



FINANCIAL STABILITY REPORT



MAY
2015

‘...a nation is strong where property and independence are guarded by free hands.’

Ferenc Deák



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2015

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Financial stability is a state in which the financial system, including key financial markets and financial institutions, is capable of withstanding economic shocks and can fulfil its key functions smoothly, i.e. intermediating financial resources, managing financial risks and processing payment transactions.

The Magyar Nemzeti Bank's fundamental interest and joint responsibility with other government institutions is to maintain and promote the stability of the domestic financial system. The role of the Magyar Nemzeti Bank in the maintenance of financial stability is defined by the Central Bank Act.

Without prejudice to its primary objective - to achieve and maintain price stability -, the MNB shall support the maintenance of the stability of the financial intermediary system, the enhancement of its resilience, its sustainable contribution to economic growth; furthermore, the MNB shall support the economic policy of the government using the instruments at its disposal.

The MNB shall establish the macro-prudential policy for the stability of the entire system of financial intermediation, with the objective to enhance the resilience of the system of financial intermediation and to ensure its sustainable contribution to economic growth. To that end and within the limits specified in the Central Bank Act, the MNB shall explore the business and economic risks threatening the system of financial intermediation as a whole, promote the prevention of the development of systemic risks and the reduction or elimination of the evolved systemic risks; furthermore, in the event of disturbances to the credit market it shall contribute to the balanced implementation of the function of the system of intermediation in financing the economy through stimulating lending and by restraining lending it in the event of excessive credit outflow.

The primary objective of the Financial Stability Report is to inform stakeholders about the topical issues related to financial stability, and thereby raise the risk awareness of those concerned as well as maintain and strengthen confidence in the financial system. Accordingly, it is the Magyar Nemzeti Bank's intention to ensure the availability of the information needed for financial decisions, and thereby make a contribution to increasing the stability of the financial system as a whole. The scope of the report broadened in parallel with the MNB's new macro- and microprudential supervisory mandate.

The analyses in this Report were prepared by the Financial System Analysis Directorate, the Macroprudential Policy Directorate and the Financial Institutions Supervision Executive Directorate, under the general direction of Márton NAGY, Executive Director.

The Report was approved for publication by Dr. Ádám BALOG, Deputy Governor.

The Report incorporates the Financial Stability Council's valuable comments and suggestions following its meetings on 10 March, 21 April 2015 and 26 May 2015, and those of the Monetary Council following its meeting on 5 May 2015.

This Report is based on information in the period to 30 April 2015.

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EXECUTIVE SUMMARY ON THE KEY RISKS

The debt settlement affecting 2.1 million contracts and the conversion of around 500,000 foreign currency-denominated mortgage loan contracts led to a sharp reduction in the vulnerability of the banking sector, and consequently the Hungarian economy. As a result, one of the highest household foreign currency-denominated exposures decreased to one of the lowest in Europe, from 14 per cent to 1 per cent as a percentage of GDP. The substantial appreciation of the Swiss franc pointed to the fact that, in the absence of the conversion, financial stability would have deteriorated remarkably. Although a large part of the toxic assets has disappeared, risks stemming from the high ratio of non-performing loans, foreign currency-denominated personal and vehicle loans and hence the maturity mismatch have remained, which all require regulatory intervention. Despite the improvement, however, corporate lending falls behind the dynamics needed to support sustainable economic growth. The FGS and FGS+ have helped boost SME lending, but a recovery in market-based lending is required.

The conversion of foreign currency-denominated mortgage loans came into effect with the fixing of the exchange rate for instalments de facto as of January 2015 (de jure February 2015). The MNB provided the required foreign exchange amount of EUR 9 billion to the counterparty institutions in a timely manner, in order to enable them to close the otherwise widening open FX position stemming from the conversion and debt settlement. As a result, 500,000 contracts with a HUF 3,300 billion outstanding amount were relieved from significant exchange rate risk. Due to the settlement and the resetting of lending rates, the debt servicing burden of households decreased by 20–25 per cent on average, but with significant heterogeneity. In the absence of forint conversion, their debt servicing burden could have jumped markedly, even by more than 50 per cent, as, in addition to the lifting of the CHF cap, the forint would have depreciated markedly as a result of a damaged banking sector and real economic costs. By contrast, the conversion has had a positive impact on the economy, households consumption and hence on the performance of the banking sector, including on its ability to support economic growth.

However, smaller but relevant financial stability risks have remained. One part of risks identified in our report is associated with subdued lending activity, as well as with profitability and portfolio quality problems. While the FGS and its expansion directly supports lending, the management of the non-performing portfolio and the remaining households' foreign currency loans indirectly helps to ease on the constraints on the credit supply, by reducing uncertainty, improving profitability, and stimulating the real estate market. In addition, acceleration of the consolidation process is needed to improve the banking system's structural profitability.

Another part of the risks relates to the vulnerability still remaining in banks' balance sheets after the conversion of foreign currency loans. While the conversion closed the foreign currency position of the banking sector in the balance sheet and the repayment of a portion of short-term foreign currency funds is expected, regulatory measures are needed to permanently reduce the risks stemming from the dependence on short-term foreign liabilities, as well as foreign exchange swap markets. These risks can be mitigated by tightening the required level of, and amending the Foreign Exchange Funding Adequacy Ratio (DMM), and constraining the banks' on balance sheet currency mismatch by the introduction of the Foreign Currency Equilibrium Ratio (DEM). With the conversion of foreign currency mortgage loans the maturity mismatch between forint denominated assets and liabilities increased and this may be addressed with incentive regulation (JMM), in which banks are encouraged to issue long-term mortgage-backed securities.

1. Although the Funding for Growth Scheme (FGS) achieved considerable results in avoiding credit crunch, no permanent turnaround has occurred yet in lending, and the growth of the corporate credit portfolio – which is essential for long-term, sustainable economic growth – has not yet commenced. The risk appetite of the banks has not changed significantly and lending outside the FGS is characterised by extreme caution; in this segment the credit portfolio has continued to decrease similarly to the trends seen in previous years. The Monetary Council decided on the launch of FGS+ with a limit of HUF 500 billion in order to manage credit supply frictions. With the new scheme, the central bank provides the banks with incentives to grant fixed-interest, long-term financing – as a result of the decreasing central bank costs – also to riskier, but creditworthy clients.

2. In the banking sector, the ratio of non-performing household loans remains high, with low rates of mortgage portfolio cleaning, and consequently the ratio has not changed significantly despite the numerous relief measures. However, it has

not been possible to resolve the non-performing mortgages for lack of an adequate market, social consensus, institutional framework and appropriate legislation. A complex debt settlement procedure is needed which limits the moral hazard and does not impair repayment propensity going forward, while at the same time solves the problem of property owners who are still in distress. The foreign currency settlement reduces the number of distressed mortgage contracts, and some of the borrowers in difficulty (approximately 10,000 debtors) may find a solution due to the expansion of the purchases of Hungarian National Asset Management Inc., while another group (up to 25,000 debtors) may find a solution via the new institution of personal bankruptcy. Resolution of the remaining portfolio is still a high-priority problem, since there may be over one hundred thousand such contracts. The MNB is about to create database for the identification of debtor types, which may help in developing appropriate, customized debt settlement packages. Some international examples should be considered, one of which appears to be effective is the scenario in Ireland, where a planned quota system encouraged banks to clean up the portfolio of household in the scope of a complete debt settlement package. Another high-priority risk in the retail portfolio continues to be the remaining is that of the foreign currency denominated loans, primarily consisting of automobile and personal loans. This exposure has to be addressed as soon as possible because of its volume (HUF 300 Bn), the number of contracts (more than 250 thousand at the end of 2014), and the cross-default risk.

3. The quality of the corporate loan portfolio poses a persistently high risk. Although the work-out rate has risen, the combined ratio of non-performing and restructured project loans is still stagnating at a high level; the central bank's asset management company (MARK) may offer an effective market-based solution in this regard. Depending on the size of the portfolio which is taken over, the ratio of non-performing corporate loans can be reduced by up to four or five percentage points within one and a half to two years.

4. In recent years, the banking sector's profitability has been low in international comparison, with the deterioration of portfolio quality, the government policies related to households' foreign currency loan problems and the fiscal burdens playing a determinant role in this regard. In the years to come, most of these effects will not impact or will impair only to lesser extent the sector's profitability, but new income-reducing factors may arise. The decline in the previous foreign currency mortgage lending rates on the converted mortgage loan portfolio, the persistent narrowing of the net interest margin reduces the profit of the banking sector by HUF 90 billion annually. While the specific cases of abuse known as the "broker scandals" have no systemic importance and only represent one per cent of the capital market, the payments to the National Deposit Insurance Fund (NDIF) and the Investor Protection Fund (IPF) in the coming years indirectly mean a substantial burden (an additional HUF 15-20 billion annually) for the banks. The persistently low interest rate environment also negatively affects net interest income. However, the profitability prospects of banking sector are changing for better thanks to the robust improvement in economic growth, the planned reduction of the bank levy (by 60 billion in 2016 and by HUF 83 billion in 2017) and the abolishment of exchange rate cap scheme (HUF 13-15 billion annually), while the elimination of exchange rate risk also reduces uncertainty surrounding future prospects. Overall, the profitability outlook is gradually improving; however the revenue-generating capacity of the sector is still below regional standards, due to structural problems and problems of economies of scale, which makes further consolidation necessary.

5. In 2015, after the conversion of household mortgages denominated in foreign currency, the maturity mismatch between the forint denominated assets and liabilities on the banking sector's balance sheet has increased significantly. The resulting risks can be effectively reduced by the mortgage financing adequacy regulation, which encourages the institutions involved to reduce the maturity mismatch. The planned regulation for the Mortgage Financing Adequacy Ratio (JMM) introduces a minimum proportion of long-term forint liabilities compared to the stock of HUF retail mortgages with a maturity of over one year, and covered by the residential mortgages. In addition to containing liquidity risks, the new regulation promotes the development of the market of securities covered by mortgages, such as mortgage bonds.

6. Although as a consequence of FX-loan conversion, the importance of foreign currency external funding is decreasing, and due to settlement the asset side is contracting, regulatory intervention is needed for a sufficient reduction of the banking system's short-term foreign currency debt and for a sustained reduction in the associated liquidity and rollover risks. On the one hand, this can be achieved by tightening the required level of, and amending the Foreign Exchange Funding Adequacy Ratio (DMM) so that long-term swap holdings cease to be eligible as long-term foreign currency financing (thus approximating the rules with the Basel NSFR regulation). On the other hand, as a preventive measure, the banking sector's excessive reliance on off-balance sheet instruments (such as FX-swaps) should also be reduced, which justifies the introduction of the Foreign Currency Equilibrium Ratio (DEM) aimed at limiting banks' on-balance sheet currency mismatch.

