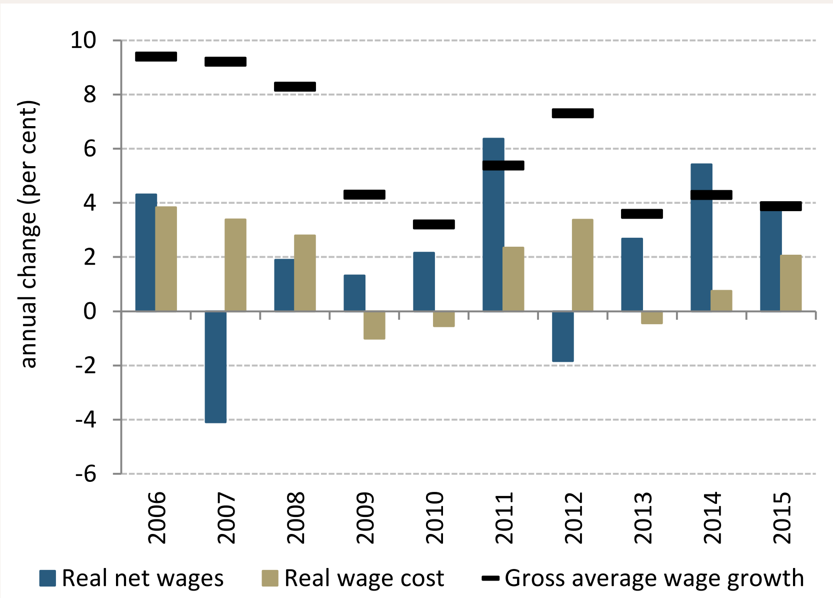


Source: European Commission, OECD

Q1 data show stronger nominal wage growth than observed in the years after the crisis. **The acceleration in wage dynamics in the first three months of the year have primarily been caused by the tight labour market conditions.**

In the current labour market environment, **increasing competition among companies may evolve in order to make up for the missing workforce**, especially in sectors where labour is the bottleneck. As a result, private sector wage growth may gradually strengthen. At the same time, **the inflationary effect from the unit wage growth became much weaker in the past period**.[4] Firstly, corporate profitability, which is rising as a result of recent years' low cost environment, provides more room for wage increases. Secondly, households and companies faced different real wages as a result of price changes and shifts in the tax system. While the real wage perceived by consumers rose considerably in parallel with the sustained low inflation environment, the real wage calculated with the GDP deflator, which is relevant for companies, increased moderately in the past years (Chart 3-41).

Chart 3-41: Development of private sector real wages



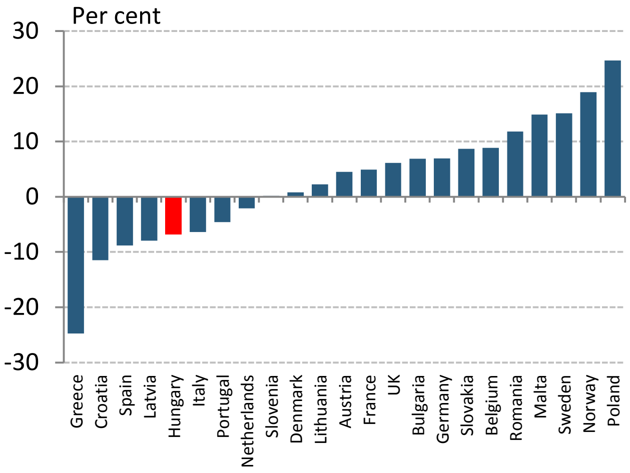
Note: Real net wages: deflated with CPI, real wage cost: total labour cost deflated with GDP deflator. Source: European Commission, OECD

[4] For more details see Special topic 6.2 in the June 2015 *Inflation Report*.

3.5. Cyclical position of the economy

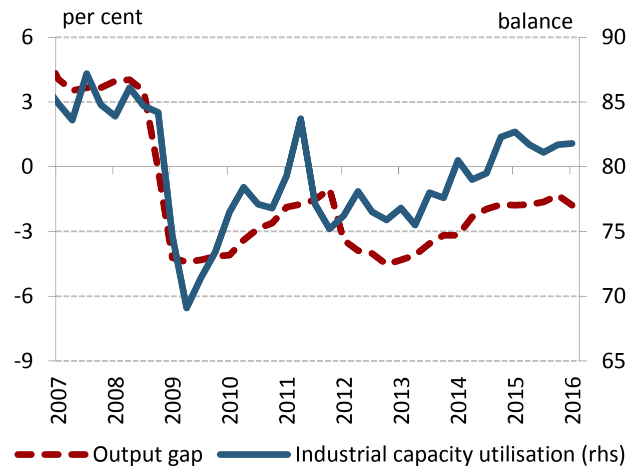
According to our estimates, the output gap remained in negative territory in 2016 Q1 as well. Confidence indicators and corporate surveys suggest that corporate capacity utilisation increased in parallel with economic growth in the past quarters.

Chart 3-42: The level of consumption in 2015 compared to pre-crisis level



Source: MNB calculations based on data from Eurostat

Chart 3-43: Evolution of the output gap and capacity utilisation



Source: MNB, ESI survey

According to our estimate, the output gap was in negative territory in 2016 Q1 as well. The main factor behind the negative output gap is the lower than pre-crisis level of household consumption (Chart 3-42).

As a result of temporary effects in the first months of the year – factory stoppages, the contraction in construction output due to lower EU fund inflows than in the previous year – **the cyclical position temporarily may have become more open. With the fading of these temporary effects, the output gap is closing again in the second half of the year.**

According to corporate surveys, capacity utilisation indicators rose in the past period (Chart 3-43). In early 2016, the indication of demand as a factor that limits production remained practically unchanged in relation to industrial and construction enterprises, while demand was considered to be much more favourable by companies in the services sector. Indicators reflecting business sentiment were typically above their historical average, while labour shortage was a bottleneck in certain sectors.

Uncertain demand prospects and stronger financing constraints in the post-crisis years both led companies to exploit their production capacities more intensively than before.

Box 3-5: Estimation of the output gap

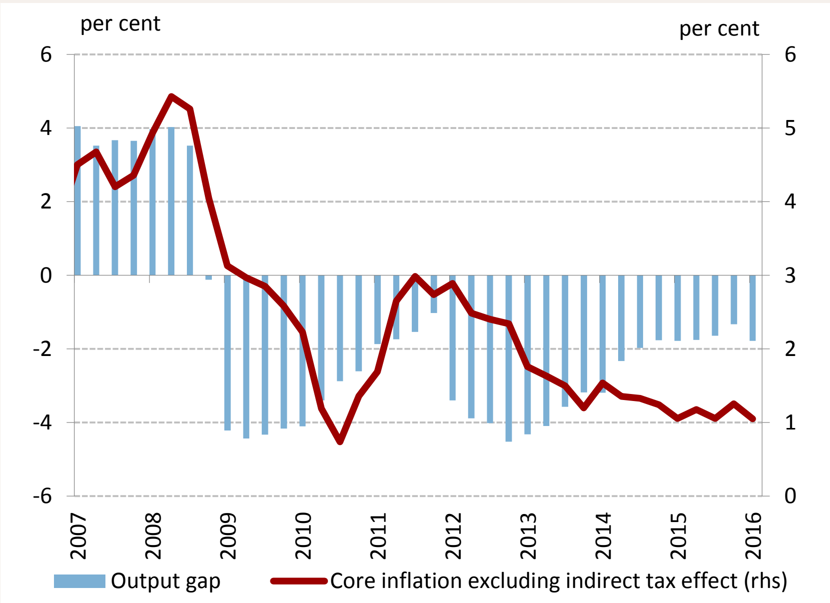
Most of the forecasting models currently used apply the decomposition of the level of output into its cyclical and potential components. Potential output basically indicates an output level that does not result in a change in the inflation rate. The cyclical position of the economy is basically captured by the estimation of the so-called output gap, which indicates the deviation of actual output from the potential level. The output gap carries information on the magnitude and direction of inflationary effects showing up from the real economy (the concept of the Phillips curve). In the case of a negative output gap, demand below its potential level in itself has a disinflationary effect, while a positive output gap results in additional inflation (Chart 3-44).

Potential output and the deviation from potential output cannot be observed directly. However, it can be quantified using various estimation methods. In addition to different statistical smoothing methods, techniques that apply the inclusion of economic relationships are also popular (production function method). However, the common problem with the different estimation methods is endpoint uncertainty, which indicates that the inclusion of new information may cause revisions in the estimation.

The multivariate structural filter used by the MNB provides an estimate for the output gap by including numerous macroeconomic statistics (deviation of inflation from the target, external demand environment, current account), and economic relationships between observed and latent macroeconomic variables (price and wage Phillips curve, Okun's law) for the identification of the cycle. Therefore, the system of equations connects the developments in the output gap, which cannot be observed directly, with an observable variable, i.e. inflation. Compared to purely statistical methods, the method applied may considerably improve the identification of the cyclical position, as economic relationships are also used during the estimation.

Underlying inflation developments have been restrained for a longer period of time, and the output gap is still negative according to our estimation, although it has recently been closing gradually, in parallel with the pick-up in economic activity. Looking ahead, further closing is expected, i.e. the disinflationary effect of the domestic economy is declining gradually.

Chart 3-44: Core inflation and the output gap



Source: MNB, HCSO

3.6. Costs and inflation

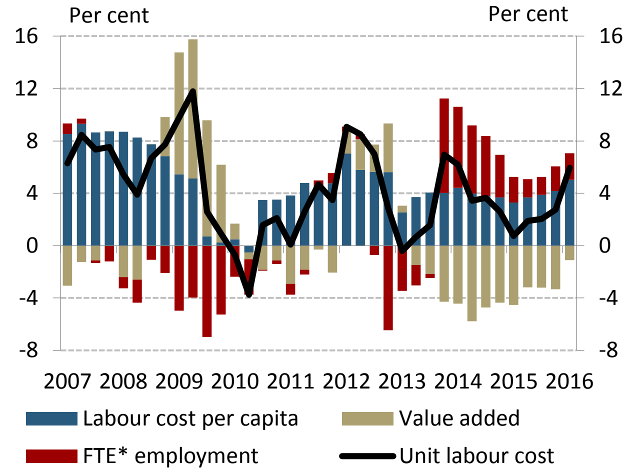
Inflation remained moderate, at levels substantially below the 3 per cent target in the first half of 2016. The restrained price growth reflects subdued commodity price levels, low imported inflation and weakening inflation expectations. Private sector wage growth increased in Q1.

Table 3-4: Annual wage growth in the main private subsectors

	2015 Q1	2015 Q2	2015 Q3	2015 Q4	2016 Q1
Private sector	3.5	4.0	3.9	4.0	5.4
Manufacturing	3.3	4.2	4.1	4.3	5.8
Market services	3.1	3.5	3.5	4.0	5.4

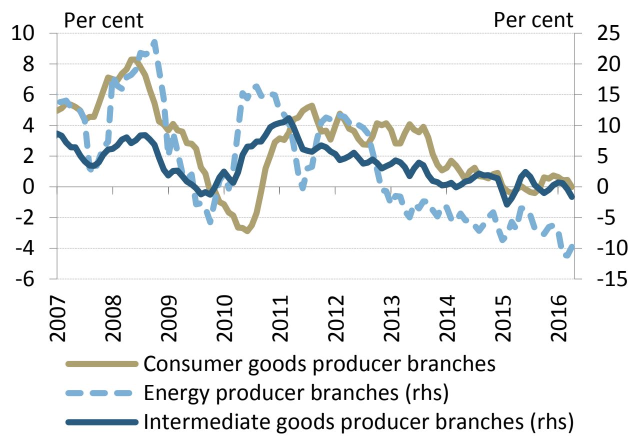
Source: HCSO

Chart 3-45: Annual changes and components of unit labour cost in private sector



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

Chart 3-46: Annual change in industrial producer prices



Source: MNB calculation based on HCSO data

3.6.1. Wages

In 2016 Q1, gross average earnings in the private sector rose by 5.4 per cent year on year. The growth rate of gross average wages accelerated compared to the previous year, which may be attributable to both manufacturing and the market services sector (Table 3-4). The bonuses paid by companies corresponded to the amounts usual in Q1. Wage-setting in the private sector was substantially influenced by labour shortage in recent quarters and the resulting increase in labour market tightness (Chart 3-41).

