

Macroeconomic and financial market developments

March 2016

Background material to the abridged minutes of the Monetary Council meeting of 22 March 2016



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The background material 'Macroeconomic and financial market developments' is based on information available until 18 March 2016.

Section 3(1) of the MNB Act (Act CXXXIX of 2013 on the Magyar Nemzeti Bank) defines achieving and maintaining price stability as the primary objective of the Magyar Nemzeti Bank. The MNB's supreme decision-making body is the Monetary Council. The Council convenes as required by circumstances, but usually twice a month, according to a pre-announced schedule. At the second scheduled meeting each month, members consider issues relevant to decisions on interest rates. Abridged minutes of the Council's rate-setting meetings are released regularly, before the next policy meeting takes place. As a summary of the analyses prepared by staff for the Monetary Council, the background material presents economic and financial market developments, as well as new information which has become available since the previous meeting.

The abridged minutes and background materials to the minutes are available on the MNB's website at:

http://www.mnb.hu/en/monetary-policy/the-monetary-council/minutes

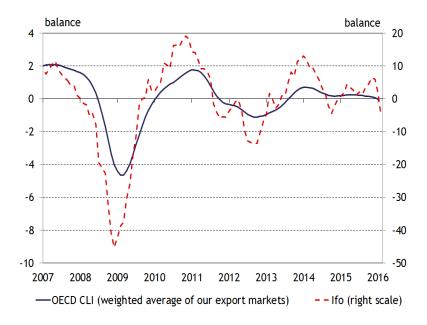
1. MACROECONOMIC DEVELOPMENTS

1.1. Global macroeconomic environment

Countries in the region grew dynamically in the fourth quarter of 2015, with euro area growth continuing at a rate similar to that of previous quarters. Based on the incoming indicators, in recent months growth in emerging economies may have decelerated compared to earlier expectations. Growth remains fragile in the emerging markets and it is surrounded primarily by downside risks. The outlook for growth of emerging regions compared to pre-crisis levels has slackened. Large commodity exporting countries may continue to be hit by low commodity prices in the coming quarters. Persisting geopolitical tensions may continue to restrain growth in developed countries through weaker demand and economic sanctions.

The euro area economy registered a quarter-on-quarter growth rate of 0.3 per cent in the fourth quarter of 2015. Looking ahead, increasing uncertainty and bilateral economic sanctions may restrain economic activity. Economic growth in Germany, Hungary's most important export partner, remained at the rate seen in the previous quarters. Domestic demand in Germany may have grown further, but external market activity may have been curbed by the Russia–Ukraine conflict and the slowdown in demand in Asia. In December, the decline of the previous months was followed by an upturn in German industrial production. Expectations concerning the German economy (Ifo) have slightly deteriorated compared to the previous months (Chart 1).

Chart 1: Business climate indices in Hungary's export markets

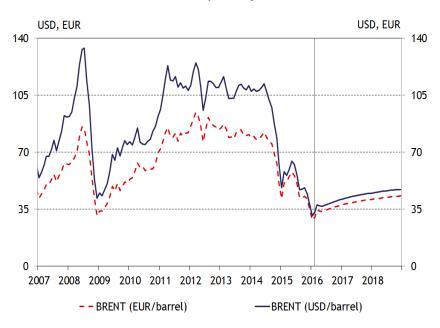


Sources: OECD, Ifo.

The region kept up its good performance in the last quarter of 2015 as well. The negative effects of the Russia–Ukraine conflict may have had only a limited impact on growth in the CEE region so far, but looking ahead, the expected significant contraction in the Ukrainian and Russian economies carry both direct and indirect risks to economic growth in the region.

Inflationary pressure from the world market remains weak. The fall in commodity prices combined with weak global demand are reducing inflation. As a result, inflation rates remained below target in the world's major economies. Oil prices were moderate, around USD 30-40, until mid-March. (Chart 2; for more details see subsection 2.1).