Systemic risks

Risk reduction policies, instruments

(1) Low corporate lending dynamics compared to the need of the real economy

Extension of the Funding for Growth Scheme and introduction of the FGS+

(2) Historically high household NPL-ratio and further risks associated with the FX-denominated vehicle and personal loan stock

Elimination of legal and institutional obstacles to portfolio cleaning

Debt Resolution Procedure:
 1. Fostering the enlargement of NAMA
 2. Personal insolvency
 3. Targeted debt restructuring and loan contract modification packages aiming at restoring ability to pay

Addressing the credit risk of remaining household FX-debt

(3) The outstanding amount of non-performing and restructured loans within project financing

Ensuring the efficient operation of the MARK Zrt. through an altered strategy

(4) Permanently low profitability, weak capital accumulating capacity

Gradual reduction of the bank levy

Increasing scale efficiency by M&A

Fostering portfolio cleaning

(5) Maturity mismatch between forint assets and forint funding

Introduction of the Mortgage-financing Adequacy Ratio in order to achieve a more healthy balance-sheet structure

(6) Short term external funding and currency mismatch

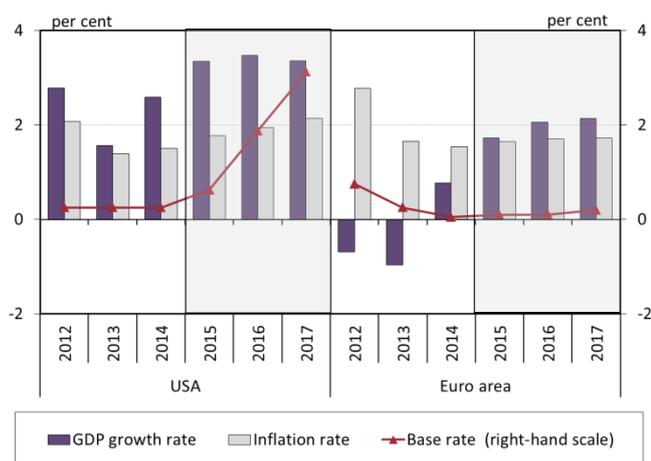
The tightening of the Foreign Exchange Funding Adequacy Ratio
Introduction of Foreign Currency Equilibrium Ratio in order to limit the banks' open currency position

The described steps above are in force and efficient assuming prudent fiscal politics, predictable regulatory environment and the support of the sustainable economic growth.

1. MACROECONOMIC AND FINANCIAL MARKET ENVIRONMENT – PERSISTENT RISKS IN THE EURO AREA, OUTSTANDING RISK REDUCTION IN HUNGARY

Europe is tracking the economic recovery in the United States unevenly and burdened with risks, and the performance of the euro area still falls short of its pre-crisis level. The different macroeconomic situation implies a different monetary policy, and thus in order to stimulate economic growth and to bring the inflation rate to the 2 percent level, the ECB commenced a more intensive easing of the monetary stance, which partially contributes to the strengthening of the US dollar against the euro. Nevertheless, the persistently low yields and geopolitical tensions have a negative impact on the activity and profitability of the European banks, which is further undermined by the rising non-performing loan ratio. The deepening political tensions attributable to the existing risks and the burden of prolonged crisis management are increasing the risk of the sovereign debt crisis, with Greece as the key actor. Despite the poor performance of the European economy over several years, in 2014 Hungary managed to embark on a sustainable growth path, and the favourable real economic developments and improving perception of risks may help to substantially reduce the systemic risks accumulated from the past.

Chart 1: Macroeconomic environment in the USA and the euro area



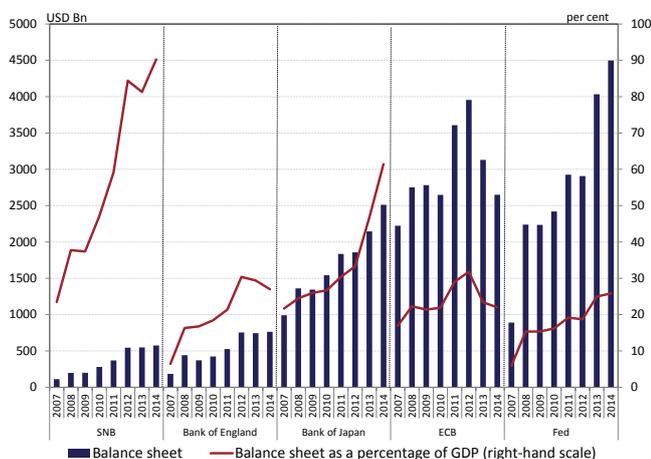
Note: IMF, ECB and FED forecast for 2015, 2016 and 2017.
Source: IMF WEO, FED, ECB.

1.1. Divergent monetary policies in developed markets

After ending the quantitative easing measures it pursued for several years, the Fed may introduce tightening measures as early as this year. The improving economic outlook and the falling unemployment signal the approaching end of support for economic growth in the form of the low interest rates in the USA (Chart 1). In the wake of this, a wave of global asset repricing may start, and disturbances may occur in markets with lower liquidity. The ending of the quantitative easing considerably strengthened the US dollar exchange rate, but the slow start to US monetary tightening for the time being continues to fuel the global search for yield. One new development is that the market volatility in the developed countries' currencies increased, which is mostly attributable to the different monetary policies pursued by their central banks (Chart 2). The United Kingdom has also ended its accommodating monetary policy, while Japanese economic growth still needs support, and consequently Japan continues its strong quantitative and qualitative monetary easing policy.

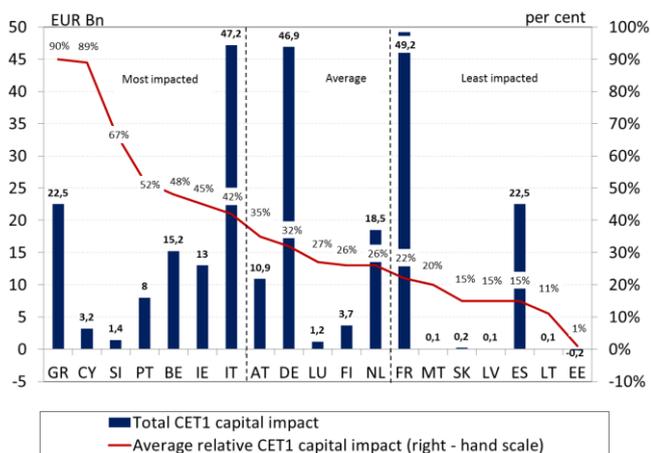
The ECB started more vigorous monetary easing. In light of the sharp decline in inflation rates and long-term inflation expectations, in June 2014 the ECB launched a new round of monetary easing using unconventional instruments such as suspending SMP sterilisation and announcing the TLTRO. In 2014 ECB launched the asset-backed securities purchase programme (ABSPP) and the covered bond purchase programme (CBPP3). The divergence between the monetary policies of the Federal Reserve and the ECB explains the gradual strengthening of the US dollar against the euro since the autumn of 2014. However, the long term inflation expectations remained well below the central bank's inflation target, in January it fell to 1.5

Chart 2: Central banks' balance sheet total in developed countries as a percentage of GDP



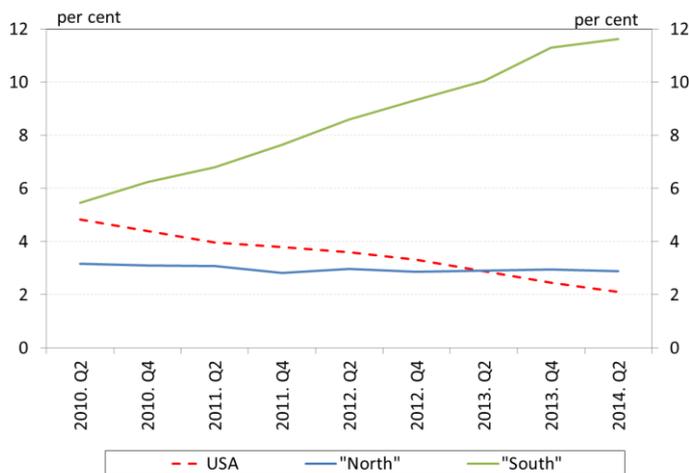
Source: Central banks.

Chart 3: Comprehensive assessment impact per country



Source: ECB

Chart 4: Non-performing loans as a percentage of total loans in the USA and the regions of euro area



Note: "North" (France, Germany, the Netherlands, Finland), "South" (Spain, Italy, Portugal, Greece).

Source: IMF, ECB

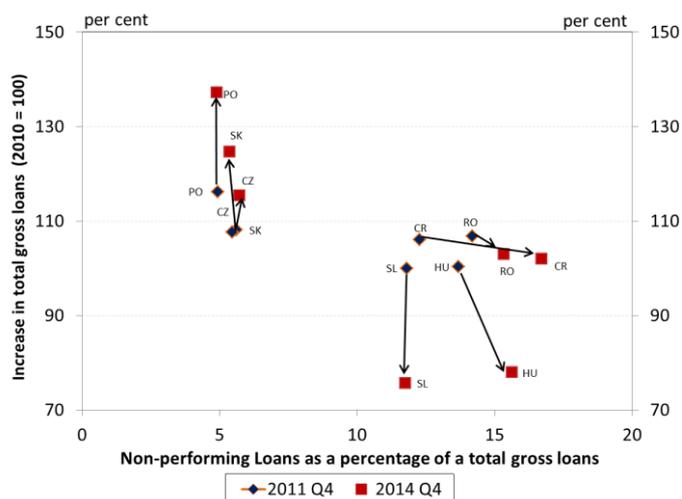
per cent, pressing the ECB to maintain its monetary easing. According to the further easing, the ECB will start to purchase euro-denominated investment-grade securities issued by euro area governments and agencies in addition to the asset-backed securities and covered bond purchase programme, launched in October, 2014. Under the expanded program, from March, 2015 until September, 2016 or as long as the inflation is unlikely to get anywhere close to the inflation target, the combined monthly purchases of public and private sector securities will amount to €60 billion. The overall size of the ECB purchase programs has an amount up to €1000 billion, including the previously launched asset-backed securities (ABS) and covered bond (CB) purchase program¹. The widening monetary easing programme of the ECB, the depreciating euro and lower crude oil prices may boost the expectations with regard to the economic recovery of the region.

As a result of the crisis management, the EU's banking system became more resilient. The results of the European comprehensive asset quality review (AQR) impacted individual member states differently (Chart 3), but on the whole it had a favourable effect in terms of reducing the uncertainties about the quality of banks' assets and strengthening the confidence in the banks. The conduct of the AQR and the stress tests, as well as the establishment of the single European banking supervision (SSM) reduced the risks burdening banks' balance sheet, increased investor confidence in the sector, and thus the banks were able to raise new capital from the market as well, in addition to parent bank funds, as a result of which their shock absorbing capacity strengthened further. The capital increase attributable to the AQR exceeded EUR 14.5 billion in 2014.