Unit labour cost growth calculated using full-time equivalent employment significantly exceeded the levels from previous quarters (Chart 3-45). The increase in the full-time headcount in conjunction with a decline in the annual dynamics of value added resulted in a slowdown in productivity. Developments in the unit labour cost were also determined by per capita labour cost.

3.6.2. Producer prices

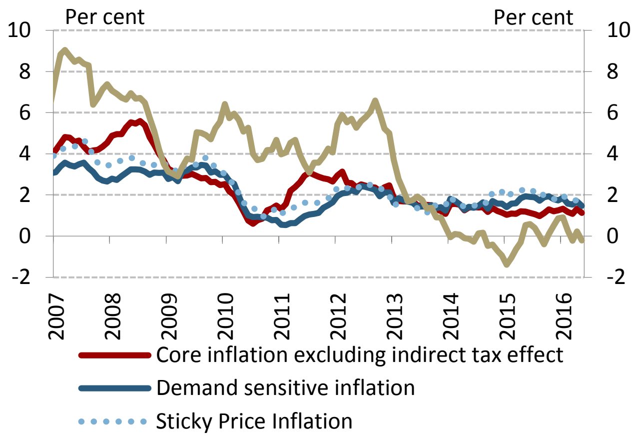
Agricultural producer prices remained at low levels in the past period. The price level of seasonal products – fresh fruits and potato – which are sensitive to environmental factors remains high level, while the prices of products of animal origin and grain declined further. The producer price of milk continued to decline in 2016 Q1.

Industrial producer prices were restrained in the period under review. In view of the low oil prices, the annual price index of the energy producing sectors is still in negative territory. Following a slight increase at the beginning of the year, the price dynamics of the sectors producing goods for further processing declined in recent months in a year-on-year comparison. The price dynamics of the sectors producing consumer goods remained practically unchanged in the past quarter (Chart 3-46). Changes in domestic producer prices were in line with the trends observed in the euro area.

3.6.3. Consumer prices

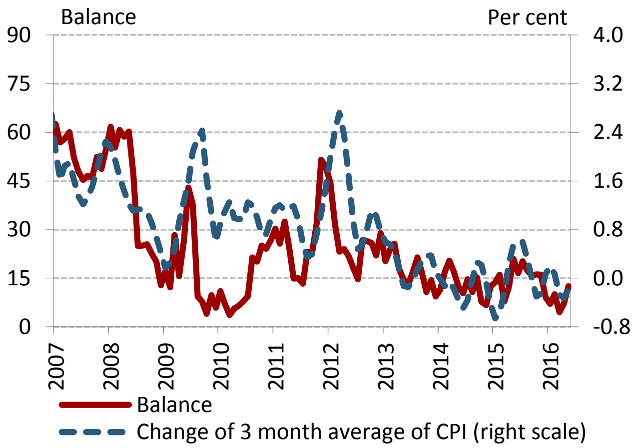
Inflation remained well below the 3 per cent target, at a level of close to 0 per cent, in the past months. The substantial fall in commodity prices in the previous period, weak imported inflationary pressure and weakening inflation expectations all contributed to the low inflation. Based on our cross-sectional data, subdued inflation is

Chart 3-47: Development of inflation and underlying inflation indicators



Source: MNB calculation based on HCSO data

Chart 3-48: 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 HCSO data

mainly caused by the price dynamics of the cost-sensitive product group.

Indicators capturing longer-term inflation trends (inflation of demand-sensitive and sticky-price products) **have fluctuated consistently in the 1.5–2 per cent range since 2013 H2**. The level of these indicators still points to a moderate inflation environment, which is attributed to depressed costs and subdued demand (Chart 3-47).

Price dynamics of industrial goods increased slightly in the previous months. Due to the growing demand the prices of consumer durables increased, but they stay at subdued levels. In the case of non-durable products, prices were volatile in the past months, which was attributable to the volatile prices of flight tickets. In addition to the price reducing effect of moderate import prices, the continuous pick-up in domestic demand also had an impact on the pricing of industrial goods during the past quarter.

The annual index of market services remained essentially unchanged in the past months. In the spring months, the same price increase was observed as in the previous years, and this was typical of a wide range of products.

Processed food prices were highly volatile in the past months, but the price level remained basically unchanged compared to the beginning of the year The price dynamics of unprocessed food remained subdued.

Fuel prices rose as a result of the increase in oil prices expressed in forints in the past period, but the annual index of the product group has continued to decline. The world market price of Brent crude oil rose gradually in the past months.

The annual price index of regulated prices was moderate in the past months.

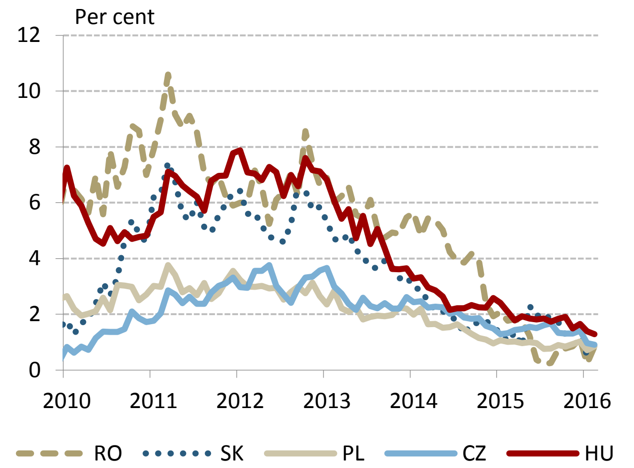
Inflation practically corresponded to the forecast in the March *Inflation Report*, although slight differences are observed in terms of its composition. The higher-than-expected increase in fuel prices was offset by the lower price index of food, which is highly volatile on a monthly basis.

3.6.4. Inflation expectations

Inflation expectations concerning retail sales prices have continued to decline in recent months. This suggests that producer price trends do not warrant price increases in the coming months (Chart 3-48).

In a regional comparison, Hungarian households' expectations were at the levels seen in countries

Chart 3-49: Inflation expectations in the region



Source: MNB calculations based on data of the European Commission

characterised by persistently low inflation earlier as well (the Czech Republic and Poland). In the spring months, Hungarian households' inflation expectations declined slightly, with other countries in the region staying at subdued level (Chart 3-49).

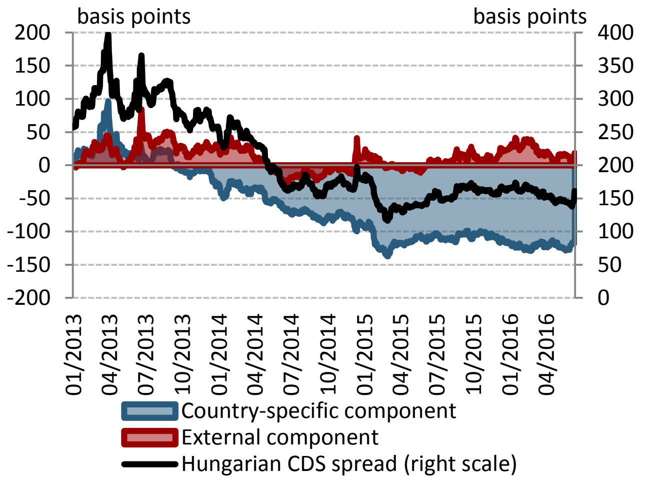
4. FINANCIAL MARKETS AND INTEREST RATES

4.1. Domestic financial market developments

At the beginning of the past period, investor sentiment first slightly deteriorated, followed by a gradual improvement from mid-April, and thus the leading stock market indices were on the rise, also supported by increasing oil prices. However, at the end of the period, global risk sentiment deteriorated significantly due to Brexit fears followed by the fall of stock indices, strengthening of the Swiss franc and Japanese yen which are regarded as safe assets, and the decrease in long-term bond yields of major developed countries. The fact that the easing expected of the Bank of Japan did not take place resulted in a decline for the Japanese stock exchange and temporary appreciation of the yen, while expectations concerning an interest rate increase in the USA, which first strengthened and then in June once again lessened, led to a swing in the US dollar exchange rate, although it did not move substantially against the euro for the period as a whole.

Domestic market developments were primarily determined by international factors. In accordance with this, the forint exchange rate against the euro fluctuated in the 309–317 band, depreciating slightly over the period as a whole. Country-specific news contributed to more significant depreciation of the Polish zloty compared to the currencies of the region. Short-term yields in the domestic government securities market were down, while long-term yields were on the rise, and thus the yield curve became steeper. The stock of Hungarian government securities held by non-residents declined during the first part of the last quarter, then increased at the end of the period. The increase in the CDS spread at end-period, reflecting the country's risk assessment, was caused by the general risk-off sentiment due to Brexit fears.

Chart 4-1: 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

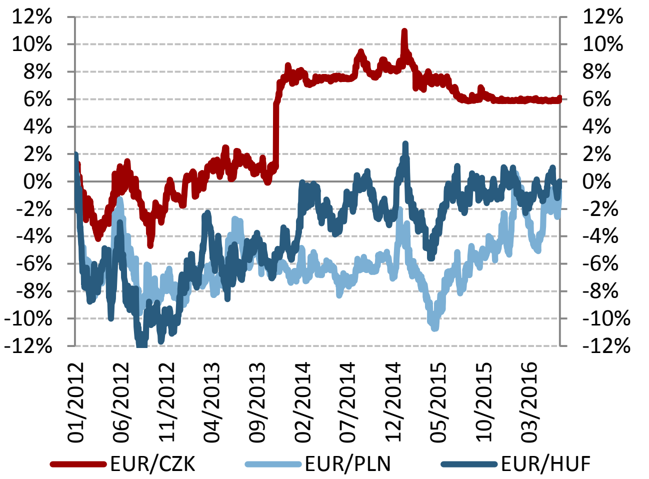
4.1.1. Risk assessment of Hungary

Hungary's risk assessment indicators deteriorated slightly since the March *Inflation Report*. The Hungarian 5-year sovereign CDS spread fell in the first half of the period and then jumped at the middle of June: thus, for the period as a whole, it increased by 10 basis points, although it continued to fluctuate at moderate levels (in the 135-160 basis point range, Chart 4-1). The 10-year government bond yield also rose, while the forint exchange rate against the euro weakened. In the second half of the period, the Hungarian currency showed slightly higher volatility, first depreciating by 2 per cent, which then was partly adjusted by June. CDS spreads and long-term yields in the region also increased, and most of the regional currencies depreciated slightly against the euro.

The development of Hungary's CDS spread in the second half of the period was mostly due to international factors. In the first half of the period under review, both international and domestic components supported the fall in the spread, but from mid-May it was primarily the international factor that caused the continuing decrease in the Hungarian spread, while the domestic component pointed to an increase, after the decline that followed the upgrade by Fitch. The increase in the spread in June was due to the global risk-off sentiment around the British referendum. During the period, spreads in the countries of the region showed an increase that roughly corresponded to that in Hungary.

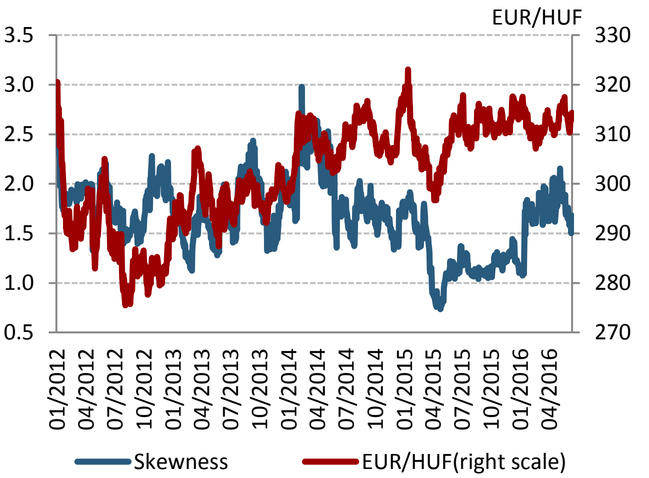
4.1.2. Developments in foreign exchange markets

Chart 4-2: Exchange rates in the region



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

Chart 4-3: EUR/HUF exchange rate and 1-month skewness



Note: Skewness = Risk reversal/Volatility *10.
Source: Bloomberg

Depreciation of the EUR/HUF exchange rate in the middle of the period was followed by appreciation, after which the rate again weakened at end-period, thus for the whole period mild depreciation of 1.5 per cent was registered. During the period, the forint exchange rate fluctuated in a range of 309–317, showing slightly higher volatility in the second half of the period. In the second half of May and early June, the Hungarian currency partially adjusted the depreciation of around 2 per cent that was seen in the first half of May, and appreciated against the euro to the level of 310.5. In the deteriorating sentiment, the Hungarian currency weakened again above the HUF 314 level at the end of the period (Chart 4-2). For most of the period the forint was affected by international factors. Of these, global risk aversion and, in May, the strengthening of the expectations with regard to the interest rate increase by Fed may be mentioned as factors that primarily had a depreciating effect on the euro and the currencies of the region. From June, the probability of the US interest rate increase once again shifted to the end of the year, which supported the appreciation of the regional currencies. The end-period developments including the HUF exchange rate movements were determined by Brexit fears. In addition to the international factors the interest rate cutting cycle, restarted by the MNB in March and closed in May, the phase-out of the IRS programme and the central bank's communications had a moderate impact on the forint exchange rate. On the whole, the skewness of exchange rate expectations slightly decreased by the end of the period, despite the small increase in June (Chart 4-3).