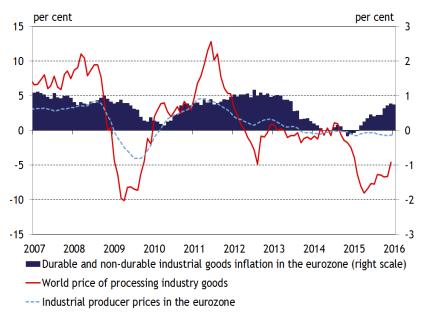
Chart 2: World market price of the Brent crude oil



Source: Bloomberg.

The world market prices of industrial commodities and unprocessed food were moderate, while the prices of manufactured goods somewhat adjusted after a considerable fall (Chart 3).

Chart 3: Industrial producer prices and tradables inflation in the euro area and world market prices of manufactured goods



Source: Centraal Planbureau (www.cpb.nl), Eurostat, ECB.

1.2. Domestic real economy developments

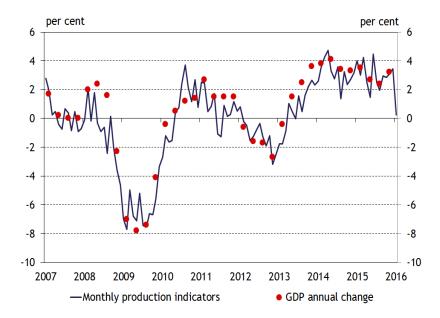
1.2.1. Economic growth

In the fourth quarter of 2015 the growth in economic output continued at a faster rate than in the previous quarters. Hungary's GDP was up 3.2 per cent year on year, with a 1 per cent growth recorded relative to the previous quarter. During 2015 the gross domestic product increased by roughly 3 per cent.

The year-on-year growth in GDP was still supported **primarily by the expansion in the performance of services and industrial production**. Industrial production and retail sales were up from the previous quarter, while construction no longer contributed to the economic growth from the second half of the year (Chart 4). **The contribution of agriculture** to economic growth **was negative** in 2015, which is primarily due to the previous year's high base.

On the expenditure side, the recovery of domestic demand continued. Retail data reflect continued growth in household consumption in the fourth quarter, while housing market figures indicate a slowdown in household investment activity relative to the previous quarter. Corporate investment activity declined in the fourth quarter as the spill-over effects of previous large investments faded. Our goods export increased to a lesser degree compared to the previous quarters, in line with the less intensive expansion of services exports, while imports were up in parallel with the dynamic growth in the domestic demand items. Overall, the contribution of net exports to growth remained positive in the fourth quarter, but materially fell short of the 2015 average.

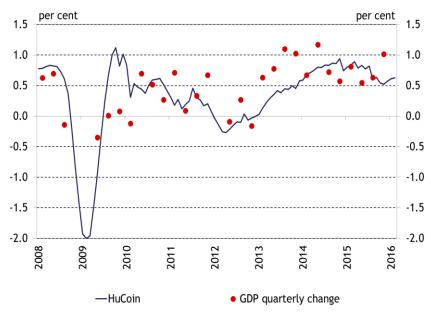
Chart 4: Changes in monthly production indicators* and GDP



* Weighted average of monthly production indicators (industrial output, construction output and retail sales). The weights are derived from regression explaining GDP growth. Sources: MNB calculations based on HCSO data.

In the beginning of the year the value of the HuCoin indicator, which marks the underlying trends of Hungarian economic activity, reflects continued positive outlooks (Chart 5).

Chart 5: Evolution of HuCoin indicator

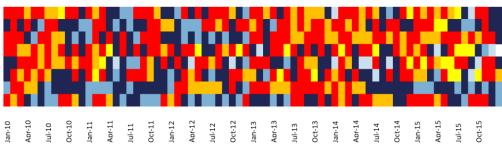


Due to the GDP data revision, the historic values of the HuCoin indicator may have also changed.

Sources: HCSO, MNB calculations.

Chart 6: Growth heat map*





* The growth heat map shows the three-month moving averages of the seasonally adjusted monthly growth rates of the most important monthly indicators of activity, using the following colour code: red = grows above the five-year average, at an accelerating rate; orange = grows above the average, at a slowing rate; yellow = grows below the average, at an accelerating rate; light blue = grows below the average, at a slowing rate; blue = falls at a slowing rate; dark blue = falls at an accelerating rate. Source: MNB calculations based on HCSO data.