At the same time, the euro-area banking system is still struggling with a number of unresolved problems. The aftermath of the crisis is a severe burden for the European banking system, as corporate lending has not yet recovered and the credit portfolio continues to contract in the southern member states. In addition to the demand factors, the supply side also contributes significantly to this: the European banking system is still segmented and vulnerable, and banks' profitability has been low for many years. As a result of the ECB's more intensive monetary easing, European yields have continued to fall, thereby increasing the pressure on banks' profitability. The main source of the problems is the unfavourable condition of the macro-economy, coupled with poor lending activity

¹ Based on market analysis, the expected purchases of government bonds could reach 70-80 per cents of the total purchases, the rate of the ABS and CB purchases remain at 20-30 per cents.

Chart 5: Development of the non-performing loan ratio in the CEE region

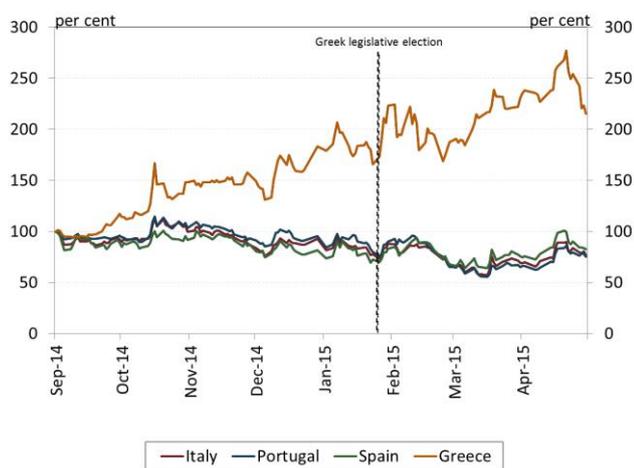


Source: IMF

and high NPL ratios in several countries, which is restraining the start of the cyclical recovery.

The reduction of non-performing loans was faster and more successful in the USA than in Europe. The difference between the reduction of the NPL ratios in the USA and in Europe is striking (Chart 4). US banks were able to exercise their mortgage claims efficiently, widely applied the restructuring of problem loans, which was also supported by the considerable easing of the monetary stance, and also launched a number of programmes to provide real assistance to debtors who were unable to repay their loans. The costs of the programmes were shared between the banks and the government. As opposed to this, in the euro area – and particularly in the southern member states – NPL ratios have been climbing for several years, which reflects the slow recovery from the recession and the absence of proper incentives to write down non-performing loans. The lower NPL ratio of US banks is more advantageous not only in terms of lending activity and profitability, as it is also more favourable for the efficiency of the monetary policy transmission.

Chart 6: 10 Y bonds spreads over German 10 Y bond (01.09.2014 = 100 per cent)

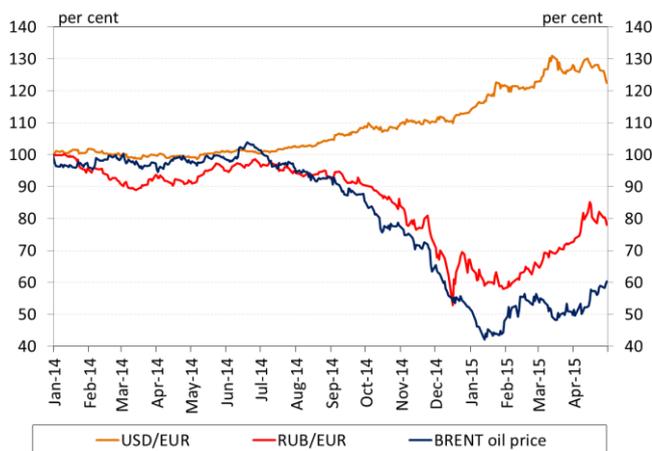


Source: Thomson Reuters, MNB

Reducing the non-performing portfolio is a focus in the region as well. In the group of countries where lending increased in recent years, the NPL ratio stabilised at a level of about 5 per cent (Chart 5). On the other hand, in countries where lending has not yet started again, the NPL ratio is stuck at a high level (around 15 per cent), and due to high loan impairment charges this undermines the profitability of banks and locks up banks' resources, preventing them from reaching a lending level which necessary for sustainable growth. Several EU member states in the region have already set about reducing the NPL portfolio; in Slovenia this process is assisted by the Bank Asset Management Company (BAMC), while in Romania the banks started a powerful portfolio resolution programme due to harder regulatory stance.

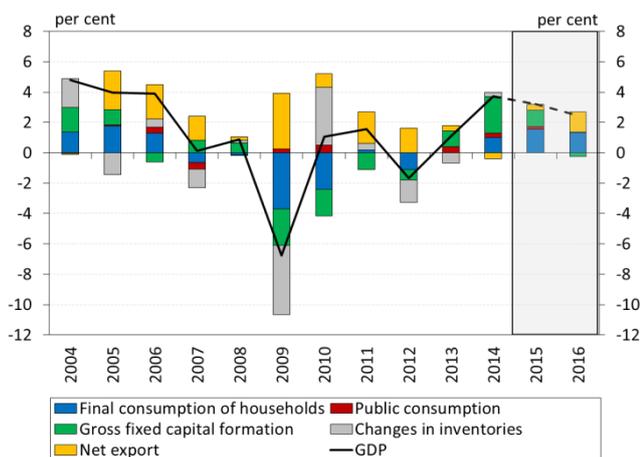
The risk of escalation of the sovereign debt crisis has increased again. As a result of the parliamentary elections in January in Greece, Greek asset prices fell considerably, withdrawals of deposits accelerated, and Greek government bond yields and Greece's sovereign CDS spreads started to rise steeply. The situation of Greek banks became particularly difficult due to the fact that the ECB removed Greek government bonds from the list of ECB-eligible collateral, thus at present Greek banks are heavily reliant on ECB's emergency liquidity assistance (ELA) funding. Greece's situation worsened further when one of the major credit rating companies assigned the country a CCC rating at the end of March. As a result of the economic

Chart 7: Price movements in oil and selected currencies (indexed, 31 Dec 2013 = 100 per cent)



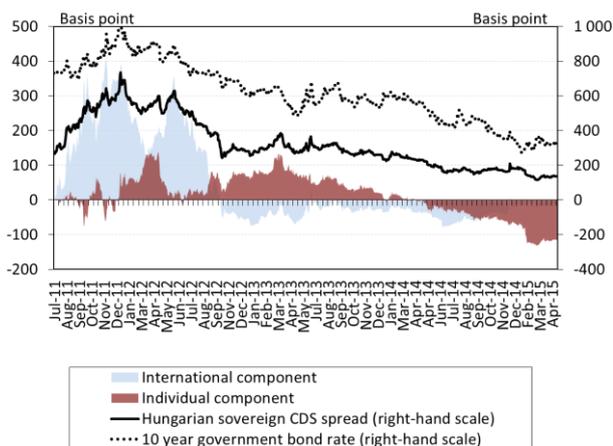
Source: Thomson Reuters

Chart 8: Changes in Hungarian GDP (year-on-year)



Source: Quarterly Report on Inflation, March 2015, MNB.

Chart 9: Hungarian sovereign 5-year CDS spread and its decomposition, and developments in the 10-year government securities yield



Note: Actualisation of the estimated parameters' decomposition retroactively modified the time series of certain components; thus those figures may differ from the formerly estimated values.

Source: Thomson Reuters, MNB.

and political developments related to Greece, the probability of Greece's exit from the euro area ("Grexit") has increased significantly again. On the other hand, the contagion impact of the Greek developments is significantly smaller now (Chart 6) than a few years ago, which also confirms that the shock absorbing capacity of the EU banking system has increased.

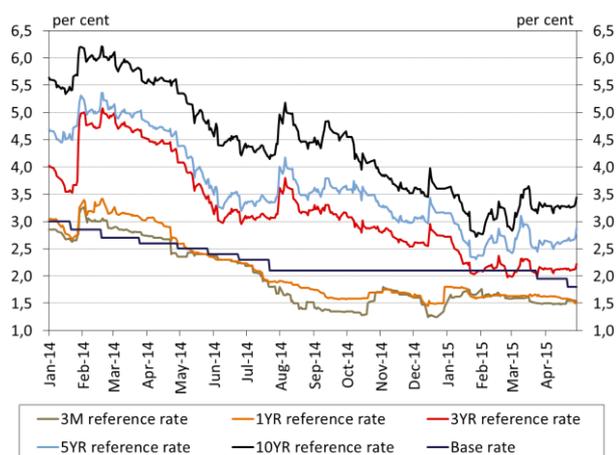
Market and geopolitical risks are on the rise. There was a considerable fall in oil prices from the second half of 2014 (Chart 7), which significantly altered the profitability of the industry. This, together with the fact that after the termination of the quantitative easing by the Fed it will be more difficult to acquire US dollar funds all over the world, the (crude oil producing) countries indebted in dollar and corporations in emerging countries, particular energy companies, will face debt repayment problems and thus the negative impacts of the search for yield will become increasingly obvious. The plunge in crude oil prices had a particularly unfavourable impact on the Russian economy. The fact that the Russian-Ukrainian conflict – which is the most severe geopolitical risk for Europe – remains unresolved also represent a financial stability risk through the negative real economic impacts and deteriorating market sentiment, since the consequences of these developments also manifest themselves in the performance of European banks with Russian and Ukrainian exposure.

1.2. Robust economic growth in Hungary

The Hungarian economy may continue to expand, after posting growth of 3.4 per cent in the first quarter in 2015.

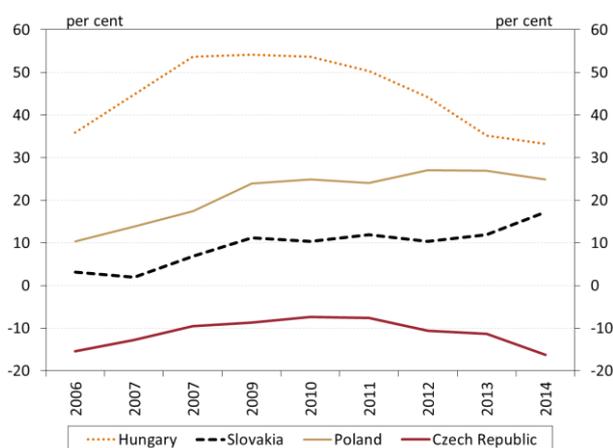
The Hungarian economy may grow at a rate of 3.2 per cent in 2015, and 2.5 per cent in 2016 (Chart 8). One of the growth determinants is household consumption, while investment growth is gradually decelerating, primarily in relation to public investment, which may still be high this year due to the intensive utilisation of the EU funds, but may then decrease next year, after utilisation of the funds from the 2007-2013 budget cycle comes to an end. Corporate investment is gradually rising due to the intensification of economic activity and the extension of the Funding for Growth Scheme (FGS+), while the improvement in households' real income situation may increase household investment activity. We expect an improvement in the economic performance of our key trading partners due to the lower oil prices and the ECB's asset purchase programme; in addition, the depreciation of the euro may improve the competitiveness of the euro area's exporters, which may also boost the performance of Hungarian suppliers and contribute to growth in Hungary's export market

Chart 10: Benchmark yields and the policy rate



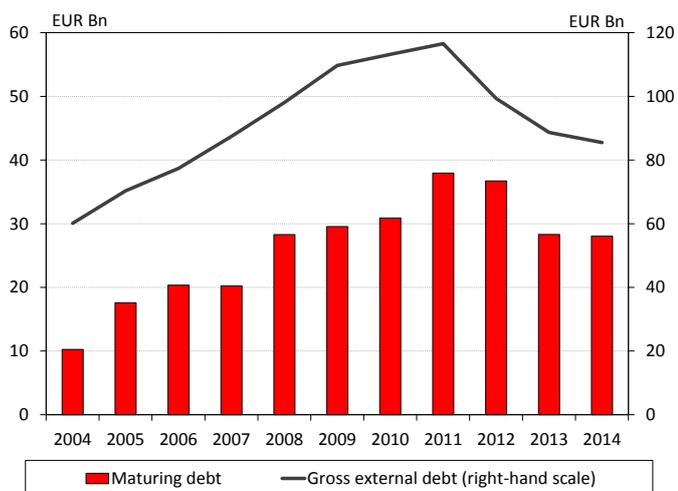
Source: MNB, ÁKK.