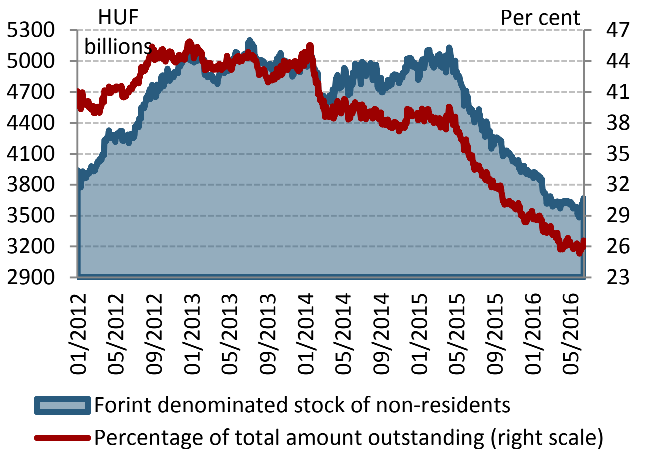
Turning to the regional currencies, partially due to country-specific factors, the Polish zloty showed a more significant, 4 per cent, **depreciation than the currencies of the region**, while the Romanian leu as well as the Hungarian forint depreciated by more than 1 per cent during the whole period.

The stock of non-residents' holdings of the HUF government securities portfolio increased slightly. The continuous decline in the stock of government securities held by non-residents, lasting since last year, continued in the larger part of the period as well, temporarily dropping below the HUF 3500 billion level, and then at the end of the period it increased substantially, which raised their stock HUF 55 billion above start-period levels. Their share in HUF-denominated securities decreased only marginally from 26.8 per cent (Chart 4-4).

4.1.3. Government securities market and changes in yields

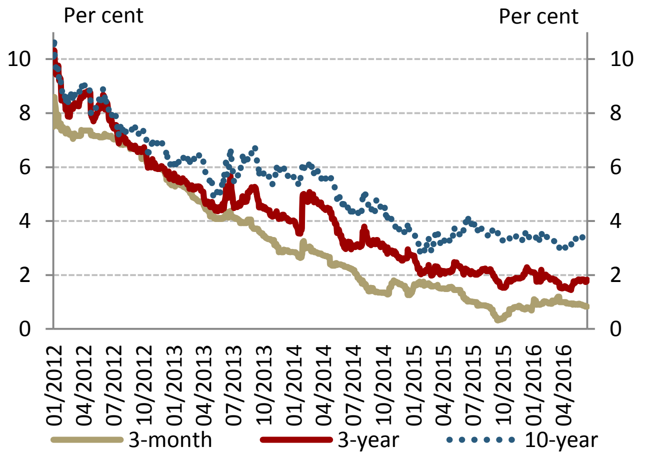
Demand in the primary market of government securities was mixed, accompanied by different yield trends for the

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



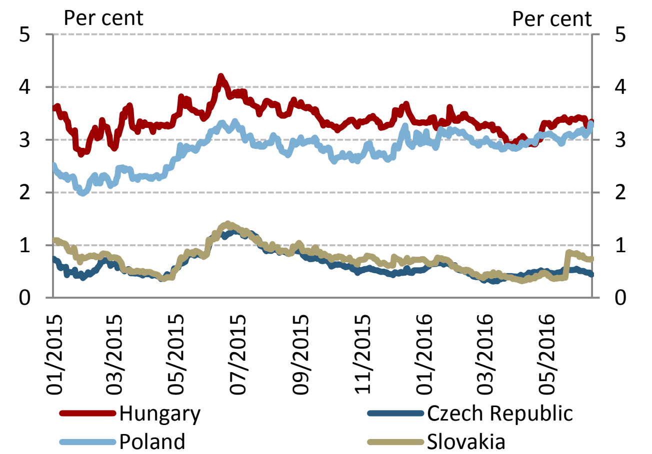
Note: The chart shows the stock of T-bills and T-bonds and the amount of government securities held by non-residents; retail securities are not included.
Source: MNB

Chart 4-5: Yields of benchmark government securities



Source: ÁKK

Chart 4-6: 10-year government benchmark yields in CEE countries



Note: Bloomberg

individual maturities. As regards short-term securities, demand for the 3-month maturity was sound, while it was weak for the 1-year T-bill; yields – primarily in the case of the 3-month discount T-bill –fell considerably. For longer maturities, despite the strong – 2.5-3-fold average – coverage, average yields increased substantially, in line with secondary market yields.

The government securities market's yield curve became steeper last quarter. Short-term secondary market yields fell by 15-30 basis points. The 3-year benchmark yield was up 10 basis points, while a yield increase of 20-30 basis points in total was observed for 5-10 maturities. The 15-year yield showed a slightly smaller increase of roughly 15 basis points. In the first half of the period, the Hungarian 10-year yield temporarily fell below the Polish yield on similar maturities; however, from the middle of the period, partly due to the closing of the central bank's interest rate cut cycle, and then at the end of the period due to global risk-off sentiment it showed an increase. Thus by the end of the period, it exceeded its start-period level by 25 basis points. Of the 10-year benchmark yields in the region, the Romanian yield increased at a similar rate as the Hungarian compared to its initial level, while the Polish yield showed a higher, roughly 45-basis point increase. The Czech yield rose only slightly during the period, whereas the surge in the Slovakian yield was caused by the benchmark switch.

Box 4-1: The role of the BUBOR in the Hungarian economy and reform of the quotation system

The BUBOR quotations for various maturities play a prominent role in the Hungarian financial markets in respect of derivative and other financial products, variable-rate loan contracts and the monitoring of monetary conditions as well. Based on data for 2015, outstanding loans and interest rate derivative transactions amounting to HUF 29,000 billion (nearly equal to the annual GDP of Hungary) were priced on the basis of the BUBOR. Outstanding loans priced in relation to the BUBOR were around HUF 2,700 billion in 2012, but by now exceed HUF 6,000 billion, mainly due to the conversion of household loans.

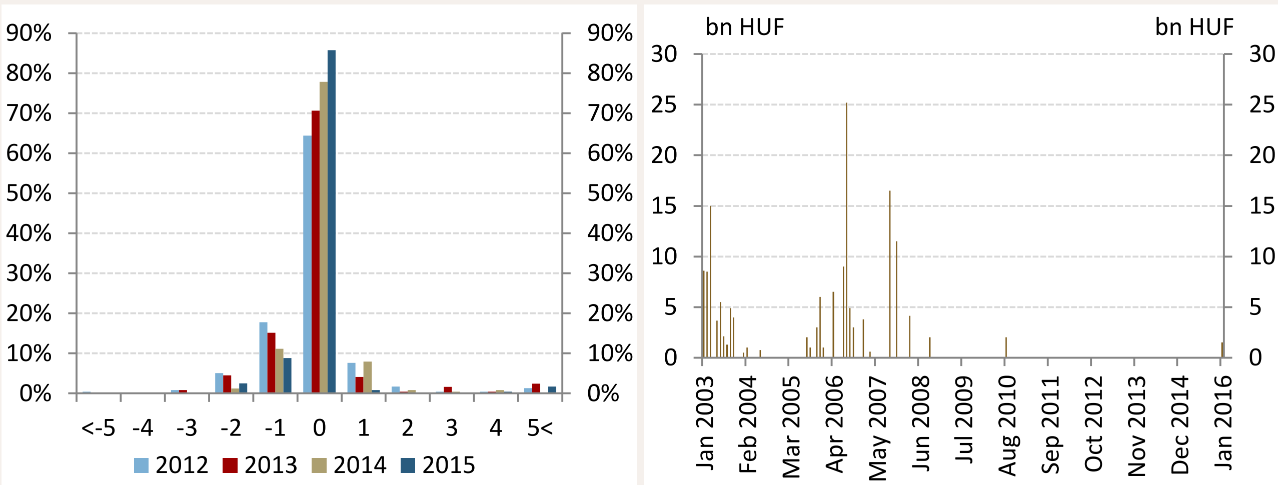
Table 4-1: Portfolios priced in relation to the 3-month and 6-month BUBOR

Instrument	Stock (bn HUF)
FRA	400
IRS	16 114
CCIRS	6 499
Loans	6 127
Total	29 140

Note: Stock at the end of 2015. FRA: Forward rate agreement; IRS: Interest rate swap; CCIRS: Cross-currency interest rate swap.
Source: MNB, data for 2015

In order to fulfil its functions and function as a reliable basis for pricing the aforementioned products, the BUBOR must represent all relevant market information. However, at the most important maturities the increasingly strong 'stickiness' of quotations seen until April 2016 indicates that **this condition is not met and thus the BUBOR fails to adequately play its role**. In the case of the 3-month BUBOR, apart from the amendment to the base rate, the ratio of unchanged days increased gradually in the past 12 years (2004: 12%; 2008: 35%; 2012: 64%; 2015: 85%; until May 2016: 95%).

Chart 4-7: Frequency of daily shifts in the 3-month BUBOR (left panel) and 3-month unsecured transactions between BUBOR panel banks (right panel)



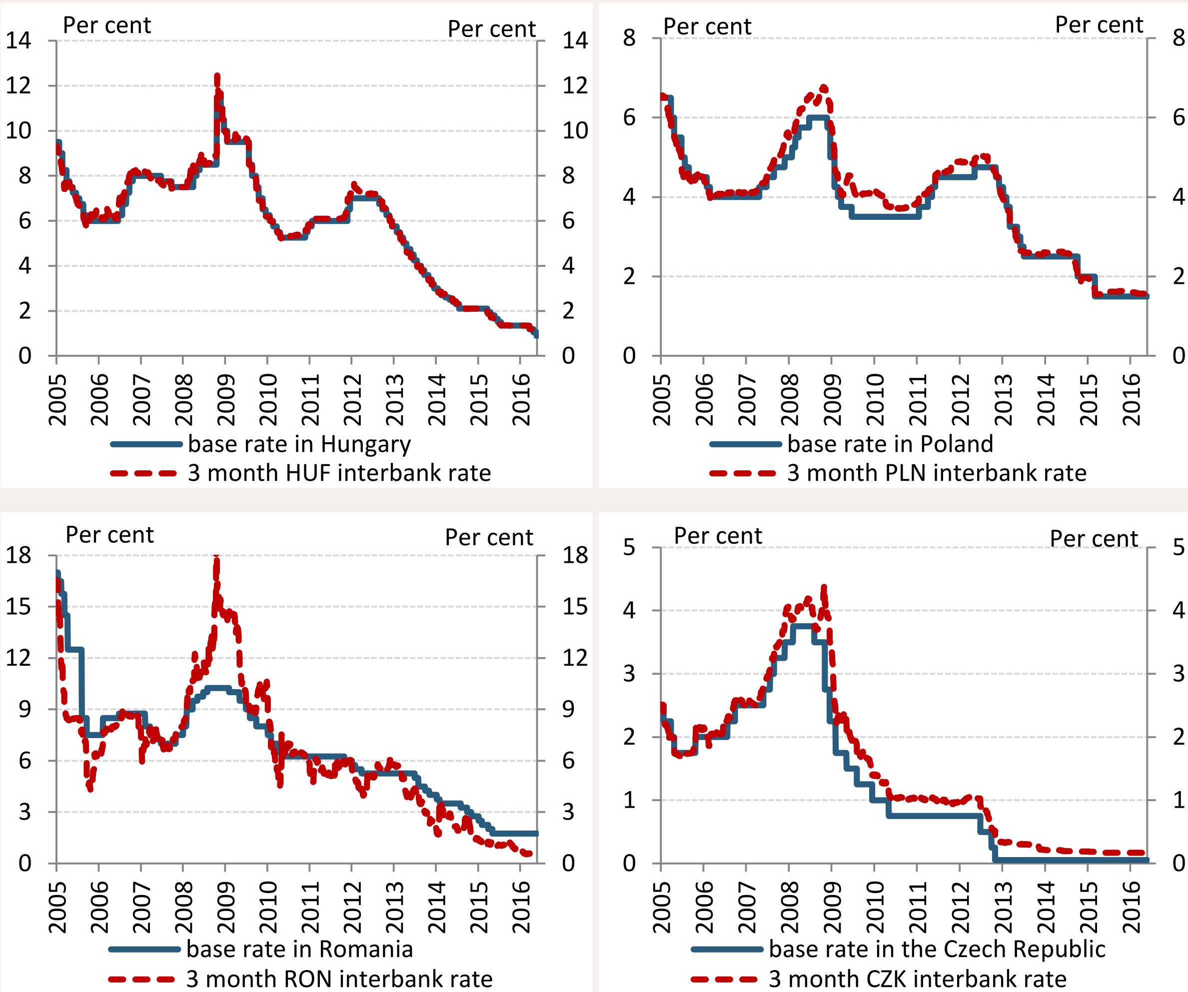
Note: Turnover data until April 2016. Source: MNB.