In January 2016 industrial output was down 0.2 per cent year on year and 0.1 percent compared to the previous month. The performance of manufacturing subsectors showed a mixed picture. The decline in the production of the vehicle manufacturing subsector was attributable to the factory stoppage in the beginning of the year, while the food and metal industries output increased compared to the previous month. The forward-looking indicators reflect a mixed picture for the short-term outlooks of the domestic industry. The EuroCoin indicator, which marks the underlying trends of European economic activity, recorded a higher reading with favourable developments in Hungarian export orders. However, there may be a risk from the subdued performance of the German industry, which is in line with the continued fall of the Ifo indicator since December 2015.

Expressed in euro terms, in January 2016 goods exports and goods imports increased by 1 and 4.3 per cent, respectively, year on year. Balance of trade surplus was down EUR 195 million from January 2015. In December, low energy prices remained the largest contributor to the improvement in the terms of trade.

In January 2016, the volume of construction output decreased by 20.1 per cent year on year, while the seasonally and working-day adjusted figure fell by 13 per cent compared to the previous month. January saw a meaningful decrease in the volume of new contracts due to the fall in the number of contracts for the construction of buildings and other superstructures. The January decline is primarily attributable to the completion of the works funded by EU resources

at the end of 2015. The largest decline was registered in the output of companies engaged in road, rail and public utility construction.

The pick-up in consumption demand continued in the beginning of the year as well. This may be explained by the improving labour market situation and by the increase in real wages as a result of low inflation, as well as by the upswing in retail sales volumes. In January, according to preliminary data, sales volumes increased by 2.4 per cent year on year, while the decrease in turnover was 0.9 per cent compared to the previous month. The January turnover figure, reflecting a more moderate growth, was distorted downward by previous year's high base and the calendar effect. As regards the structure of sales, turnover may have increased in January in a wide range of products apart from food sales. The growth in the turnover of non-food consumer durable continued, while food sales reflected a decline due to last year's high base and the calendar effect. Fuel sales increased further.

1.2.2. Employment

In the fourth quarter of 2015 the number of employees in the national economy increased further to a small degree. Similarly to the previous quarter, no material change occurred in the number of employees in the general government, albeit the public work programme was further extended. Within the private sector, the dynamic growth in employment – characterising the sector since the beginning of the year – continued. The growth in private sector employment was observed in the manufacturing sector, while the headcount in the market services sector decreased.

According to Labour Force Survey data, in January 2016 the number of employees in the national economy increased by 2 per cent year on year. The unemployment rate stood at 6.3 per cent in January (Chart 7).

thousand persons per cent 4 400 13.5 4 300 12 4 200 10.5 4 100 9 4 000 7.5 3 900 3 800 6 3 700 4.5 3 600 3 3 500 1.5 3 400 3 300 2015 2014 2007 2008 2009 2010 2011 2012 2013 2016 Employment (thousand persons) —Unemployment rate (right scale)

Chart 7: Number of persons employed and the unemployment rate

Source: HCSO.

In the fourth quarter of 2015, the number of newly announced non-subsidised jobs was slightly lower than in the previous quarter, accompanied by a moderate decrease in the number of vacant non-subsidised jobs at the end of the quarter. The gradual tightening of the labour market, observed since 2013, has continued according to the tightness indicators calculated from the various statistics (Chart 8).

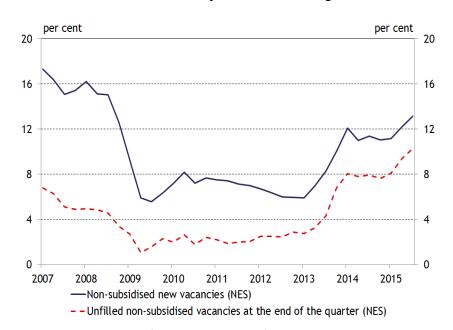


Chart 8: Indicators of labour market tightness

Source: Sources: HCSO (Labour Force Survey), National Employment Service.