Chart 11: Net external debt as a percentage of GDP in a regional comparison



Source: Eurostat.

Chart 12: Development of gross external debt and maturing debt



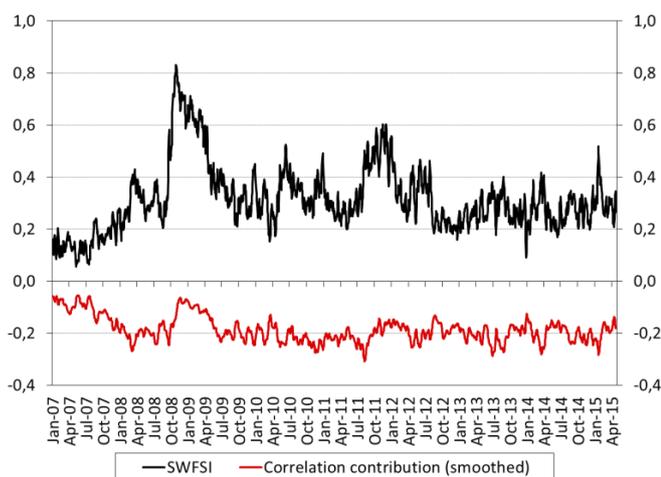
Source: MNB.

share. The growth rate of imports may decelerate in 2015 and in parallel with that the growth contribution of net exports may gradually increase.

Perceptions of risks related to Hungary have continued to improve. The favourable real economic development in recent periods has had a positive impact on the perception of Hungary's risk; accordingly Hungarian sovereign risk spreads decreased further, moving significantly closer to the level of the regional countries. With the closing of the households' open foreign currency position, the country's vulnerability has decreased significantly and this factor played an important role in the changing risk perception. In March, CDS spreads were fluctuating at a much more favourable level than at the end of October 2014, mainly due to the individual components (Chart 9). The ECB's intensifying quantitative easing helped the domestic currency strengthen against euro, and thus at present the EUR/HUF exchange rate is fluctuating at the same level as at the beginning of 2014, i.e. at around 300. Yields on long-term government bonds decreased further, amidst low volatility: the yield of the 10-year Hungarian government bonds fell from its end-September level of 4.82 per cent to 3.62 per cent by the end of March. This process was also supported by the renewal of the MNB's monetary policy toolkit, the conversion of foreign currency loans into forints, households' increasing purchases of government securities and the continued global search for yield. The increase in US dollar yields generates a risk of rising pricing of long-term yields as well, which may have been behind the volatility seen in March (Chart 10).

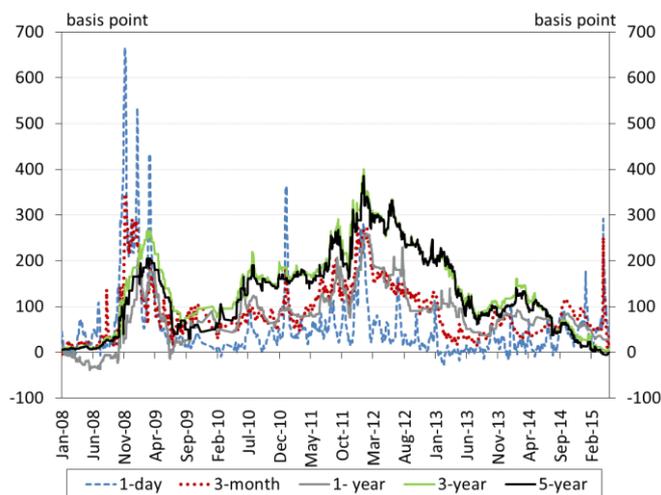
Hungary's external balance position continued to improve. The Hungarian economy's external financing capacity improved in 2014, which was facilitated by the adjustment of households, the high level of corporations' financial savings and moderate general government spending. The improvement in the financing capacity was also supported by the high utilisation of EU transfers. In parallel with the further improvement in the external balance position, net external debt continued to fall (Chart 11), which reduces Hungary's external vulnerability. Hungary's net external debt as a percentage of GDP has been gradually declining for several years and it is coming closer to the regional level, mostly due to the fact that the households and corporations without natural hedge are phasing out their foreign currency debt. In addition to the decrease in GDP-proportionate net external debt, gross external debt has been also continuously decreasing since 2011, and the funding required for the rollover of maturing debt has also declined (Chart 12).

Chart 13: System-Wide Financial Stress Index



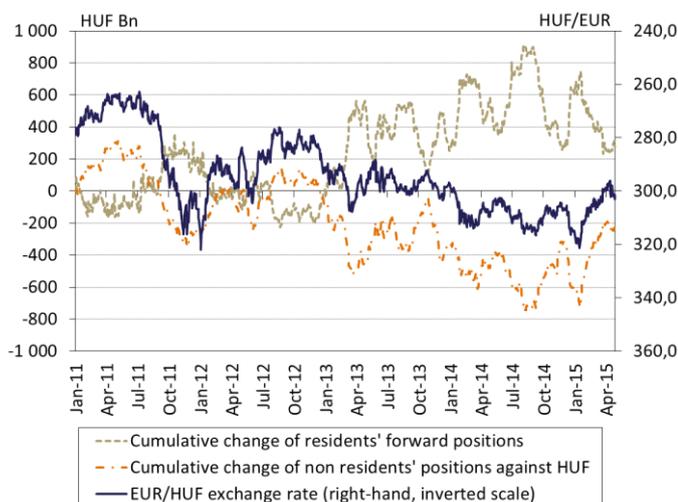
Note: The SWFSI index's higher value means higher stress risk. The correlation indicator of REPSI measures the co-movements between markets. Source: MNB.

Chart 14: FX swap spreads



Note: Spreads calculated from HUF/EUR listing. Exponential moving averages are shown in case of the spreads with maturity less than 1-year. Source: MNB, Bloomberg.

Chart 15: Cumulative changes in the short forint positions of residents and non-residents (January 2011 = 0)



Source: MNB, Bloomberg.

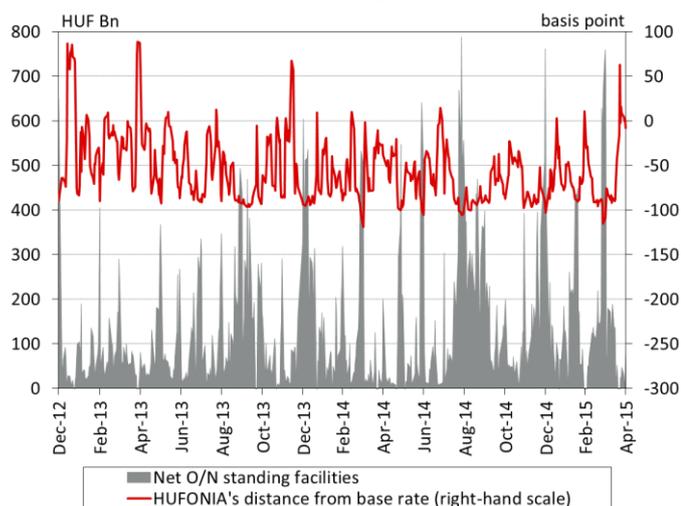
1.3. The liquidity of key financial markets is adequate

Following the exchange rate shock in January, the system-wide stress level of the domestic financial markets returned to its previous low level. In the second half of 2014, the System-Wide Financial Stress Index (SWFSI) was at a low level. However, in January 2015, as a result of the decision of the Swiss central bank, the value of the index soared higher (Chart 13). As a result of removing the ceiling to the Swiss Franc against the euro, the volatility of the EUR/CHF exchange rate increased remarkably, which raised the stress level of the spot foreign exchange market. At the same time, the stress level of the other sub-markets remained almost unchanged, which is attributable to the fact that the turbulence observed in the EUR/CHF exchange rate did not spread to domestic financial markets. The fact that the phenomenon was not contagious is also supported by the correlation component, which decreased while the stress index increased. After the surge in the EUR/CHF exchange rate, the SWFSI stabilised in February and returned to the average level observed in the last two years. However, this was primarily attributable to the considerable decrease in the capital market stress level, rather than to the decline in the spot foreign exchange market's stress level.

Foreign exchange swap spreads on long maturities fell close to zero. While in 2014 Q4 the swap spreads fell due to the expansion of non-residents' forint assets and the contraction of the balance sheet open position, in the overnight maturities we observed a sudden increase in December, similar to previous years (Chart 14). Although the year-end foreign exchange swap market tensions may be considered to be common, this large-scale expansion due to the transformation of the main policy instrument was less expectable. The increase of the spread was presumably attributable in part to the swap requirements generated by the significant withdrawal of external funding at the year-end, and in part to the banking system's cautious foreign currency liquidity management. In the first days of January 2015, spreads returned to their previous level. In long maturities the spreads were gradually decreasing from September 2014, and in March 2015 they stood close to zero for the three- and five-year maturities, which can be deemed favourable even by regional standards. The decrease in long-term spreads to such extent may also be related to the conversion of the foreign currency loans into forints.

Recently, non-residents took a long forint position in the foreign exchange market, and in parallel with that the value of domestic outstanding forward contracts de-

Chart 16: Central bank overnight deposits outstanding and the distance of the HUFONIA from the base rate



Source: MNB.

created. Between August 2014 and end of March 2015, the non-resident sector increased its long forint position by about HUF 480 billion in total through spot and FX swap transactions (Chart 15). In parallel with this, with the strengthening of the forint exchange rate, domestic actors reduced their long forint position during this period by about HUF 600 billion in total. The total swap position fell below HUF 750 billion by end of March.