There are various reasons for the stickiness of interbank reference rates that are longer than a few weeks. Even before the crisis one could not really consider the market liquid, but during the crisis **trading practically ceased to exist in the longer segments of the unsecured interbank market, while counterparty limits fell to nearly zero**. In addition, due to the LIBOR scandal and the ensuing regulatory tightening, 'herd behaviour' became stronger and stronger, i.e. panel banks strived to submit interest rates that were close to the group average or to their earlier quotations. Ultimately, beside the possible reputational advantages, against the background of the tightening regulation and increasing requirements, there is no incentive that could make banks interested in quoting, and thus the panel size declined in Hungary and also in the case of the majority of international benchmarks. In relation to that, the public good character of the BUBOR is worth emphasising: it is a product available free of charge for anybody; its reliable, fixed-quality production requires common efforts. **Based on**

the above, the overall conclusion is that there is lack of harmony between the importance of the BUBOR and the grounding of its information content.

It is important to mention that it is an international phenomenon, i.e. the decline in information content of interbank reference rates is not a Hungarian speciality. Nevertheless, **this degree of stickiness of the fixing is unprecedented in the region as well**. In the Czech Republic as well as in the Romanian and Polish markets, the latter of which have a mandatory quotation system, movements of the 3-month interbank reference rate much better reflect real market developments (Chart 4-8).

Chart 4-8: Changes in interbank reference rates in the region



Source: Bloomberg, MNB calculation

In recent years, several steps have been taken to improve the reliability of the BUBOR and the transparency of quotations. The development of the rules and principles related to the BUBOR (trimming methodology, maturities, code of conduct, transparency, etc.) and the expansion of the quoting bank panel size were important steps in order to develop quotations. **These steps, however, have not yet resulted in significant strengthening of the information content of the BUBOR. One significant underlying reason for the problem is that there are practically no unsecured market transactions, and thus the price discovery function of the market cannot support the quotation system.**

In order to increase the soundness of BUBOR quotations, **from May 2016 the BUBOR rules were amended and the quotation system was reformed at the MNB's initiative**. This had been preceded by several rounds of discussions with the Quotation Committee and panel banks. As a result of the changes, a price quotation system based on transaction obligation similar to the regional patterns in Poland and Romania was set up. In line with international recommendations, it increases the role of real market transactions related to the quotation.

Pursuant to the new rules, following the publication of the BUBOR fixing at 11:00, panel banks may trade with one another for 15 minutes at the interest rate corresponding to their submitted BUBOR quotations. Banks' transaction obligation is for the 1-month and 3-month maturities, and on the given day for each counterparty it is valid up to the amounts of HUF 100 and 50 million, respectively. The interest rate of the deposit acceptance is determined by using a fixed, 15-basis point spread, taking the submitted BUBOR quotation as a basis. The system was launched on 2 May 2016 with the participation of 9 BUBOR-quoting panel banks; further institutions are expected to join during the summer.

The first experiences related to the new quotation system bear witness to a rise in the number of interbank transactions and in turnover as well as to an increase in the information content behind the BUBOR. During May, in the one-month segment the transactions concluded between BUBOR panel banks amounted to a total HUF 10 billion, while at the 3-month maturity the amount of transactions was HUF 2 billion. In addition, both the information content of the BUBOR and thus its volatility increased; this is also corroborated by the behaviour of the BUBOR, which is similar to the regional pattern.

The MNB continuously follows the developments related to the BUBOR quotation, and based on the evaluation of the experiences, during the autumn it may take further steps in order to strengthen the trading-based information content of the BUBOR.

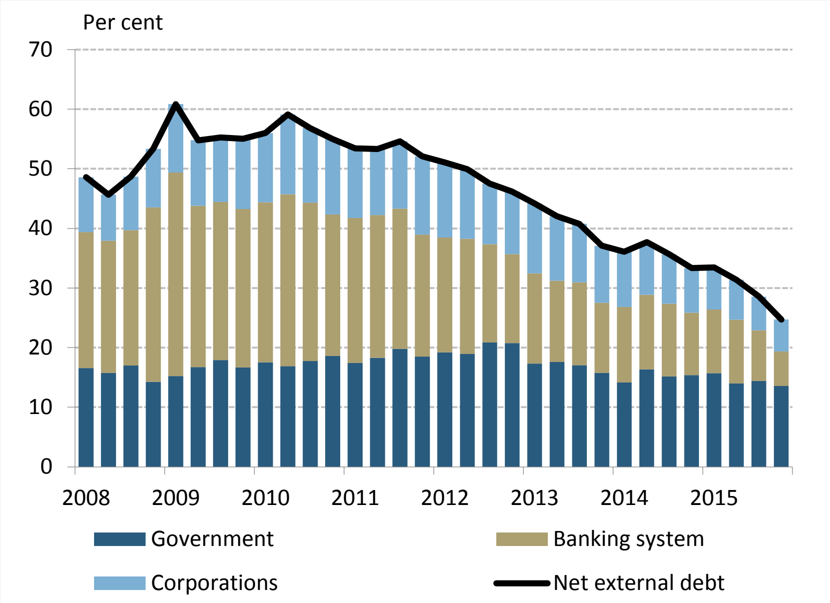
Box 4-2: The role of MNB's programmes in upgrading and improvement in the risk assessment of Hungary

Of the three major credit rating agencies, Fitch Ratings was the first to raise Hungary's credit rating to investment grade again. The high balance of payments surplus, significant inflows of EU funds, the decline in banks' external debt, the self-financing programme and the conversion of FX loans into forints were mentioned as the main reasons for the positive step. The latter three developments took place with the MNB's direct involvement, and thus the MNB's programmes contributed significantly to lowering Hungary's external vulnerability.

According to the credit rating agency's calculations, **from the level observed in 2012, Hungary's net external debt-to-GDP ratio declined by 25 percentage points** by 2015 Q3, and the agency forecasts a further fall in the indicator for the coming years. The MNB's measures taken in order to reduce external vulnerability played a major role in the considerable decline in Hungary's gross external debt. This decline started from 2011, and had been preceded by a steep rise in the period between 2002 and 2009. In the justification of its decision, Fitch Ratings emphasised that **as a result of the MNB's self-financing programme** and, of course, of the adequate adjustment of the economy, the financing of the debt of Hungary is less and less dependent on external sources.

The objective of the self-financing programme announced by the MNB in 2014 is to reduce external vulnerability through the restructuring of central bank instruments. As a result of the lower reliance on external funds, Hungary's financing can be ensured at a lower risk even in the case of a turbulent external environment, compared to the earlier period when the external financing requirement was high. In order to reduce external vulnerability, the central bank instruments have been restructured in a way to drive commercial banks' liquidity kept with the Bank towards non-central bank eligible collateral acceptable for the market (primarily forint-denominated government securities), as a result of which the state is able to refinance the maturing FX bonds by issuing forint bonds. **As a result of the programme, banks significantly increased their government securities portfolio, by more than HUF 2,600 billion**, as a result of which the sector became the largest actor in the market of HUF-denominated government securities.

Chart 4-9: Breakdown of net external debt by sectors (as a percentage of GDP)



Note: Fitch uses an indicator that includes intercompany loans as well, its level is different from the MNB's, but the degree of the decline in external debt is identical according to the two methodologies.
Source: MNB, excluding intercompany loans

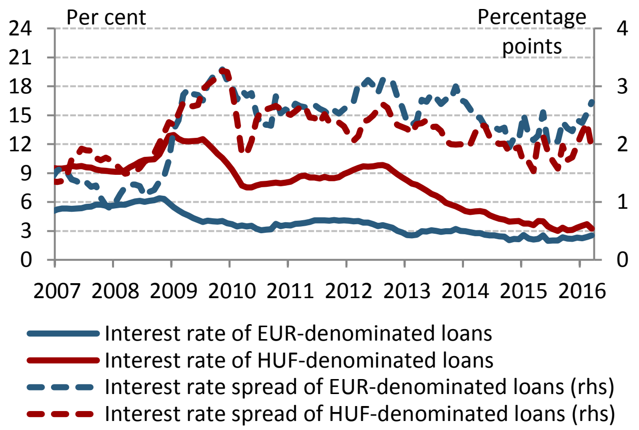
The decline in the external debt of the banking sector, which also started in recent years after 2010, is another important change emphasised by the credit rating agency. The conversion into forints of households' FX loans at the initiative of the Bank played a major role in this; the foreign currency needed by the banking sector was provided by the Bank. Since end-2015, the gradual ceasing of the FX transactions between the MNB and banks has gradually provided backing for banks to repay their external liabilities, significantly contributing to the dynamic reduction of the total external debt of the country.

Looking ahead, in addition to awarding the stable outlook, the credit rating agency mentions that together with several factors a **further decline in external debt could lead to another upgrade**. The aforementioned programmes of the MNB point to this direction, and thus they are expected to contribute to the improvement in the country's risk assessment in the future as well, supporting the permanent maintenance of the current monetary conditions that are necessary in terms of achieving the inflation target.

4.2. Credit conditions of the financial intermediary system

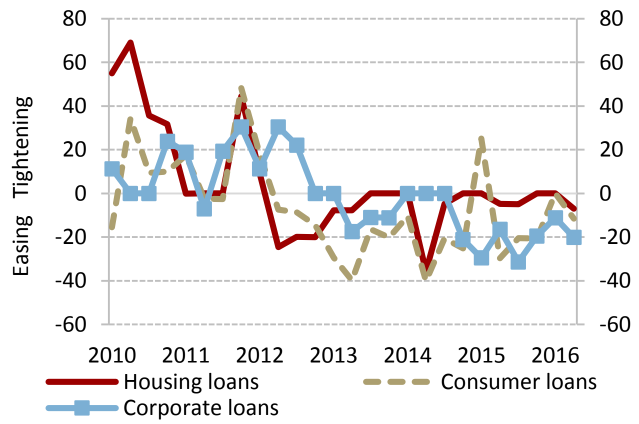
In 2016 Q1, the financing costs of corporate HUF loans decreased, and the credit conditions continued to ease. This was facilitated by increased bank competition, improving economic outlook and increased risk tolerance, and these factors are also expected to support the easing of lending conditions in the next two quarters. Financing costs also fell in household consumption financing, while credit conditions have remained unchanged in the case of housing loans. In addition, demand for loans continued to rise significantly in both segments, which is strongly supported by the availability of the home creation programme. The one-year forward-looking real interest rate recovered from its previous historical low, mainly as a result of declining inflation expectations.