1.3. Inflation and wages

1.3.1. Wages

In January 2016 the annual wage dynamics in the private sector accelerated compared to the dynamics observed in previous year. According to the seasonally adjusted data, gross average wage in the private sector increased by 4.4 per cent year on year. The bonus payments in January were higher than the rate seen in previous years. Within the private sector the annual dynamics of the gross average wage in the market service sector outstripped that of the manufacturing sector in January.

1.3.2. Inflation developments

In February 2016, inflation was 0.3 per cent, while core inflation was 1.4 per cent and core inflation excluding indirect taxes stood at 1.2 per cent (Chart 9). The decrease in inflation was essentially due to the decrease in the fuel price index.

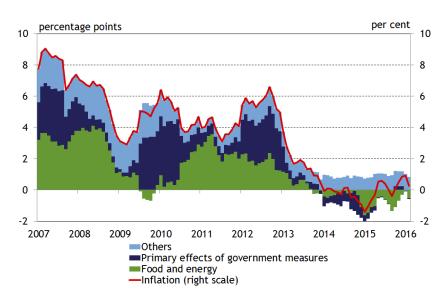


Chart 9: Decomposition of the consumer price index

Source: MNB calculations based on HCSO data.

Underlying inflation indicators continue to point to a subdued inflation environment, which may be attributable to the low level of imported inflation, low oil prices and the magnitude of unutilised capacities (Chart 10). In January 2016, agricultural producer prices rose by 4.8 per cent in annual terms, while the domestic sales prices of the consumer goods sectors increased by 0.6 per cent year on year.

per cent per cent ·Core inflation excluding indirect tax effect - - Demand sensitive inflation - · · Sticky Price Inflation

Chart 10: Measures of underlying inflation

Source: MNB calculations based on HCSO data.

Looking ahead, inflation may significantly fall short of the 3 per cent target and may approximate it only in the first half of 2018. Inflation may be close to 0 per cent in the short run.

1.4. Fiscal developments

The deficit of the central subsystem of the general government stood at HUF 77 billion in February 2016, representing a favourable balance relative to the same period of the previous years (Chart 11). The budget balance of January 2016 represents a significant improvement of HUF 180 billion compared to the same month of 2015, which is due to a greater extent to increased revenues, and to a lesser extent to a lower level of expenditures.

HUF billion **HUF** billion 200 200 0 0 -200 -200 Appropriation of 2016 -400 -600 -600 -800 -800 -1000 -1000 -1200 -1200 -1400 M10 M11 M2 M3 M5 M6 M7 М9 -2011 modified - - 2012 -· 2013 ---2014 ---2015

Chart 11: Intra-year cumulative cash balance of the state budget

Source: Hungarian State Treasury.

The tax and contribution revenues of the central subsystem in February 2016 outstripped the revenues of February 2015 by HUF 102 billion. The difference is attributable to the high corporate income tax revenues and other revenues, and to a lesser extent the payments by the households also contributed to the revenue figures that were more favourable than last year.

The **expenditures of the central subsystem** in February 2016 fell short of the expenditures in February 2015 by HUF 78 billion. The difference is almost solely attributable to the lower value of net expenditures related the EU projects.

1.5. External balance

According to the January data release, the seasonally unadjusted external financing capacity fell to EUR 350 million, with surpluses of almost EUR 260 million and EUR 90 million in the current and capital accounts, respectively.

Financing data indicate a financing capacity that is slightly higher than that of the real economy, amounting to almost EUR 450 million. The fall in foreign funds was generated in the context of a decrease in net external debt and smaller net FDI inflows. Foreign direct investments increased slightly, i.e. by EUR 39 million; however, due to the capital in transit transactions both investments by foreigners and foreign investments by residents decreased substantially, by approximately EUR 9 billion. In January foreign equity investments continued (EUR 70 million), but this capital inflow was partially offset by the residents' equity investment

abroad. The more than EUR 200 million decrease in net external debt was mostly due to the government's debt reduction in the amount of EUR 575 million, which could be achieved primarily in the context of higher reserves. This was attributable, among others, to the expiry of the swaps provided to the banks at the end of December and the absorption of the EU transfers. Contrary to the reduction of the government debt, the banks' exceptionally high net debt repayment in December was followed by net external borrowing of roughly EUR 525 million in January, due to the increase in debts and the decrease in receivables – the expiry of the swaps concluded with the MNB may have contributed to the latter. The non-financial corporations further reduced their external debt by approximately EUR 180 million.