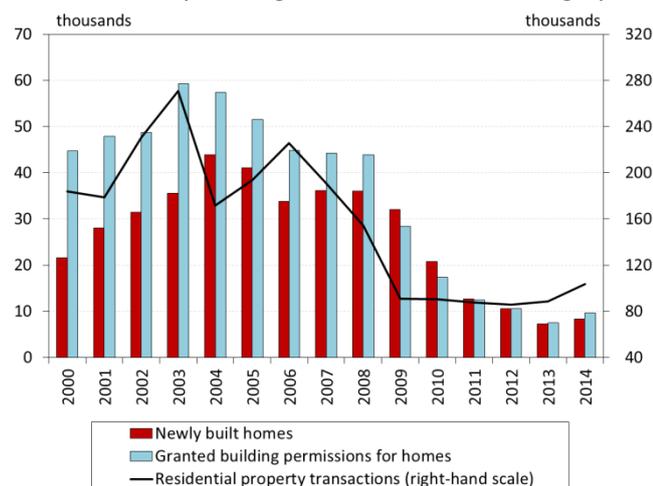
Since the end of 2014, the turnover of the forint inter-bank markets has remained high. HUFONIA continued to move within the interest rate corridor almost throughout the period, exceeding the base rate level on one occasion at the end of February, while in March it moved away to the lower bound of interest rate corridor (Chart 16). Demand for the central bank overnight loans increased considerably at the end of February, which was attributable to the fulfilment of the minimum reserve requirement.

No liquidity disturbance is experienced in the government bond market; longer-term yields increased as a result of rising market uncertainty. Starting from November 2014, the liquidity of the government bond market was slightly volatile, but the market indices do not signal any liquidity tension. The growth in the banking system's government securities portfolio may be linked to the self-financing programme, indicating that the central bank instruments did indeed stimulate the banking system's demand for government securities. The portfolio growth primarily impacted longer-term securities, thereby contributing to the safer financing of the general government. In February, the volatility of long-term yields was attributable to uncertainties related to the negotiations with Greece, the ECB's QE programme and the Fed's interest rate hike. However, at the end of February, developments on the government securities market were determined by the unfavourable developments relating to the domestic investment service providers: market liquidity deteriorated slightly, and the increase in longer-term benchmark yields intensified (Chart 10). As a result of the transformation of the main policy instrument into deposits, short-term yields came under demand pressure; the three-month and one-year reference yields have been below the base rate level since the second half of 2014 (by 30-40 basis points at present).

2. REAL ESTATE MARKET – SIGNS OF RECOVERY IS EXPERIENCED IN THE REAL ESTATE MARKET

In 2014, in parallel with the economic growth and increase in real income, rising activity was observed in the residential and commercial property markets. Compared to 2013, the number of newly issued construction permits and the number of newly built homes increased in the residential property market, while the real level of residential property prices rose by 4 per cent on an annual basis. However, the market is able to absorb only at significant discount the large volume of residential properties serving as collateral that remain on the balance sheets of the banks and financial enterprises. The occupancy rate of offices in Budapest improved in 2014, which may point towards increasing property values in the future.

Chart 17: Key housing market indicators in Hungary



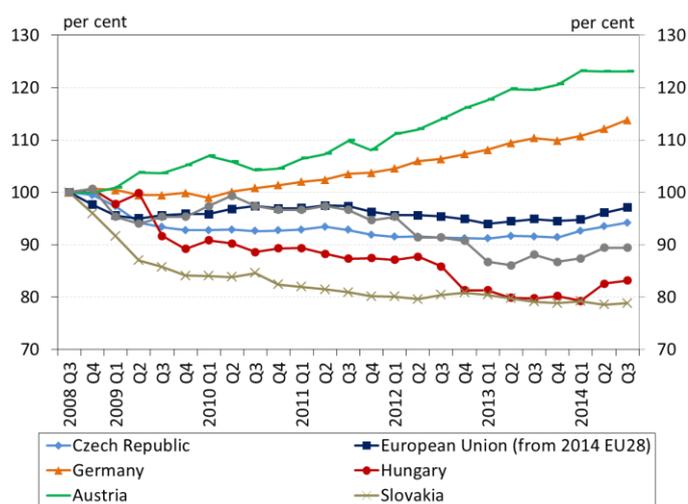
Source: MNB, HCSO.

2.1. The housing market follows increasing trend in pricing like in other European countries

A slight recovery was observed in the housing market in 2014. The number of construction permits issued in 2014, of newly built homes and of housing market transactions were all higher compared to 2013. The number of construction permits and new starts increased by 28 and 15 per cent, respectively, compared to 2013 (Chart 17). Households' home purchasing propensity, and thereby the recovery in the housing market is supported by the low interest rate environment, in addition to growth in real income. The number of housing market transactions was over 100,000 during 2014, which represents growth of 17 per cent compared to 2013.

In 2014, there was a general increase in European house prices. After the crisis, house prices fell in the Visegrád countries, similarly to the European average, in parallel with the decrease in demand and housing market investment (Chart 18). As opposed to this, in Austria and Germany house prices were continuously increasing even after the crisis. In 2014 after a long time there was an increase in the nominal house price in the Visegrád countries. Of these countries, it was Hungary where the housing market price level increased at the highest rate in the first three quarters of 2014; compared to the end of 2013 the level of nominal house prices and the level of real house prices rose by 3.7 and 4 per cent, respectively, at the end of 2014 Q3. The recovery of the housing market and with that the correction of house prices are key priorities in Hungary, since under the present circumstances there is a lack of adequate demand in the market to absorb at a proper price the large number of properties serving as collateral that are on banks' balance sheets.

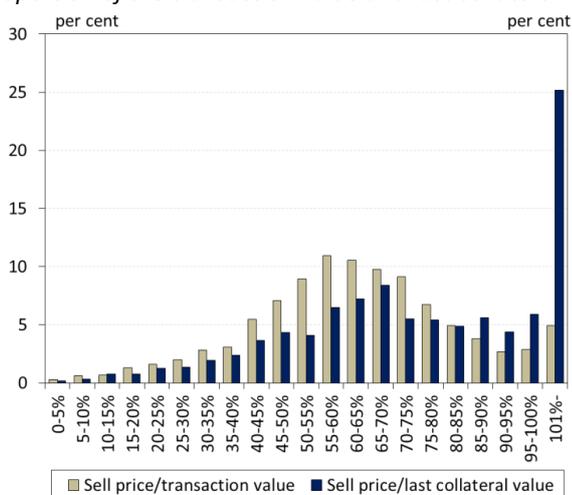
Chart 18: Nominal house prices in European comparison, 2008 Q3 = 100 per cent



Source: Eurostat, BIS, FHB.

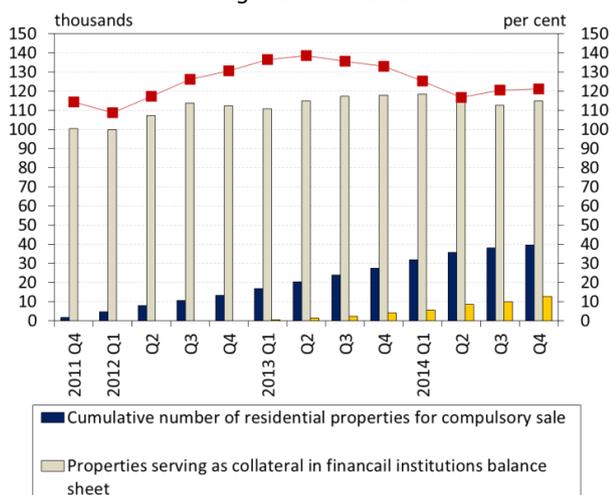
Financial institutions are selling residential properties serving as collateral at a substantial discount under market conditions. In 2013 and 2014, financial institutions sold merely 15,000 properties in total, over 75 per cent of which were purchased by National Asset Management Agency (NET). In the last two years, banks only sold 3,600 residential properties on the market. However, the market players sold the properties at a significant discount of about 40 per cent on average

Chart 19: Distribution of the sales price of residential properties serving as collateral sold under market circumstances as a proportion of the transaction value and last collateral value.



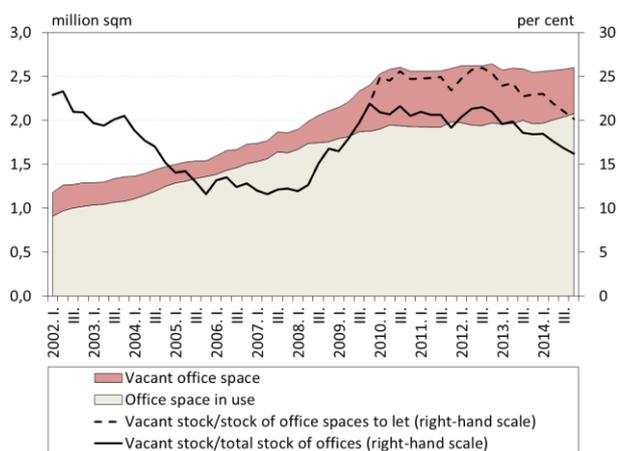
Note: Data from 2013 and 2014.
Source: MNB.

Chart 20: Number of properties serving as collateral compared to housing market transactions



Source: MNB, HCSO.

Chart 21: Office space to let and vacancy rate in the Budapest office market



Source: BRF, MNB.

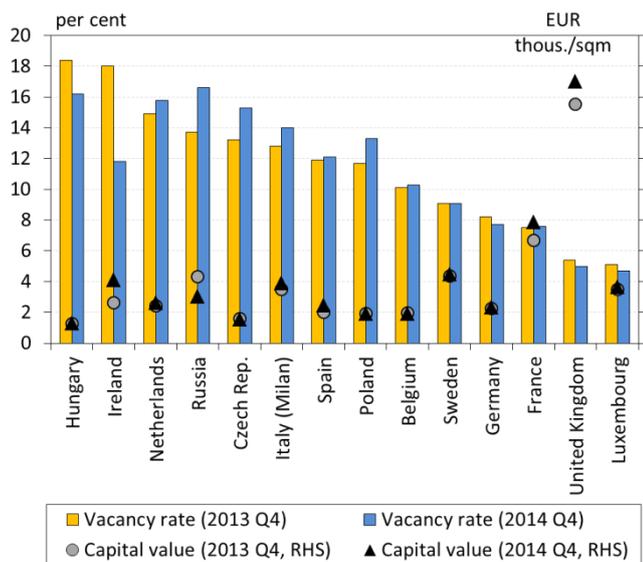
compared to their original market value between 2013 and 2014. The properties were sold on average at a 20 per cent discount even compared to the last collateral value, and the sale price exceeded the last collateral value only in 25 per cent of total cases (Chart 19). All of this may suggest that the valuation of the collaterals was not appropriate or that despite the recovery, the residential real estate market is still far from a normalised level.

The large number of residential properties serving as collateral represents a latent pressure on housing prices. At present, the balance sheets of the banks and financial enterprises contain 182,000 non-performing mortgage contracts, with almost 115,000 residential properties serving as collateral (Chart 20). Until the end of 2014, the forced sale quota system represented a theoretical barrier to one-off mass sales of the properties. However, banks did not utilise the quotas fully. In the last three years, out of the 64,000 eligible properties almost 43,000 properties were designated for forced sale. Only about 3,500 of these were sold on a market basis, while National Asset Management Agency (NET) took over more than 12,000 properties. At the end of 2014, the number of properties included in the balance sheet of the financial institutions, subject to sale in the future, amounted to almost 120 per cent of the annual transaction number in the housing market, and thus the market will only be able to absorb this portfolio over the long term.