Chart 4-10: 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

Chart 4-11: Changes in credit conditions in the corporate and household sectors



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

4.2.1. Corporate credit conditions

Corporate HUF loan spreads continued to decline, which can primarily be attributed to the composition effect. The average interest rate level on new HUF loans with floating interest rates or with up to 1-year initial rate fixation[5] declined by 0.4 percentage point compared to the end of the previous quarter. The average reduction in spreads originated from an increase in spreads on small-amount loans and a significant drop in spreads on high-amount loans. However, the composition of loans granted plays a key role in the reduction in the average spread. The ratio of loans with lower average spread but of higher amount has increased, especially the ratio of so-called "money market" type deals within that. When these are eliminated, the average spread on other loans would have dropped by 0.1 percentage point to 1.9 percentage point during the quarter (Chart 4-10). The average interest spread on EUR loans increased by 0.3 percentage point in the period under review. By the end of the period, the average level of HUF interest rates reached 3.3 per cent, while that of EUR loans reached 2.7 per cent.

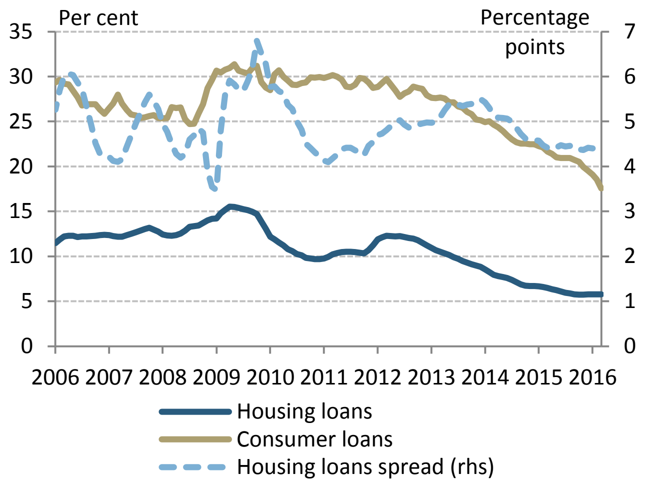
Corporate credit terms continued easing in Q1. According to the Lending Survey,[6] in net terms, 11 per cent of banks eased corporate credit conditions (Chart 4-11). Among the factors contributing to the easing, the improvement in economic prospects was emphasised the most by the responding institutions. In addition, banks' responses also mentioned market share objectives as well as the change in risk tolerance.[7] Looking ahead, a net 20 per cent of respondents mentioned the expected easing of lending conditions in general, and the majority of them see the reason for that in market share objectives and improving economic outlooks. The banks also indicated the improvement in their risk tolerance, which may be

[5] The majority of loans granted under the Funding for Growth Scheme are long-term loans; therefore, the interest rates reviewed mainly reflect lending developments outside of the scheme.

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

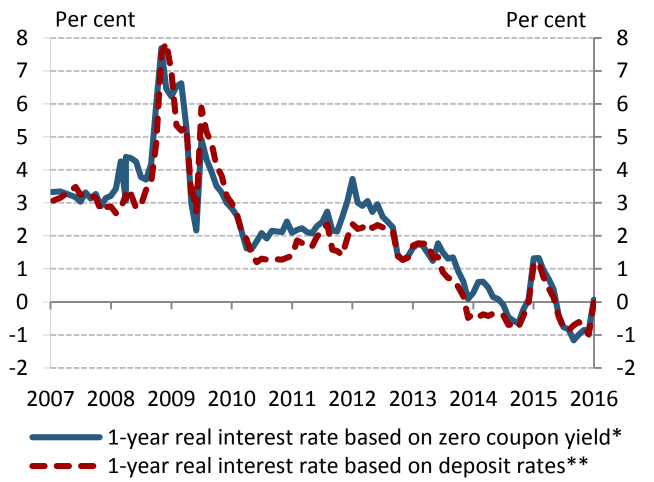
[7] For a detailed analysis of the findings of the Lending Survey, please refer to the MNB's *Trends in Lending* publication, available at: *http://www.mnb.hu/letoltes/hitelezesi-folyamatok-2016-majus-en.pdf*

Chart 4-12: 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

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

strengthened by continuous improvement of portfolio quality.

4.2.2. Household credit conditions

Housing loan interest rates and spreads remained unchanged in Q1. In 2016 Q1, the annual percentage rate of charge on disbursed loans dropped by 1.9 percentage points to 17.6 per cent in the case of consumer loans. However, the average interest rate and spread on housing loans did not change in the period under review, remaining at 5.8 per cent and 4.4 percentage points, respectively, at the end of March (Chart 4-12). No heterogeneity of costs was seen in terms of interest payment either; the total costs of variable-rate housing loan products stood at 4.9 per cent, while the average APR level of fixed-rate loans was at 6.5 per cent on average, similarly to the values recorded at the end of December.

Credit conditions did not ease in any loan segment during the quarter. Banks responding to the lending survey did not modify the terms of their consumer or housing loans in 2016 Q1. In their opinion, the easing is justified by bank competition and market share objectives in the case of consumer loans, and by the economic outlook and developments in the housing market in the case of housing loans. No easing can be expected in the credit conditions in the upcoming period, either, while the majority of banks expect a continued recovery in demand. In respect of housing loans, all respondents expect rising demand, with use of the home creation programme also playing an important role in this regard.

4.2.3. Changes in real interest rates

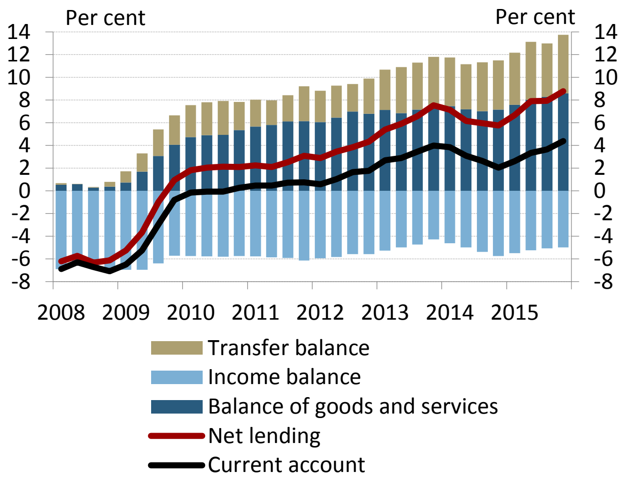
In 2016 Q1, the annual forward-looking real interest rate recovered from its historical low. In March 2016, on the basis of the yield estimated from government securities, the real interest rate level reduced by inflation expectations stood at 0.1 per cent, after an increase of 1 percentage point. Following a similar increase of 0.9 percentage point, the real interest rate calculated on the basis of the deposit interest rate reached a level of –0.1 percentage point in March. Following the increase in January, the average level of real interest rates remained unchanged during the quarter, according to both indexes (Chart 4-13). The increase in the real interest rate in January was mainly due to the decline of 1 percentage point in inflation expectations.

5. THE BALANCE POSITION OF THE ECONOMY

5.1. External balance and financing

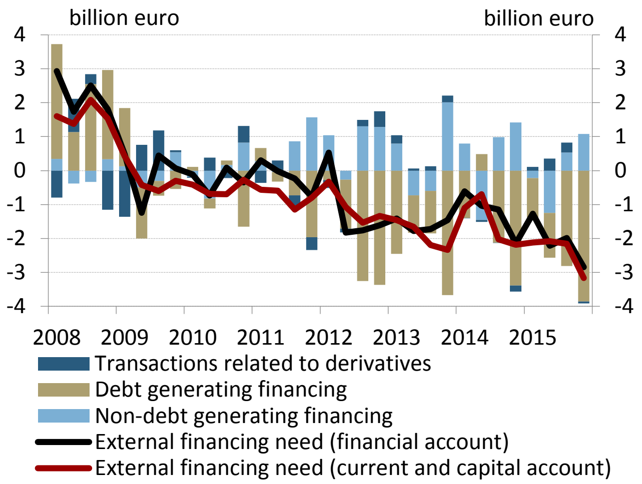
Hungary's net lending continued to increase in 2015 Q4, amounting to 8.8 per cent of GDP. All three components contributed to the growing external surplus. The increase in the trade surplus was attributable to the expansion of automotive industry production and the improvement in the terms of trade, as well as higher net exports of services. Utilisation of EU transfers increased at the end of the year again, while the deficit on the income balance decreased slightly. Based on monthly data, at the beginning of the year, net lending was down slightly, as utilisation of EU transfers fell. According to the financing approach, in Q4 there was an unprecedented decline of EUR 3.9 billion in external debt, in which the main role was played by banks. Repayment of external debt continued in the first three months of the year as well, while FDI increased. External debt indicators declined further at end-2015, and net external debt fell below 25 per cent of GDP. In a sectoral breakdown, corporates' net financial savings increased, while the net borrowing of the state continues to be restrained, and households' savings remain high.

Chart 5-1: Changes in net lending (cumulated four-quarter values; as a proportion of GDP)



Note: Cumulated four-quarter values.
Source: MNB

Chart 5-2: Structure of net lending *



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

5.1.1. Developments in Hungary's net lending position

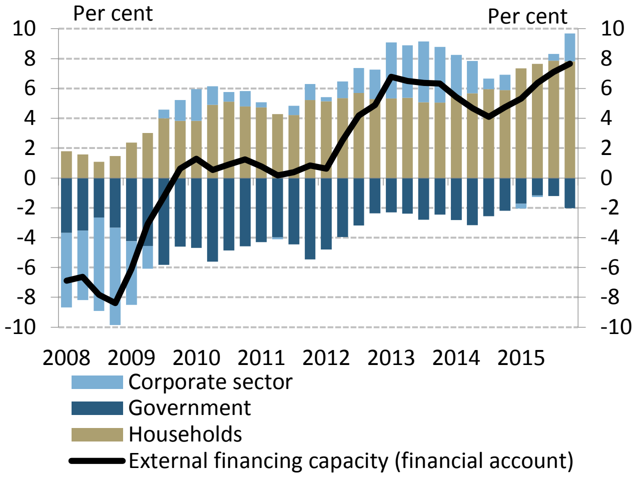
In 2015 Q4, Hungary's net lending increased to 8.8 per cent of GDP, while the current account surplus rose to 4.4 per cent (Chart 5-1). The **trade surplus** grew to 8.6 per cent of GDP in 2015, with the rise in exports of goods as a result of expanding capacity utilisation in the automotive industry and the improvement in the terms of trade due to falling oil prices playing a significant role in this development. As a result of decelerating investment growth, slower import growth also boosted the surplus of net exports. The **transfer balance** increased again, and its four-quarter value exceeded 5 per cent of GDP at the end of the year. In this, the utilisation of EU transfers continued to be a key factor, exceeding EUR 3 billion at the quarterly level. The deficit on the **income balance** continued to decline, still reflecting the decrease in interest paid abroad. Based on preliminary monthly data, Hungary's net lending declined slightly in Q1, mainly due to lower utilisation of EU transfers, which is related to the new programming period. This effect was partly offset by the possible slight increase in the trade surplus.

5.1.2. Developments in financing

Net lending calculated from the financing side reached an unprecedented amount of more than EUR 2.8 billion in Q4 (Chart 5-2). During the quarter, non-debt liabilities increased by nearly EUR 1 billion, while domestic agents repaid some EUR 3.9 billion of their external debts.

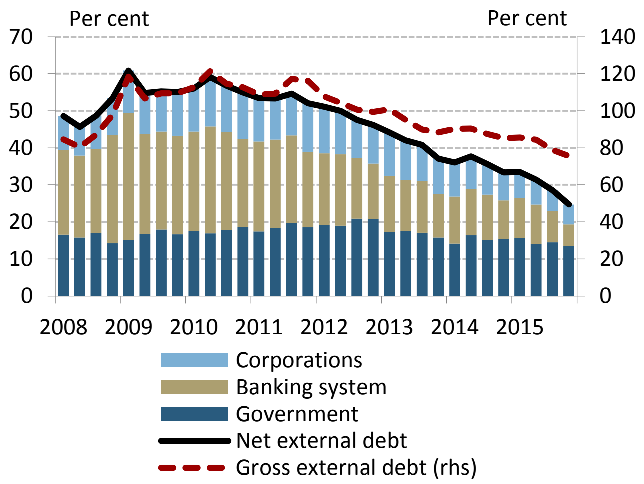
In Q4, net foreign direct investment (FDI) by non-residents increased by more than EUR 0.6 billion, complemented with a nearly EUR 0.4 billion rise in stock investments. FDI by non-residents continued to increase, primarily as a result of foreign corporates' reinvested earnings. In addition, non-residents' stock investments in Hungary also rose, and thus the non-debt liabilities of the economy increased by more than EUR 1 billion in total.