2. FINANCIAL MARKETS

2.1. International financial markets

The fundamentally negative market sentiment observed in 2016 until the interest rate decision in February and the emerging market turbulences eased during the last one month. During the month the investment analyses focused on the lower-than-expected and once again negative inflation of the euro area, which strengthened expectations with regard to the ECB's monetary easing in March. The deceleration of the Chinese economy and the oil price developments were additional determinant factors, but on the whole the emphasis shifted to the monetary policy decisions during the month. Financial market processes were initially characterised by trading without specific direction, followed by the easing of the emerging market turbulences and clear improvement in sentiment.

This is evidenced by the major adjustment of the formerly negative performance of the stock market indices, the decrease in risk indices and the rise in oil prices. The US stock market indices were on the rise, the S&P 500 index, the DAX index and the Japanese Nikkei were up 5.5, 6.5 and 5.5 per cent, respectively, since 23 February. However, the favourable trend was not sufficient to offset the fall in the developed market stock market indices seen in the beginning of the year. The emerging market stock exchanges showed a more complex picture; the countries more sensitive to turbulences showed substantial negative trends, while e.g. the CEE region was characterised by more positive trends in the first months of the year. On the whole, the composite indices also support the positive equity market trends; the MSCI stock price index, containing both the developed and the emerging states, showed a material (5-6 per cent) increase during last month.

The development of the risk indices also signalled positive trends; the emerging bond market EMBI Global premium (by a fall of 50 basis points) and the VIX (by a fall of 6 percentage points) both fell below their value registered in the beginning of the year.

Long-term yields in the periphery of the euro area decreased, while the less risky countries with higher credit rating were characterised by a minor increase or stagnation, which also suggested that strains in financial markets were partially removed from the prices.

The **oil price** was volatile initially as a result of the mixed news; however, in the observation period oil prices increased by 20-23 per cent. This may have been partially attributable to the

essentially positive market sentiment, and to the market rumours about the potential restriction of the volume produced. The oil price-increasing impact of the positive sentiment may be strengthened by the general adjustment in commodity prices, to the highest degree in fuels, but metal and agricultural produce prices were also on the rise.

The **exchange rate of major currencies** initially was determined by trading without a specific trend, with the exception of the British pound, which — as a result of the strengthening Brexit expectations — depreciated to a 7-year low, followed by an adjustment. During most of the period the euro fluctuated against the dollar in a narrow band; however, the ECB's announcement was first followed by the major depreciation and then by a larger appreciation of the euro. Thereafter, the milder-than-expected communication of Fed depreciated the dollar further against the euro.

Chart 12: Developed market equity indices, the VIX index (left scale) and the EMBI Global Index (right scale)



Source: Bloomberg.

The central banks of global importance essentially moved towards the easing of the monetary stance, while in the case of Fed, expectations with regard to rising interest rate path, albeit slower compared to December, could be observed. Although as a result of the better-than-expected labour market data (the monthly expansion in the number of non-farm employees was 242,000 instead of the expected 195,000 and unemployment stagnated at 4.9 per cent) and the

slightly increasing inflation outcome the expectations for the interest rate hike slightly strengthened, they still remained below the levels before the emerging market turbulences. The decrease in the steepness of the interest rate path is partially attributable to the fact that the deceleration in Japan, Europe and some of the emerging countries also took the Fed by surprise and this may affect the US economy as well. However, overall the market prices 2 further interest rate increases this year, which is less than expected in December, but more than anticipated in the period of turbulence in January and February. The **Bank of Japan** did not change its monetary conditions, but the Governor noted that they may move to three directions to ease the monetary conditions and attain the inflation target (decreasing the current key policy rate of -0.1%; accelerating the growth in the monetary base; buying riskier assets). The **Chinese central bank** reduced the reserve requirement ratio by 50 basis points from 1 March, and expanded access to its onshore bond market. According to the latest data, the rate of decrease in the foreign exchange reserves decelerated compared to the earlier period.