2.2. Commercial property market is recovering, mostly in the office segment

The occupancy rate on the office market in Budapest has been continuously improving. The occupancy rate rose despite the fact that the total office space offered for lease increased. At the end of 2014, the vacant area accounted for 16.2 per cent of the total office space as opposed to the 18.4 per cent measured at the end of 2013 (Chart 21). It should be emphasised that the soaring vacancy ratio after 2008 was primarily attributable to the inflexible supply, as the total office space offered for lease in Budapest was increasing until 2010 as a result of the time-consuming construction of commercial properties. In 2014, the best rental price available in the office market of Budapest increased by about 2.4 per cent compared to 2013. In addition to the office market the industrial properties also picked up in Budapest in 2014. The vacancy rate of industrial properties in the vicinity of the capital, after a significant annual decrease (5.6 percentage points) amounted to 15.7 per cent at the end of 2014. In addition, demand growth is also indicated by the fact that last year new lease contracts were concluded for an area that was by approximately 36 per cent larger than in 2013.

Chart 22: Vacancy rate in capital city office markets and capital value of prime offices in international comparison



Note: In case of Italy, Milano-based data.

Source: Jones Lang LaSalle.

In 2014, it was primarily the price of the high-value commercial properties that increased in Europe. The office markets in European capitals showed a heterogeneous picture in 2014. In 2014, the value of office buildings, calculated on the basis of the best available rental price and yield, increased significantly in Paris and London (Chart 22), where the value of properties was higher before as well compared to other cities. The best annual rental price available in the office market of Budapest is about half of the average of the surveyed European capitals. This, coupled with the expected high yields, signals the relatively low value of office buildings in Budapest in European comparison. However, looking ahead, the increasing market activity coupled with a decreasing vacancy rate may indicate the increasing value of the commercial properties in Budapest.

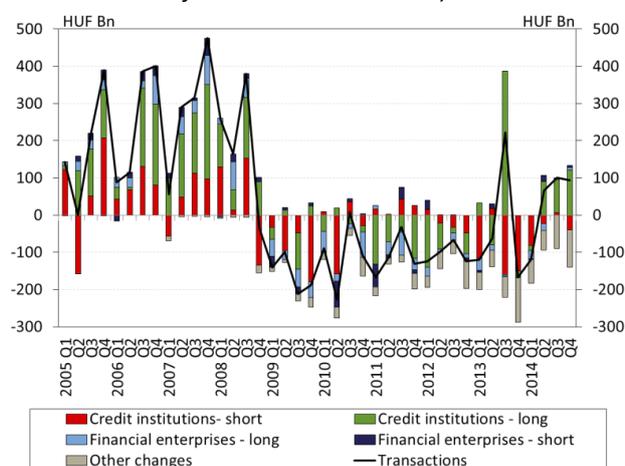
3. DEVELOPMENTS IN DOMESTIC LENDING – CORPORATE LENDING REFLECTS THE IMPACT OF THE FGS RATHER THAN SIGNS OF A MARKET RECOVERY, WHILE FORINT LENDING TO HOUSEHOLDS IS SLOWLY PICKING UP

Corporate lending expanded in the second half of 2014, credit portfolio increased significantly at an annual level for the first time since the beginning of the crisis. New disbursements under the FGS also significantly contributed to overall lending: at the end of 2014, the annual growth rate of the credit portfolio was 1.9 per cent, while – according to our estimates – in the absence of the FGS it would have decreased by 4 per cent. Favourable real economic developments suggest a recovery in credit demand by corporations, while the indebtedness of the sector on the whole cannot be deemed outstanding in an international comparison. Nevertheless, the supply side may still be characterised by prolonged adjustment, which manifests itself in the sluggish easing of persistently tight credit conditions.

The extended and expanded Funding for Growth Scheme and the FGS+ targeting riskier enterprises may encourage further easing of the supply conditions. In 2014, non-performing project financing loans, which the banks failed to clean from their balance sheet, represented a considerable obstacle to a market-based turnaround in lending, however the project financing portfolio may be cleaned out with the cooperation of MARK Ltd. Although the slowly easing corporate lending conditions of the domestic banking sector impede the turnaround in market-based lending, policy announcements made since the beginning of 2015 (reducing the fiscal burdens of the banking sector, and the extension of the central bank FGS) may support further expansion of corporate lending. The improving economic environment may also have a positive impact on bank's credit supply and on corporations' credit demand via increasing investment demand. Bearing all of this in mind, we expect a higher increase in the corporate credit portfolio compared to our previous forecast.

The household credit portfolio continued to contract in 2014, primarily in relation to foreign currency loans; however, signs of a turnaround were already seen in forint lending in the period under review. The volume of housing loans significantly increased within newly disbursed loans: decreasing financing costs and the increase in consumption and household investments together had a positive impact on household borrowing. Credit conditions facing households slightly eased during the year, but the standards may still be deemed tight compared to the pre-crisis period. The vast majority of the clients complied with the MNB's "debt cap" rules (PTI and LTV) in 2014, thus the regulation's entry into force is not expected to generate significant downward effect, except some probable decline on the consumer credit market. As a result of the settlement and conversion into forint, households' debt service burden may decrease while their net financial worth may increase, which – looking ahead – may also support the households' credit demand in parallel with sound economic environment. Taken together, the underlying developments determining household lending have not changed since the last report; accordingly, assuming an unchanged path, we expect in our forecast that the contraction of the household credit portfolio will gradually decelerate over the forecast horizon.

Chart 23: Quarterly transactions of corporate lending (domestic financial intermediaries)

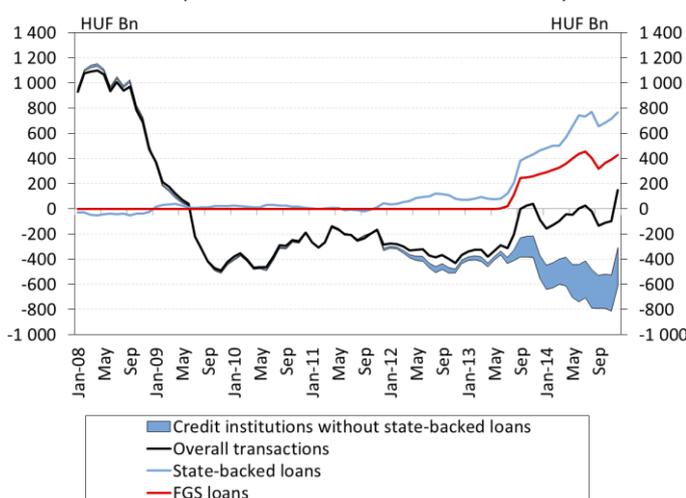


Source: MNB.

3.1. Corporate lending expanded in 2014, but market lending conditions remain tight

For the first time since the start of the crisis, corporate lending expanded in 2014 on a transaction basis, mainly due to the FGS. In the second half of 2014, non-financial corporate loans outstanding of financial intermediaries increased by almost HUF 195 billion as a result of transactions (Chart 23). The expansion materialised in long-term loans; transaction volumes for the entire year amounted to HUF 257 billion, while the outstanding amount of short-term loans decreased by about HUF 115 billion as a result of transactions. In addition, the decrease stemming from other volumes (write-offs and reclassifications) was more intensive than the average of previous years, amounting to HUF 307 billion.

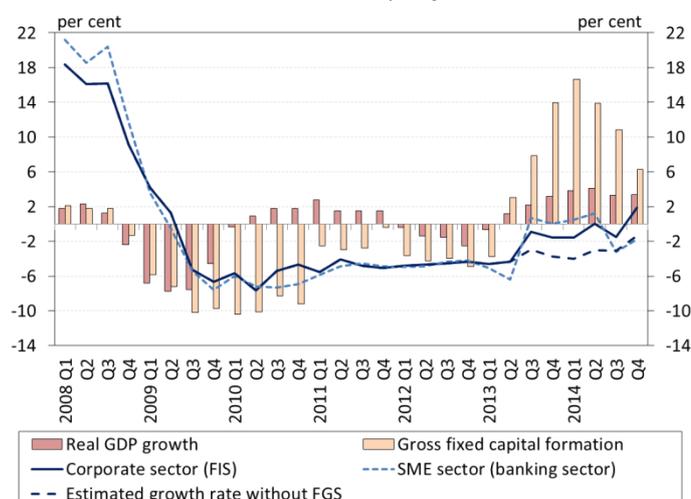
Chart 24: Decomposition of corporate lending by credit institutions (cumulative 12-month transactions)



Note: The bottom of the uncertainty band assumes 0 to a top 40 percent crowding-out effect for the FGS pillar 1.

Source: MNB.

Chart 25: Annual growth rate of the entire corporate and SME sector credit portfolio



Note: In case of the overall corporate sector the time series is based on transactions, while the SME data is based on estimated transactions from Q4 2013. FIS stands for financial intermediary system.

Source: HCSO, MNB.

Since the outbreak of the crisis, 2014 was the first year when the corporate credit portfolio expanded on the whole on a transactional basis, and the loans granted under the FGS made a major contribution to this (Chart 24).

The annual growth rate of corporate lending improved significantly in 2014. Considering 2014 as a whole, the annual growth rate of financial intermediaries' lending to non-financial corporations fluctuated around 0 per cent and by the year-end rose to 1.9 per cent. The estimated growth rate without the FGS would have stayed in the negative range at the end of 2014 as well, at a level of -4 per cent. Base effect also contributed to the sudden increase in the growth rate: in December 2013, loan repayments considerably exceeded disbursements due to two main reasons; on the one hand, indirectly due to the FGS², and on the other, as a result of the corporate balance sheet adjustment, which was also observed in previous years, typically taking place at the end of financial years. The annual dynamics of bank loans to SMEs is slightly lower than the growth rate of the entire corporate sector; however, the annual rate of portfolio contraction improved, with its value at -1.8 per cent at the end of Q4 (Chart 25).³ The growth of loans outstanding is also supported on the demand side by the favourable cyclical developments. In 2014, real GDP increased at over 3 per cent on average; in addition gross fixed capital formation – starting from a relatively low value – has set on a path of fast growth partly due to the FGS (see Box 1).