Chart 5-3: Breakdown of net lending by sectors (four-quarter cumulation as a proportion of GDP)



Note: Four-quarter cumulation.
Source: MNB

Chart 5-4: Breakdown of net external debt by sectors (values as a percentage of GDP)



Note: Excluding intercompany loans.
Source: MNB

Hungary's net external debt declined significantly, falling by EUR 3.9 billion, at the end of the year, which is mainly attributable to the banking sector. At the end of the year, banks' net external debt was some EUR 2.8 billion lower, with the FX liquidity received due to the conversion of FX loans into forints as well as banks' balance sheet optimisation at the end of the quarter and the corporate sector's year-end placement of deposits playing a role in this regard. The consolidated general government also reduced its net external debt by some EUR 0.8 billion at the end of the year, which is attributable to the strong utilisation of EU transfers. According to preliminary monthly data, the decline in external debt continued in Q1. At the same time, the sectoral breakdown of the outflow of funds was considerably influenced by the decline in FX reserves in connection with the conversion of FX loans into forints.

The rise in net lending is mainly related to the significant expansion in corporate savings, while households' net savings continue to be high and the state's net borrowing is low (Chart 5-3). The steadily restrained net borrowing of the budget is attributable to the rise in tax revenues resulting from the expansion in employment and consumption as well as from the suppression of the shadow economy and to the declining interest expenditures. Corporate net lending continued to rise at the end of the year, which may have also been due to the slower expansion in investment, while households' high savings may still be related to the low credit demand and rising incomes. According to the Q1 preliminary financial accounts, households' four-quarter net savings declined (as a result of the drop-out of the effect of the settlement), while the net borrowing of the state decreased mainly in connection with the higher corporate tax revenues.

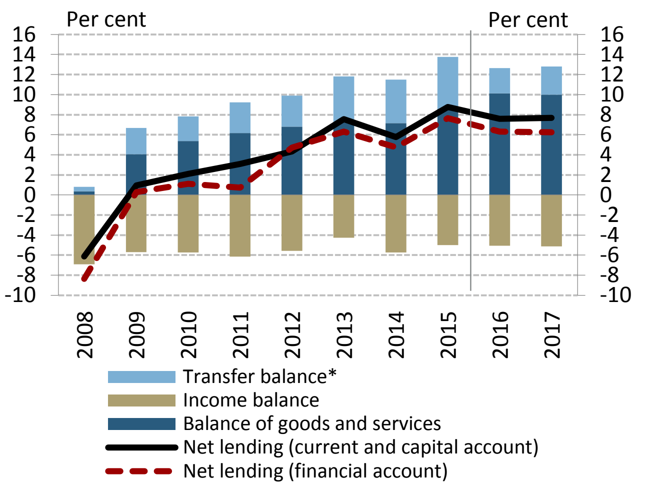
By end-2015, the net external debt-to-GDP ratio had declined below 25 per cent (Chart 5-4). External debt continued to decline, also supported by an increase in GDP. As a result, net external debt sank below 25 per cent of GDP at the end of the year. In line with the debt repayment, the strongest decline was observed in the case of the banking sector. Gross external debt also decreased further, falling below 76 per cent of GDP, which represents a decline of around 10 percentage points in the span of one year. This decline may have reflected the impact of the tightening FFAR and the newly introduced FECR rules as well.

5.2. Forecast for Hungary's net lending position

Due to lower EU transfers, net lending will decline in 2016 and 2017, but will still remain high. In line with the significant net lending which will remain stable at around 8 per cent of GDP, Hungary's external indebtedness may also decline further. The decrease in 2016 is attributable to the fall in transfer inflows related to the new programming period of the EU. In line with rising external demand, the export market share of the Hungarian economy is expected to grow further, entailing a higher trade surplus. In addition, improvement in the terms of trade due to the lower oil prices is also expected to contribute to the increase in the trade surplus, the impact of which will be mitigated by faster growth in household consumption. In 2017, net lending will increase slightly, due to the transfer balance, which is rising again. From the sectors' side, households' high net lending continues to play a prominent role in the robust net lending, while the general government's deficit may be close to last year's historically low level this year as well. However, fiscal expansion will be reflected in a higher deficit as well by 2017. On the whole, net lending may remain high over the entire forecast horizon, leading to further decline in external vulnerability with the decline in the foreign currency debt of the state.

In 2016 and 2017, net lending may remain stable at a high level of close to 8 per cent of GDP (Chart 5-5). The net savings of the economy are declining this year as utilisation of transfers is decreasing in line with the upcoming new programming period of the EU, which is partly offset by the rising trade surplus. In addition to growing external demand, the expansion in the trade balance will also be supported by the further improvement in the terms of trade due to lower oil prices; this latter item is expected to contribute to the increase in the trade surplus by more than 1 per cent of GDP. The aforementioned impacts are dampened by the import content of the expansion in domestic absorption, and thus, on the whole, the trade surplus may stabilise at 10 per cent of GDP. Due to contrasting effects, the deficit of the income balance will remain nearly unchanged. Economic growth will result in a further expansion in foreign-owned companies' profits, offset by the lower interest expenditure of the declining external debt.

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

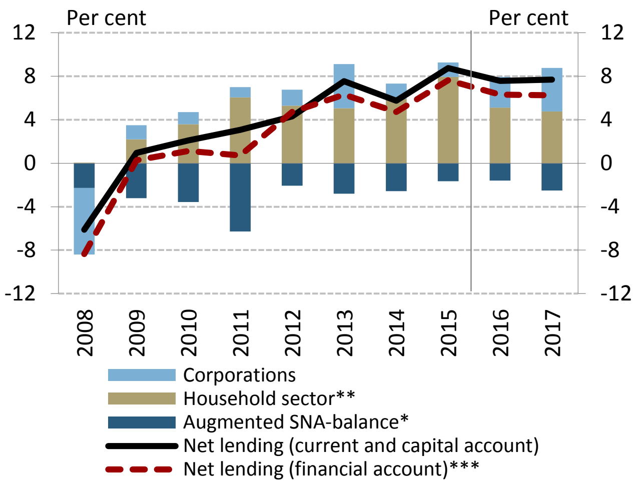


Note: * The sum of the balance of the current transfers and the capital account balance.
Source: MNB

Looking at the savings of sectors, **the high net lending of the economy continues to be mainly attributable to households' considerable savings**: with the fiscal expansion, the net borrowing of the general government is increasing slightly, households' savings decline somewhat in the context of stronger consumption, but remain high, while corporates' net lending may rise (Chart 5-6).

According to the underlying developments, the financial savings of households will fall slightly between 2015 and 2017, but remain high. Excluding the settlement of FX loans, which temporarily adds to savings, households' net lending may decline slightly in 2016 and 2017, in line with the consumption growth due to easing precautionary motives and with the rise in household investment, which is attributable to both state subsidies and lower VAT. At the same time, the decline in savings will be somewhat offset by the impact of tax cuts (personal income tax, VAT) and

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



Note: * In addition to the central government, the augmented general government includes local governments, MNV Zrt., 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 returning to the public pension system. The net saving figure in the financial accounts differs from the data in the chart. *** We expect that 'Net errors and omissions' (NEO) will return to the historical average.
Source: MNB

the wage increases implemented in the public sector this year and next year.

In parallel with the fiscal expansion, corporates' net lending will increase over the forecast horizon. In 2015, the settlement related to FX loans modestly reduced financial corporations' net lending. This year's fall in corporate savings (excluding one-off effects) is related to the lower EU transfers. In 2017, however, as a result of the fiscal expansion, income will grow, entailing a rise in corporate net lending.

After registering a lower level this year, the net borrowing of the general government may rise in 2017, owing to expansion in growth-stimulating expenditures. The net borrowing of the state remains unchanged this year, amounting to 1.6 per cent of GDP again. This unchanged net borrowing will evolve as a result of contrasting impacts. Public sector wage increases and investment as well as the reduction of the personal income tax and the expansion of the family tax allowance add to the net borrowing this year. By contrast, higher corporate tax revenues, revenues from land auctions, lower interest expenditure due to the continued repricing of forint debt and the lower own contribution requirement related to lower EU transfer utilisation all point to a lower deficit. In 2017, the expansion, implemented in parallel with the steadily disciplined fiscal policy, may increase demand substantially, while the announced wage increases and investment will add to the net borrowing of the state.

High net lending will further reduce external debt indicators, and thus Hungary's external vulnerability as well. With robust net lending still in place, the repayment of external debt will continue, entailing a decline in external vulnerability. In parallel with a gradual decline in the government debt-to-GDP ratio, FX debt may shrink more quickly, also contributing to the reduction of external vulnerability. Overall, developments in financing point to a pronounced decline in external debt indicators in the coming years as well.

5.3. Fiscal developments

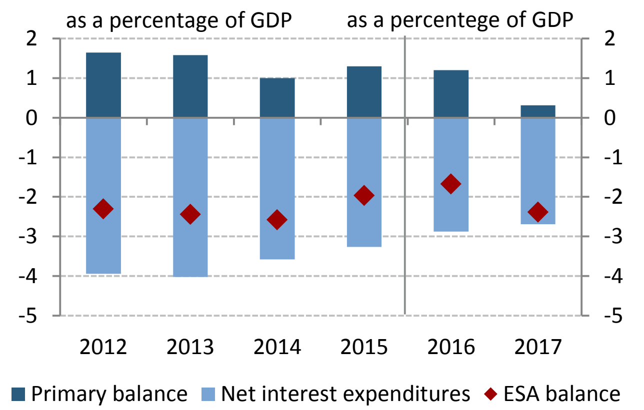
The low deficit of the government sector seen in recent years is projected to decrease further in 2016, but in 2017 the deficit will be somewhat larger due to the intention of the government to stimulate the economy. In 2016, the deficit is expected to be slightly lower than forecast in March, but in 2017 it is anticipated to be higher. The budget for this year and the next year is based on positive underlying trends (dynamically growing tax bases, historically low interest rates). In 2016, the ESA deficit is expected to be below 2 per cent of GDP – at 1.6–1.8 per cent – as the surplus fiscal revenues exceed the surplus expenditures that have already been announced. In 2017, the deficit is forecast to increase to 2.4 per cent in GDP terms, as the adopted budget seeks to further boost the economy by way of investments, the more widespread increase of public employees' wages and tax cuts. As a result, the demand incentive effect of fiscal policy is projected to be roughly neutral in 2016 and significantly positive in 2017. As compared to our expectations in March, the deficit projection for 2016 has grown somewhat more positive, and the projection for 2017 increased by 0.7 percentage points based on the adopted budget. According to our forecast, the downward trend in the debt path will continue, which is supported by the positive macroeconomic fundamentals. The gross debt-to-GDP ratio drops from 75.3 per cent at the end of 2015 to 74.5 per cent this year, and to 73.4 per cent by the end of 2017, thereby fulfilling the domestic and international requirements.