The month was clearly determined by the expectations with regard to the measures the European Central Bank may take, the announcement of the measures and the impacts thereof. Before the monetary policy decision analysts deemed the acceleration of the asset purchases, the reduction of the deposit rate and the extension of the asset purchase programme's time horizon most probable. The expectations were further enlarged by the fact that the February inflation data fell short of the analysts' expectations, and thereby euro area inflation once again fell to the negative domain (inflation fell to -0.2 per cent contrary to the expected 0 per cent, representing a one-year low). On 10 March the ECB announced a major package of measures, which generated substantial volatility in the markets. The ECB reduced the deposit rate by 10, the base rate and the lending rate by 5 basis points; in addition it increased its asset purchase programme by EUR 20 billion per month and extended it to corporate bonds, and announced a new, four-phase TLTRO programme with start date in June 2016. The ECB announcement initially improved market sentiments; however, shortly after the decision a major adjustment was observed due to the statements made at the press conference, according to which further interest rate cut is not justified in the current situation.

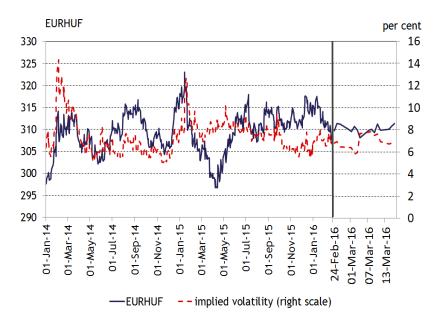
2.2. Developments in domestic money market indicators

In the past period Hungarian asset prices were driven by the central bank's announcements and domestic reporting, in addition to the international factors. The somewhat lower-than-expected inflation data may have had temporary depreciating effect on the exchange rate.

During the period, the EUR/HUF rate moved between the 308 and 312 levels, with the forint depreciating against the euro by 1 per cent overall. On the day following the February interest rate decision, the forint exchange rate to the euro depreciated to 311, slightly deviating from the regional trends. At the end of February, under the improving international sentiments, a substantial adjustment commenced and the forint appreciated to below HUF 308, then after the publishing of the inflation data that fell short of the expectations, the domestic currency once again depreciated to the level of 311, deviating from the regional trends. A few days before the ECB's March decision it once again appreciated slightly, then returned to the level of 311, representing a depreciation of 1 per cent. After the decision the regional currencies temporarily depreciated. As a result of the Fed decision of 16 March, the appreciation of the euro was accompanied by the appreciation of the forint and the Polish zloty both against the dollar and the euro. The Polish zloty, drifting away from the forint, appreciated by 2 per cent during the period, which may be attributable to the adjustment after the substantial depreciation of the zloty in January. Due to the depreciation of the dollar at the end of the period, the forint exchange rate appreciated by 1 per cent against the dollar, while the other regional currency appreciated against the US currency by about 2-4 per cent.

Due to the disinflationary risks and the ECB's accommodating monetary policy, the probability of another interest rate cut may have already been priced in the **interbank rates** as an alternative path in the short run.

Chart 13: EUR/HUF exchange rate and the implied volatility of exchange rate expectations



Source: Bloomberg.

Relative to the date of the previous interest rate decision, the short end of the yield curve moved 5 to 15 basis points up, with the middle and long sections moving down to a lesser degree.

The benchmark yield in the market of short-term government securities rose above 1 per cent from their initial levels of about 0,95 per cent. The middle and longer sections of the yield curve registered a fall in yields.

Chart 14: Shifts in the spot government bond yield curve

Source: MNB, Reuters.

The bond auctions of the period were characterised by strong demand. The sales of 3-month treasury bills were conducted under muted demand, hardly exceeding the amount announced; the Government Debt Management Agency reduced the offered volume on two occasions. At the last auctions, yields averaged at around 1.26 per cent, representing an increase of 20 basis points relative to the average yield at the beginning of the period. At the first auction of the 12-month bills the amount of the submitted bids fell short of the offered volume; the Debt Management Agency issued less than half of the announced quantity. On the other hand, there was a sound demand for the fixed-rate, long-term government securities. In the case of the 3-, 5- and 10-year bonds auctions registered 3- and 4-fold overbidding and decreasing average yields, and the Debt Management Agency raised the issued volume on each occasion.