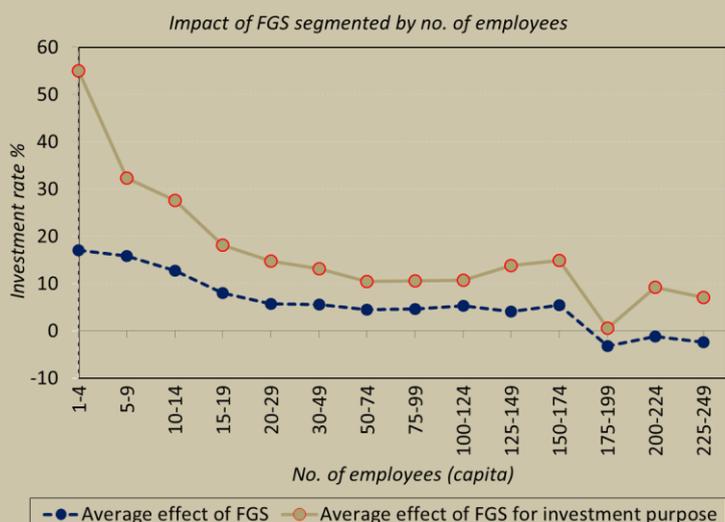
1. BOX: INVESTMENT IMPACT OF THE FUNDING FOR GROWTH SCHEME

With the publication of the company's annual financial reports for 2013, MNB experts had an opportunity to review the impacts of Phase 1 of the FGS on investment activity of participating companies with the use of micro-level data (see MNB WP 2015/2: Marianna Endresz-Peter-Harasztoši-Robert P. Lieli: The impact of Magyar Nemzeti Bank's Funding for Growth Scheme on Firm Level Investment). The advantage of the micro-data is that they facilitate the identification of the programme's impacts, while the micro-level investment in accounting terms (change in the balance of tangible

² In FGS, there is opportunity to restructure loans with more favourable conditions.

³ We provide an estimate of SME segment's transactions by breaking down other changes (write-offs and reclassifications) to total loans.

assets) may be higher than the investment reflected in the macro-statistics.



Source: MNB.

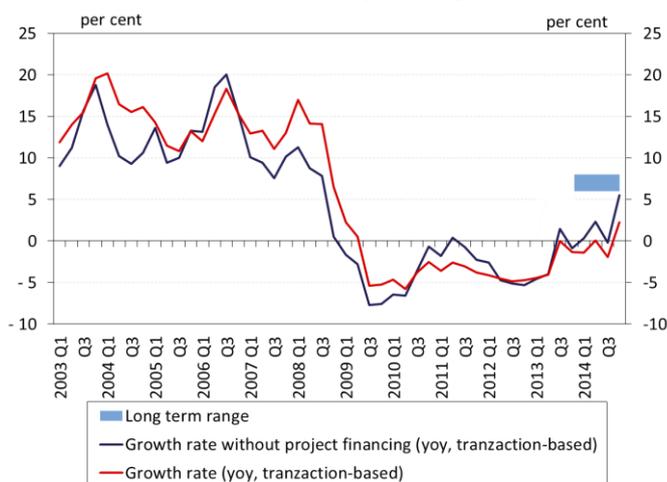
According to the estimations, Phase 1 of FGS generated new investments that would have not materialised in the absence of the programme. However, the relative impact of the programme depends greatly on the size: according to the estimates the investment ratio may have increased by as much as 15-18 percentage points among the micro-enterprises as a result of the programme, while the impact on the small enterprise size category declines and virtually disappears among enterprises employing more than 175 employees. This latter fact may be interpreted such that the larger participants simply implemented those investment projects that they would have implemented anyway, only could they do so – as a result of

the programme – under cheaper conditions. Based on the available data and results, it is not clear whether the size-based differences also represent the differences between the liquidity constraints.

The impact of FGS also depends on the credit purpose; we measure a higher (e.g. 30-50 per cent among micro-enterprises) relative impact (expressed in the investment ratio) at companies drawing down loans for new investments. Heterogeneity based on the company size can be observed in this case as well.

Using these results, additional investments attributable to the programme can be also estimated, which may be around HUF 120 billion. This accounts for 30.8 per cent of the actual investment of the respective companies and 6.8 per cent of the investments of the entire SME sector. Heterogeneity of corporate sizes determines these results as well: the former ratio is much higher among the micro-enterprises and practically zero for the largest participants.

Chart 26: Annual growth rate of lending to corporate sector with and without project financing (MFI)

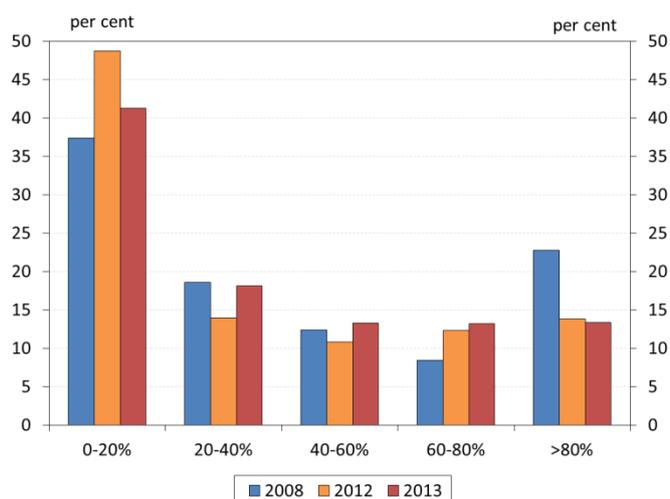


Note: The transactions of project financing is based on estimations. Idiosyncratic effects distort the last quarter values. The long term range based on MNB WP 2006/10 (Gergely Kiss–Márton Nagy–Balázs Vonnák: Credit Growth in Central and Eastern Europe: Convergence or Boom?)
Source: MNB.

Corporate lending remains under the level which supports sustainable economic growth. Before the crisis, project financing portfolio increased at a faster pace than corporate loans outstanding as a whole, which increased the growth rate of the entire outstanding amount (Chart 26). The growth rate calculated without project financing loans was suitable on its own, but project financing strongly intensified the contracting behaviour of the banking sector. At the end of 2014, the annual growth rate of corporate lending based on transactions, adjusted for the impact of project financing, would have come close to the 6-8 percentage band that supports long-term economic growth. The high ratio of non-performing project financing is still an issue which has a considerable downward effect on lending in the banking sector.

SMEs' demand for financing has improved since 2012. Since the outbreak of the crisis, the indebtedness of SMEs may have been shaped by two factors of opposite direction on the demand side. On the

Chart 27: Share of SMEs' external financing within the balance sheet in the individual years



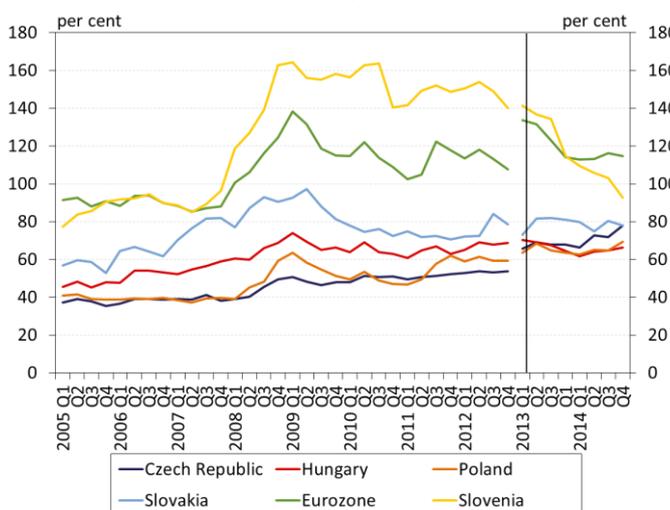
Note: Ratio of the liabilities on the balance sheet excluding commercial loans and inter-company loans.

Source: National Tax and Customs Administration, MNB.

one hand, the ratio of excessively indebted (and as such highly vulnerable) companies decreased considerably until the end of 2013: the ratio of companies whose leverage exceeded 50 per cent has fallen by almost 5 percentage points since 2008. On the other hand, following the involuntary post-crisis deleveraging, in the case of SMEs which have relatively lower debt ratio, the share of the external financing within the balance sheet has already been increasing since 2012 (Chart 27). Although the latter has not yet reached its pre-crisis level, this development may continue with the improvement of the economic outlook and the gradual easing of the credit supply; as with the SMEs' credit demand may increase in parallel with the recovery of the investment activity. The central bank's FGS programme may stimulate all these developments.

At an aggregate level, the leverage of Hungarian corporations is not higher than the Visegrad Group average. By 2014 Q1, the net outstanding debt of the Hungarian non-financial corporate sector – which also includes non-bank debt – had fallen from 70 per cent as a percentage of net capital to close to 60 per cent. Overall, the sector's indebtedness is markedly lower compared to the euro area and is in line with the regional average, while an increase in the indebtedness ratio was already seen last year in the Visegrad Group, e.g. in the case of Slovakia and the Czech Republic (Chart 28). In the euro-area countries, despite the higher level, corporate financing was characterised by an intensive decline of the share of external financing, which was driven by the contraction in the peripheral countries; however, this development seems to have come to an end by 2014 Q3. In 2014, the deleveraging which had previously characterised the Hungarian corporate sector came to an end and the share of external financing started to increase in the balance sheet. However, this was mainly attributable to the decrease of shares and shareholdings (equity).

Chart 28: Non financial corporations' net debt to net shares and other equities

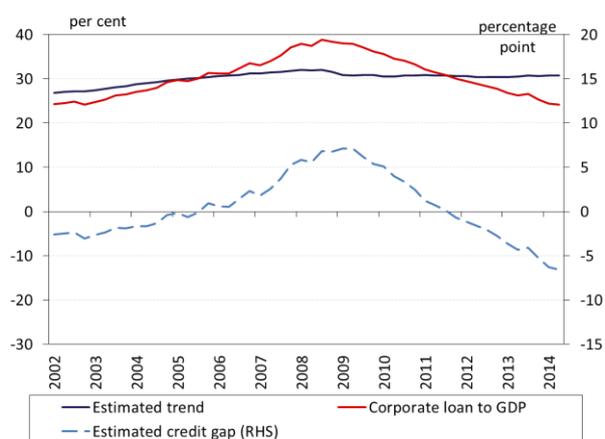


Note: Non-consolidated data, net loan and bond portfolio/net shares and other equity ratio. Based on new methodology since 2013 Q1.

Source: ECB, MNB.

Compared to GDP, the corporate loans outstanding is low. Assuming that financial cycles do exist, in an assessment of sound credit growth the focus is on the deviation of the current level of the credit-to-GDP ratio from its long-term trend, i.e. the credit gap. Although, in parallel with increasing financial depth, an increase in the credit-to-GDP ratio may be likely as well (assuming convergence), based on empirical evidence, this may fit only in the long run. The evolution of imbalances and thus vulnerabilities

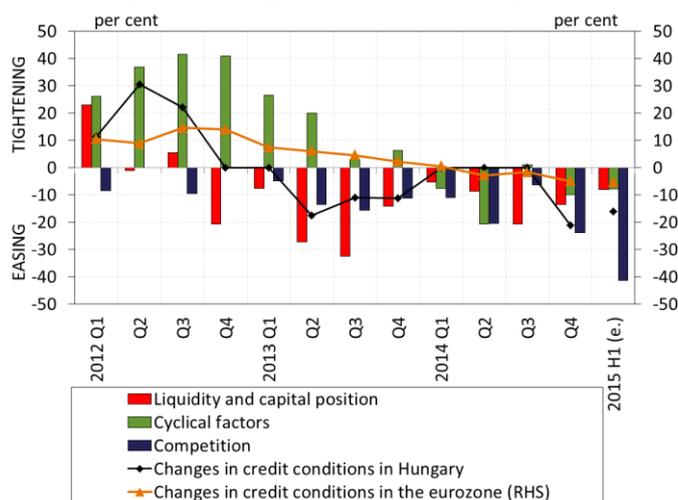
Chart 29: Corporate loan to GDP and development of the credit gap (MFI)



Note: Estimation of the long-term trend with the use of the multivariable Hodrick-Prescott filter.