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

	2015	2016	2017
ESA deficit	-2.0	(-1.6) - (-1.8)	-2.4
Cyclically adjusted ESA-balance	-1.5	(-1.3) - (-1.5)	-2.2
Primary ESA-balance	1.3	1.1 - 1.3	0.3
Fiscal impulse*	-0.6	0.1 - 0.3	1.2

Note: In the year 2016, the values of the single balance indicators may develop in the given range depending on the use of the Country Protection Fund. For 2017 the calculation was made by having assumed the cancellation of the Country Protection Fund. Namely, the Country Protection Fund is only allowed to be utilized, when the government deficit does not rise above the appropriated 2,4 percent, taking into account the free reserves as well. * Change in the augmented (SNA) primary balance.
Source: MNB

Chart 5-7: Decomposition of the ESA-balance



Note: The numbers do not include the imputed interest expenditures related to the reform of the pension system.
Source: Eurostat, MNB

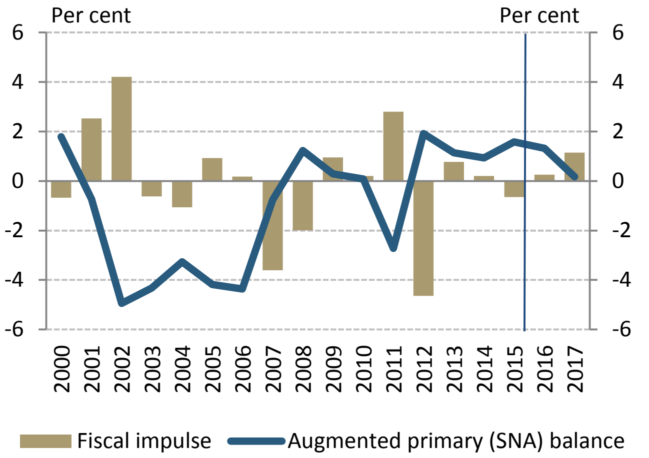
5.3.1. Main balance indicators and the fiscal demand effect

According to our forecast, the ESA deficit of the government sector in GDP terms will amount to 1.6–1.8 per cent in 2016 and to 2.4 per cent in 2017 (Table 5-1). Both revenue-side and expenditure-side factors contribute to the low deficit in both years. Revenues will grow dynamically, owing to buoyant wage dynamics, the success of measures aimed at reducing the shadow economy and some extraordinary items. On the other hand, expenditures will be under tight government control, and interest expenditures have been declining each year thanks to the persistently low interest rate environment and the gradual repricing of debt (Chart 5-1). If the available free reserves (Country Protection Fund) are utilised in 2016, the deficit would amount to 1.8 per cent, while it would be 1.6 per cent if the reserves were preserved. According to our estimate, the government would have the opportunity to utilise its free reserves, but a governmental decision has not yet been made in this regard, and therefore a range estimation is appropriate for the 2016 deficit figure. According to our forecast, the 2.4 per cent deficit target may be achieved in 2017, but for this to occur, total cancellation of the Country Protection Fund would be necessary. This assumption meets the requirements of the Budget Act, since the free reserves may only be utilised, if the achievement of deficit target is ensured (Chart 5-7).

According to our projections, following the moderate narrowing in demand in 2015, fiscal policy will be almost neutral from the perspective of aggregate demand in 2016 (Chart 5-8).[8] Aggregate demand is boosted by the

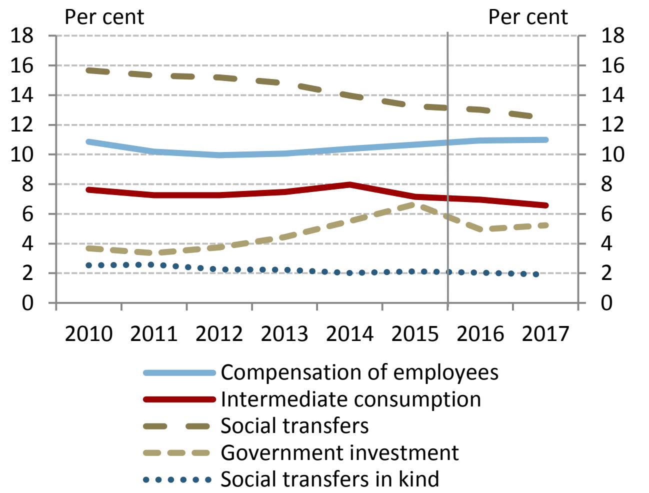
[8] The fiscal impact is quantified by the change in the augmented (SNA) primary balance, which gauges the impact of the fiscal measures and developments and the automatic stabilisers on the income position of the other sectors.

Chart 5-8: Fiscal impulse (as a percentage of GDP)



Note: 1. The fiscal impulse corresponds to the change in the augmented (SNA) primary balance. 2. In the case of fiscal impulse the positive prefix indicates demand expansion, while the negative prefix implies demand restraint. 3. Assuming partial utilisation of the available free reserves in 2016, and complete cancellation in 2017.
Source: MNB

Chart 5-9: Government sector primary expenditures as a percentage of GDP



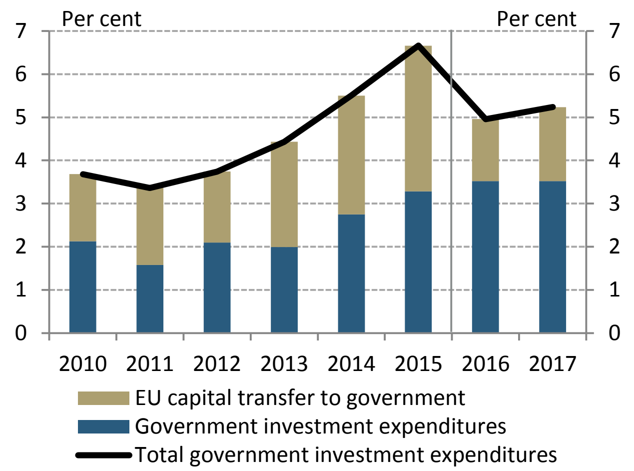
Source: HCSO, MNB

reduction of the flat-rate personal income tax, the expansion of the family tax base allowance and the family home creation allowance, as well as the drop in the VAT rate for pork and newly built homes from 27 to 5 per cent, the considerable decline in the bank levy and the significant rise in government wages and investments. The positive effects of these measures may be offset by the surplus corporate tax revenues achieved through the option of the tax credit for growth, the proceeds from selling state-owned land as well as the transfers that, in GDP terms, have been on the decline for years. According to our prognosis, the ESA deficit adjusted for the cyclical fluctuations of the economy will be around 1.3–1.5 per cent of GDP in 2016. On account of the fiscal easing, this figure may rise to 2.2 per cent in 2017, which basically conforms with the expectations of the government.

2017 is forecast to bring a substantial demand stimulus, which will also be reflected in the budget deficit. On the revenue side, the targeted VAT reduction and the further expansion of the family tax base allowance will increase the disposable income of households. In addition, the tax burden on the banking system will be eased due to the reduction in the bank levy and the elimination of the credit institutions' contribution. On the expenditure side, the growing government investments from own funds (e.g. Modern Cities Programme, public road development) and the continuation and expansion of the increase in public sector wages and the career path models (for those working in the education and healthcare sectors, employees in the National Tax and Customs Administration and law enforcement as well as government officials) will provide additional demand stimulus, and a significant proportion will flow back into the budget in the form of tax and contribution revenues. The positive effects of these measures on growth will only be slightly counterbalanced by the rise in the excise duty (on tobacco) expected from 2017.

The fiscal easing in 2017 will mainly occur via the increase in public sector wages and the significant expansion of government investments from own funds (Chart 5-9). According to our projections, compensation of employees of the government sector as a percentage of GDP will continue to rise in 2017, mainly owing to the public sector wage increases implemented within the framework of the sectoral career path models. In addition, government investments will also rise, which will be chiefly reflected in the widespread implementation of the Modern Cities Programme and the programme aimed at public road development, partly offsetting the temporary drop in EU transfers. However, interest expenditures as a percentage

Chart 5-10: Composition of government sector investment expenditures (as a per cent of GDP)



Source: HCSO, MNB

Table 5-2: Decomposition of the change in the 2016 ESA balance forecast (compared to the March 2016 Inflation Report; as a percentage of GDP)

	Macro data	Measure and other	Total
I. Central government	0.4	0.2	0.6
Payment by economic units		0.1	0.1
Consumption taxes	0.1	0.03	0.2
Labour taxes	0.3	0.0	0.3
II. Central government	0.0	-0.5	-0.5
Net expenditures of budgetary organisations		-0.5	-0.5
Medical and preventive care		-0.1	-0.1
III. Other effects	0.0	0.1	0.1
Other items		0.1	0.1
Total (I.+II.+III.)	0.4	-0.2	0.2

Note: The positive and negative prefixes indicate deficit-reducing and deficit-increasing effects. The sum of partial data may differ from the aggregated value because of the rounding.
Source: MNB

of GDP will decrease, thanks to the subdued interest rate environment, and intermediate consumption and social transfers will also diminish. The latter is mainly attributable to the reduction in pension and social spending relative to GDP, while the drop in intermediate consumption is a result of the disciplined financial management of the government.

5.3.2. Budget balance in 2016

According to our forecast, depending on the utilisation of the Country Protection Fund, the ESA deficit of the general government in 2016 may be 1.6–1.8 per cent of GDP, i.e. slightly favourable than forecast in the March *Inflation Report* (Table 5-2). The range estimation for the 2016 fiscal deficit is justified, as utilisation of the Country Protection Fund can only occur by government decision, when the deficit target is achievable. Our projection for the revenues of the central subsystem of the general government relative to GDP rose by 0.6 percentage points, and the forecast for expenditures rose by 0.5 percentage points as compared to our last prediction. On the revenue side, the difference is mostly attributable to the 0.3-percentage point rise in our projections for taxes on labour, which is the result of the larger-than-expected gross wage bill. The balance is also improved by the rise in consumption-type taxes, which is due to the consumption of households on the one hand and to public investments on the other hand, as well as minor measures affecting the excise duty.

The similar, 0.5-percentage point expansion of the expenditure side is entirely due to the amendment to the Budget Act. Of this, 0.3 percentage points can be attributed to growth in the government's own investments, which is largely a result of the expansion of this year's budget allocated to the Modern Cities Programme. The other 0.2-percentage point increase is explained by the adjustment of our prognosis for the compensation of employees of the general government. This is primarily due to increased public sector spending on education – affecting the Klebelsberg Institution Maintenance Centre, higher education and vocational training centres – and the announced wage rises in the healthcare sector. Most of the expenditure that appeared in the amended act was already known earlier, and therefore they were included in our March prognosis as well (family home creation allowance, public road developments).

Thus, according to our estimates, the deficit will be lower this year than projected in the Budget Act (Table 5-3). This is mainly attributable to the expected higher proceeds

Table 5-3: Differences between our forecast and the appropriations set out in the 2016 Budget Act (as a percentage of GDP)

	Difference from appropriation
I. Central government revenues	0.6
Payment by economic units	0.2
Labour taxes	0.1
Payments related to state property	0.3
II. Central government expenditures	-0.5
Net own expenditures of budgetary organisations	-0.3
Net expenditures related to EU-funding	-0.1
Housing subsidies	-0.2
START public work scheme	0.1
III. Other effects	0.1 - 0.3
Net interest expenditures	0.1
Balance of local governments	0.1
Lock of the Country Protection Fund	0.0 - 0.2
Other items	0.0
Total (I.+II.+III.)	0.2 - 0.4

Note: The positive and negative prefixes indicate deficit-reducing and deficit-increasing effects, respectively, compared to appropriations. The sum of partial data may differ from the aggregated value because of the rounding.
Source: MNB

Table 5-4: Decomposition of the change in the 2017 ESA balance forecast (compared to the March 2016 Inflation Report; as a percentage of GDP)

	Macro data	Measure and other	Total
I. Central government revenues	0.7	0.1	0.8
Consumption taxes	0.2	0.0	0.2
Labour taxes	0.5	0.0	0.5
Payments related to state property		0.1	0.1
II. Central government expenditures	0.0	-1.8	-1.8
Net expenditures of budgetary organisations		-2.1	-2.1
Subsidies, social transfers		0.1	0.1
Transfers to local governments		0.1	0.1
Expenditures related to state property		0.1	0.1
III. Other effects	0.0	0.3	0.3
Cancellation of Country Protection Fund		0.2	0.2
Other items		0.1	0.1
Total (I.+II.+III.)	0.7	-1.4	-0.7

Note: The positive and negative prefixes indicate deficit-reducing and deficit-increasing effects. The sum of partial data may differ from the aggregated value because of the rounding.
Source: MNB

from the sale of government-owned land. In addition, the tax and contribution bases that expand dynamically due to the favourable macroeconomic developments contribute to somewhat higher revenues than planned. On the other hand, spending is also expected to be higher than the appropriation. Net own expenditures of budgetary organisations may be higher by 0.3 per cent as compared to the governmental appropriation in this year's budget, which, in addition to the combined effect of several minor items, is caused by the stronger-than-expected increase in the stock of hospitals' supplier credit. Furthermore, spending on housing subsidies will be higher than the appropriation, which is due to the increased momentum of the family home creation allowance programme. This may be counterbalanced by the fact that based on last year's data, public spending on the START labour programme is projected to be lower than planned by the government.