Non-residents' holding of government securities has not changed substantially since the last interest rate decision; their portfolio fluctuated in the range of HUF 3,590-3,690 billion during the period; at present it stands at HUF 3,615 billion, while their share within the total forint government bond portfolio held by the market fell below 27.1 per cent. As international sentiment improved, Hungarian 5-year CDS premium dropped to 159 basis points by the end of the period. Our decomposition methodology suggests that the slight decrease of 5 basis points may be attributable to the improved international risk appetite at the end of the period.

3. TRENDS IN LENDING

In January, outstanding loans to enterprises decreased by HUF 5 billion in total as a result of transactions, while the value of transactions amounted to HUF 19 billion after seasonal adjustment (Chart 15). In terms of denomination, forint loans increased by some HUF 41 billion, while foreign currency loans decreased by HUF 46 billion. Thus the annual decrease in outstanding loans stood at 6.1 per cent in January, compared to the value of 6.7 per cent measured in December.

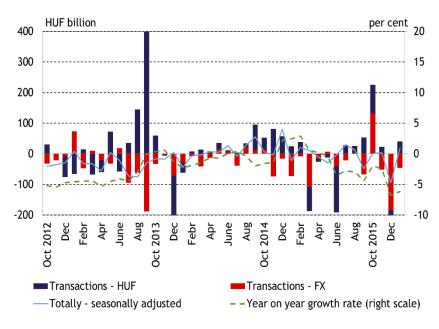
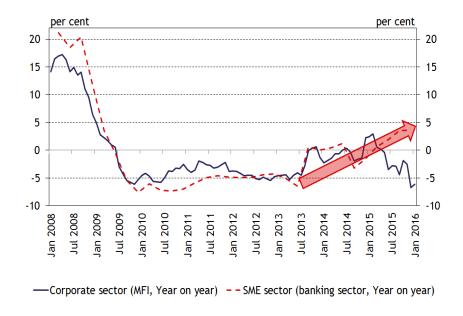


Chart 15: Net borrowing by non-financial corporations

Source: MNB.

By contrast, our estimate based on preliminary data suggested an annual increase of 2.4 per cent in the loan portfolio of the SME segment in January (Chart 16). In the period under review the Funding for Growth Scheme contributed to the rise in the portfolio by HUF 10 billion through the disbursement of part of the loans contracted earlier.

Chart 16: Growth rate of loans outstanding of the whole corporate sector and the SME sector



Source: MNB.

In January, in the case of newly granted corporate loans, the average annualised interest rate on small-value forint loans rose by 0.79 percentage points to 4.85 per cent from December, while the average interest rate on higher-value forint loans decreased by 1.21 percentage points to 1.75 per cent.

Outstanding loans of the household segment vis-à-vis the credit institutions sector as a whole declined by HUF 28 billion as the result of loan transactions (Chart 17). Forint loans outstanding and total foreign currency loans decreased by HUF 24 billion and HUF 4 billion, respectively. In January the annual decrease in loans outstanding amounted to 14.3 per cent; without the impact of the settlement and the conversion into forint this equals to a decrease of 4.3 per cent. Compared to January 2015 the largest increase was seen in the amount of the personal loans, but the extension of new housing loans and car loans were also on the rise.

HUF billion per cent 50 10 2757 HUF Bn 83 HUF Bn 25 0 -25 -50 -10 -75 -15 -3438 HUF Bn -100 -20 2013 Oct 2012 Dec oct O ö Oct

Chart 17: Net borrowing by households

Source: MNB.

Transactions - FX

—Totally - seasonally adjusted

In January, interest rates on new household loans decreased slightly. The annual percentage rate of charge on HUF housing loans fell by 0.18 percentage point to 5.62 per cent, while that on HUF general purpose loans decreased by 0.75 percentage points to 6.85 per cent.

Transactions - HUF

- - Year on year growth rate (right scale)