5.3.3. Budget balance in 2017

According to our forecast, assuming total cancellation of the Country Protection Fund, the ESA deficit of the general government relative to GDP will be 2.4 per cent in 2017. Our current prognosis is higher than the March forecast by 0.7 per cent of GDP, which is mainly due to the fact next year's budget is now known (Table 5-4). In the case of revenues, the changes as compared to our March prognosis are almost all linked to the adjustment of the macroeconomic path. The substantial increase in wage-related tax revenues is explained by the stronger-than-expected gross wage dynamics. The rise in consumption-related tax revenues is chiefly attributable to households' consumption and public investments which are both higher than expected, as well as the results of the measures targeting the reduction of the shadow economy. The effect of next year's VAT reduction may be partly offset by the impact of the increase in the excise duty.

On the expenditure side, in contrast to revenues, the differences as compared to the prognosis in March were caused by the announced measures. Public sector wages (continuation and expansion of the sectoral career path programmes, and other public sector wage increases) and government investments from own funds (Modern Cities Programme, public road development) both rise considerably. In addition to the measures that boost demand, the cancellation of the National Protection Fund is assumed for next year, which would enable achievement of the deficit target. The latter was needed, because – according to the Budget Act – the free reserves may only be utilised, if the deficit-to-GDP ratio does not rise higher

Table 5-5: Differences between our forecast and the appropriations set out in the 2017 Budget Act (as a percentage of GDP)

	Difference from appropriation
I. Central government revenues	-0.2
Payment by economic units	0.1
Consumption taxes	-0.2
II. Central government expenditures	-0.1
Housing subsidies	-0.2
Net expenditures related to EU-funding	0.1
III. Other effects	0.2
Cancellation of Country Protection Fund	0.2
Other items	0.0
Total (I.+II.+III.)	0.0

Note: The positive and negative prefixes indicate deficit-reducing and deficit-increasing effects, respectively, compared to appropriations. The sum of partial data may differ from the aggregated value because of the rounding.
Source: MNB

than 2.4 percent, including the amount of the reserves to be utilised.

All in all, according to our projection, the ESA deficit target in the 2017 Budget Act is feasible (Table 5-5), but in respect of certain items in the central subsystem, our estimates differ from the appropriation in several points. On the revenue side, the different projections for the expected impact of the measures targeting the better efficiency of tax collection explain the fact that our prediction with respect to consumption-related taxes is lower than the appropriation. However, the effects of these may be somewhat counterbalanced by higher revenues from the excise duty than in the Budget Act. On the expenditure side, we expect that the family home creation allowance will be utilised more than forecast in the Budget Act. At the same time, according to our forecast, the disbursement of EU transfers will not be as dynamic in 2017 as in the appropriation. This reduces the expenditure with the amount of the state's own contribution. We believe that the planned deficit target can be achieved if the Country Protection Fund is not utilised.

5.3.4. Risks surrounding the baseline scenario

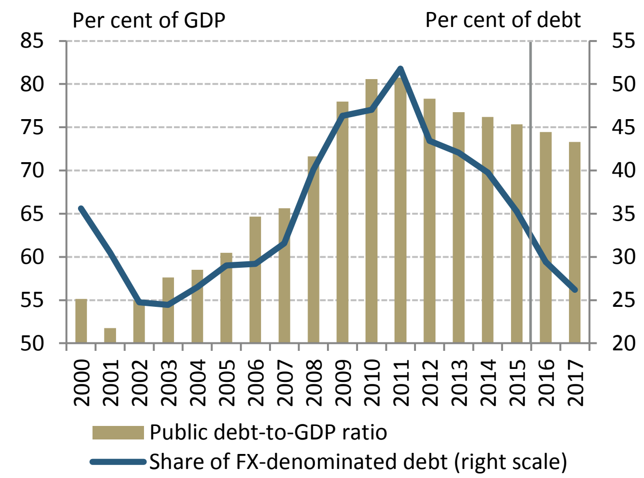
Three main uncertainties can be mentioned over the forecast horizon: the recourse to EU funds, the utilisation of the family home creation allowance and the increased efficiency of tax collection. Forecasting the utilisation of EU grants is difficult because a new programming period has started in the EU. The expected utilisation is forecast to be slightly higher than the appropriation in 2016, and lower than planned in 2017. The overwhelming majority of such transfers in 2016 is linked to the last period, which will basically completely end in the coming months. In parallel with this, the volume of transfers linked to the new period may increase substantially towards the end of the year. Nevertheless, it is difficult to predict the acceleration of absorption. According to our forecast, utilisation of the family home creation allowance will be higher than planned in the Budget Act in both years, but based on current data this projection involves huge uncertainties. Finally, the government measures aimed at improving the efficiency of tax collection have produced substantial results. Nonetheless, it is difficult to gauge how the development of the measures introduced so far and the new steps may increase revenues, especially because the Budget Act does not detail the measures and their impact. The fact that we expect the VAT revenues in 2017 to be lower than the budgetary appropriation is largely due to this.

5.3.5. Expected developments in public debt

Based on the MNB's preliminary financial accounts data, **gross public debt amounted to 76.9 per cent of GDP at the end of 2016 Q1**. The debt ratio in the first quarter of this year was higher than the figure of 75.3 per cent registered at the end of 2015, and also increased slightly in year-on-year terms (by 0.1 per cent). The increase in debt in the first quarter is in line with the usual intrayear seasonality, however in contrast to other years, this was not caused by the budget deficit but rather by the increase in the state's deposits. The debt issuance for repaying the last instalment (amounting to EUR 1.5 billion) of the EU–IMF loan package also contributed to the debt at the end of the first quarter, but the debt-reducing effect of the repayment only emerged in Q2. On the other hand, the net financing need of the general government was extremely low, supporting the subdued expansion of debt. In 2016 Q1, the government budget deficit calculated from the financing side amounted to a mere HUF 4 billion, which is the best figure since the political transition.

Until the end of 2017 – assuming a constant, end-2015 HUF exchange rate – we forecast that the public debt ratio will continue to fall, and that the debt rule set forth in the Fundamental Law will be complied with (Chart 5-11). According to our forecast, the downward trend of the end-of-year debt ratio seen in recent years will continue, which is supported by the somewhat looser but still disciplined budget management, the rising interest savings of the state due to the low interest rate environment as well as economic growth. According to our projections, the debt ratio will fall to around 74.5 per cent this year, and to 73.4 per cent by the end of 2017. In parallel, the forint financing of the maturing foreign currency debt will continue to ensure the dynamic reduction of the foreign currency ratio of the government debt and of the economy's external vulnerability. From the perspective of statistical methodology, the issue of the potential inclusion of the Eximbank in the public sector, which is still not reasonable according to the MNB, causes uncertainty in the projections. In line with the currently official data, we did not include this in our prognosis.

Chart 5-11: Gross public debt forecast – calculated using an unchanged (end-of-2015) exchange rate over the forecast horizon



Source: MNB

Box 5-1: Budget Bill for 2017 and amendments to the 2016 Budget Act

As adopted by the National Assembly on 13 June, the 2017 Budget Bill targets an ESA budget deficit of 2.4 per cent of GDP for 2017. Accordingly, in comparison to the 1.7 per cent deficit target set in the 2015 *Convergence Programme* and in the March issue of the *Inflation Report*, the Government envisages substantial easing in three areas: increased government investment (e.g. public road development and the Modern Cities Programme), wage increases in excess of the previously announced plans (in healthcare, higher education, public administration and the tax authority), and targeted VAT reductions. Based on the new information, the GDP-proportionate compensation of employees will increase by 0.3

percentage points, while government investment in 2017 will be raised by 0.5 percentage points compared to the data presented in the March *Inflation Report*.

Table 5-6: Effects of the new government measures on GDP volume directly affecting the households

	2016	2017
VAT reduction	-	0.1
Excise duty increase	-0.0	-0.1
Wage increase in the governmental sector	0.1	0.2
Total	0.1	0.2

Note: The sum of partial data may differ from the aggregated value because of the rounding.
Source: MNB calculation

The impact of tax measures has also been incorporated into the MNB's forecast for 2017: the VAT reductions (affecting VAT on poultry, milk, eggs, restaurant services and internet subscriptions) are expected to reduce revenues from this tax type by HUF 63 billion in total. The increase in the excise duty on tobacco will generate extra revenues of HUF 37 billion in 2017. The HUF 60 billion rise in public sector wages (continuation and expansion of the career models in the case of education and health sectors, tax authority, law enforcement agencies and state officials) compared to the assumption in the March *Inflation Report* will raise households' disposable income by around HUF 40 billion, which may increase GDP by 0.1 per cent through consumption. VAT reductions and continuing wage increases in 2017 are expected to generate HUF 70 billion in surplus income and savings for households, which will **increase GDP by more than 0.2 per cent through consumption in 2017** (Table 5-1).

According to the MNB's estimate, the VAT reductions in 2017 (affecting staple foods, internet and restaurant services) will lower consumer prices by 0.4 percentage points. The increase in the excise duty on tobacco products will have the opposite effect. In 2016 and 2017, the increase in excise duty is expected to cause a 0.1 and a 0.5 percentage point shift in the annual consumer price index, respectively. Based on the information currently available, tax changes may raise the annual inflation rate by 0.1 percentage point overall, both this year and next year (Table 5-2).

Table 5-7: Impact of government measures on inflation

	2016	2017
VAT reduction: food, internet, restaurant services	-	-0.4
Excise duty increase: tobacco	0.1	0.5
Total (percentage point)	0.1	0.1

Source: MNB calculation

The National Assembly decided to raise the excise duty on fuels in 2017. The excise duty on fuels has been pegged to global oil prices. If Brent crude oil price quotes remain below the USD 50 per barrel statutory limit, gasoline and diesel oil prices will increase by HUF 10 and HUF 5, respectively. Based on market expectations for global oil prices, in 2017 the MNB anticipates no surplus revenues through this channel.

The National Assembly also amended the 2016 Budget Act in light of the expected surplus revenues and a significant increase in expenditures. Before the amendment, the MNB estimated the 2016 deficit at 1.8 per cent, including, essentially in full, both the surplus revenues stated in the amendment and a substantial part of the expenditures, given that the Government had already announced the measures envisaged (e.g. costs associated with the extension of the home subsidy purchase programme for families with children [CSOK], the financing needs of the developments affecting the state school administration centre [KLIK] and the public road development). In view of the new information, now we anticipate even a slightly more favourable deficit-to-GDP ratio than that of 1.8 percent we forecast in March. GDP-proportionate compensation of employees was revised upwards by 0.2 percentage points, while government investment was raised by 0.3 percentage points compared to the data presented in the March *Inflation Report*. The budget balance, however, benefits from the tax implications of the additional expenditures and high month-to-month revenues; accordingly, the MNB's estimate for the expected deficit – despite the new expenditures – is 1.6–1.8 per cent of GDP.

6. BREAKDOWN OF THE AVERAGE CONSUMER PRICE INDEX FOR 2016

Table 6-1: Decomposition of inflation to carry-over and incoming effect

	Effect on CPI in 2016		
	Carry-over effect	Incoming effect	Yearly index
Administered prices	0.0	0.0	0.0
Market prices	-0.4	1.0	0.6
Indirect taxes and government measures	0.0	-0.1	-0.1
CPI	-0.4	0.9	0.5

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 calculated the inflationary effects of changes in the indirect taxes, 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 6-2: Detailed decomposition of our inflation forecast to carry over and incoming effects

	2016				
	Average carry-over effect	Carry-over indirect tax effect	Average incoming effect	Incoming indirect tax effect	Yearly index
Food	-0.6	0.0	0.7	0.0	0.1
non-processed	-0.7	0.0	4.0	-3.2	0.1
processed	-0.5	0.0	0.7	0.0	0.2
Traded goods	0.6	0.0	0.7	0.0	1.3
durables	0.7	0.0	0.7	0.0	1.4
non-durables	0.6	0.0	0.6	0.0	1.2
Market services	0.5	0.0	1.5	0.0	2.0
Market energy	0.3	0.0	-1.2	0.0	-0.9
Alcohol and Tobacco	0.3	0.4	1.4	0.6	2.7
Fuel	-6.4	0.0	0.4	0.0	-6.0
Administered prices	0.0	0.0	0.2	0.0	0.2
Inflation	-0.4	0.0	1.0	-0.1	0.5
Core inflation	0.3	0.1	1.0	0.1	1.5

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 calculated the inflationary effects of changes in the indirect taxes, 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

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Mátyás Hunyadi

(23 February 1443 – 6 April 1490)

He ruled from 1458 to 1490 as King of Hungary, and had been Czech king from 1469 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.

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