Source: MNB.

Chart 30: Changes in credit conditions and categories contributing to the changes in the corporate segment



Note: Category values are derived from the arithmetic average of the factors thematically classified therein.

Source: ECB Bank Lending Survey, MNB.

begins with the positive opening of the so-called credit gap. The process lasts until the credit gap reaches its maximum and then starts to decrease, and when it closes, loans outstanding return to its long-term level. Currently, the credit-to-GDP ratio is at a lower level compared to its estimated long-term trend (Chart 29). This may suggest that with the end of the deleveraging process, a considerable increase may be necessary for corporate loans outstanding to reach its optimal long-term level.

Credit conditions in Hungary were eased only at the end of 2014, but on the whole they can still be considered as rather tight. Easing in credit conditions can be regarded as a general trend in global terms. In the euro area, easing in the conditions took place by one period after competition as relevant factor had become a crucial determinant pointing in that direction, (Chart 30) and indeed for half a year it was the only factor that justified a considerable easing. In Q4, in net terms⁴, 21 per cent of the banks in Hungary eased their credit conditions. In the survey responses, competition was mentioned as a main factor explaining easing. Looking ahead, in net terms 16 per cent of banks reported that they would further ease their credit conditions in the periods ahead. However, despite the easing of the credit conditions on the whole, conditions are still tighter than in the periods following the start of crisis. An improvement in banks' risk appetite would be a necessary condition for market-based lending which would support sustainable economic growth (see: Box 2).

⁴ The net proportion is the difference between tightening and easing banks, weighted by the market share.

2. BOX: LENDING CAPACITY AND WILLINGNESS TO LEND – SUPPLY FACTORS AT THE BANKS

The proper condition of the financial intermediary system – i.e. well capitalised, liquid and active in lending – is an essential precondition of the optimal operation of modern market economies. Therefore, in macroprudential regulatory terms, it is important to monitor whether the banking system complies with each of these conditions or, if lending is modest, which condition is breached. A number of indicators, and thereby a significant information set is available concerning the operation, condition, environment and performance of the financial intermediary system. Reviewing them one by one and based on that formulating a comprehensive assessment of circumstances, is a time-consuming task, which does not necessarily yield a clear result.

Variables used in the estimation, the estimated loadings and the not explained part of variances

	Variables	Factor1	Factor2	Not explained
Liquidity	Liquid assets*	-0,10	0,11	31%
	Stable funding*			31%
	Devisa swaps*			59%
Solvency	Parent bank's leverage***	0,10	-0,06	33%
	Capital buffer*		0,07	65%
	Leverage***		-0,11	55%
Risk taking, profitability	Difference of NPL-ratio	-0,06		84%
	Loan loss provisioning**	-0,14		34%
	Risk weighted assets*			59%
	Interest and comission income*	0,07	0,07	30%

Source: MNB

In order to compress the information related to the financial system and to illustrate the underlying processes, several central banks use factor models⁵. By using these methods, the most important information in several hundreds of time series can be represented in one or two variables, in so-called factors. Similarly to other central banks, MNB has also prepared such a model, taking the special features of the Hungarian economy into consideration. Within the financial intermediary system, we focused only on the banking system; the database consists of individual bank data, namely of the nine largest banks and certain aggregated indicators of the rest of the banking system. Ten time series are included in the observations for each bank, describing the liquidity or solvency situation and the risk-taking behaviour of the institutions.

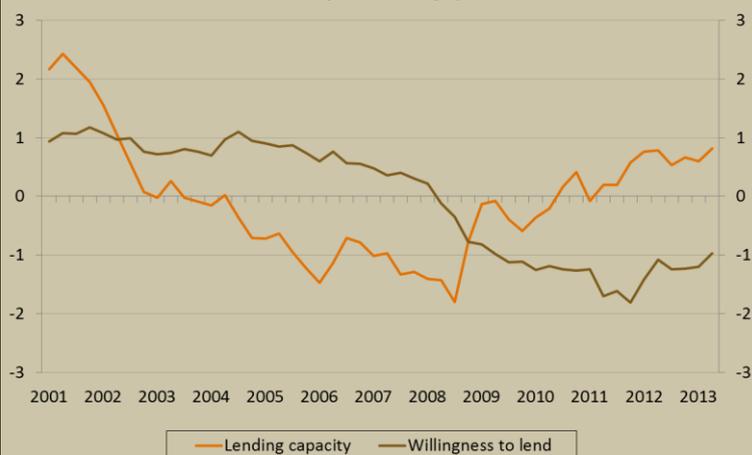
We calculated the factors from the stationary time series starting from 2001 Q3 using principal component analysis. Having performed various statistical tests⁶, we kept two principal components, which explain about 50 per cent of the variance in the data. The estimated loading values serve to interpret the derived factors, which show the direction and the strength of the factors' relation with the various variables (the sign of the loading corresponds to the sign of the correlation, and the higher the absolute value, the stronger the correlation is). Therefore, we took the average of the loadings calculated for the ten banks in each case, and included in the table the five largest numbers in absolute value for each factor (i.e. we included the loading values in the case of the five variables having the highest correlation with the factor)⁷. According to this, the value of the first factor is high when the credit risk of the existing credit portfolio is low, the interest and commission return on assets is high, the parent bank operates with high leverage and the ratio of liquid assets is low. Given the low level of the first two variables (credit risks), banks have the opportunity to move towards riskier lending segments, while the higher level of the latter three indicators suggests that banks are willing to undertake a larger lending volume and higher risks. Accordingly, we identified this factor as the willingness to lend. The level of the second factor increases when the ratio of liquid assets, bank's capital buffer and its interest and commission return on assets go up, and its leverage (both its own and the parent bank's) decreases. Accordingly, this factor is higher when banks' liquidity and capital position is more stable and their profitability is higher. Therefore, this factor is suitable for measuring lending capacity.

⁵ Brave, S. and Butters, R. A. (2011): Monitoring financial stability: A financial conditions index approach. Economic Perspectives, Vol. 35, No. 1.; Paries, M. D., Maurin, L. and Moccerro, D. (2014): Financial conditions index and credit supply shocks for the euro area. ECB Working Paper No. 1644.

⁶ Bai, J., and S. Ng (2002): Determining the number of factors in approximate factor models. Econometrica, 70, 191–221.

⁷ Note to the table: *Compared to assets, **compared to outstanding,*** leverage: assets/equity

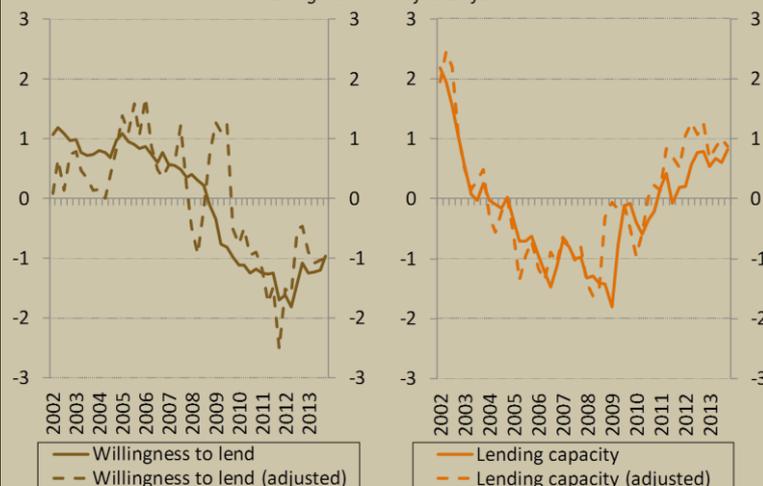
Factors of the banking system



Note: Factors measured in terms of number of standard deviations away from historical mean.
Source: MNB estimation.

Based on the time series of the first factor, willingness to lend was around a constant high level until 2005, due to the parent banks' risk appetite and the low loan losses. Then it slowly started to decrease until 2008, when – as a result of the crisis – there was a considerable decline and it fell to the negative range, in parallel with the realisation of losses on foreign currency loans and the contraction of funding. From 2009 (with the exception of the quarters impacted by the early repayment scheme) it remained roughly at the same, rather low level, and in 2013 it started to gradually recover. The lending capacity factor reached its highest level at the beginning of the sample, and then, in parallel with the sharp rise in foreign currency lending, banks' capital and liquidity situation became increasingly stretched, which was coupled with a continuous weakening of lending capacity. The capital injections by parent banks after the crisis and the measures aimed at improving the liquidity significantly increased the institutions' lending capacity by 2009, which – due to the precautionary behaviour of the banks and the moderate lending activity – moved to the positive range by 2011 and has been steadily increasing ever since then. Thus, based on the factors, in the last couple of quarters the banking system's lending capacity has been historically stable and high, but the willingness to lend is still moderate and increases only slowly, which may be the primary obstacle to the growth of the credit portfolio.

The original and adjusted factors



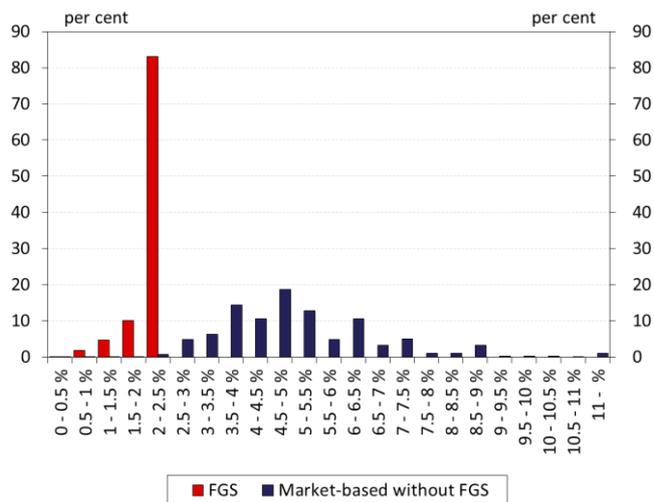
Note: Factors measured in terms of number of standard deviations away from historical mean.
Source: MNB estimation.

Some of the time series used to generate the factors are strongly dependent on the macroeconomic environment (particularly in the case of the risk-taking indicators). Therefore, in the willingness to lend and the lending capacity not only the change in the banks' behaviour has relevance, but the macroeconomic environment also plays an important role (for example, lower economic growth results in higher loan losses, which reduces the willingness to lend). If we want to generate these two factors in a way that they capture only the change in the credit supply, then the demand effects must be filtered out⁸. According to the adjusted willingness to lend, the value of the factor was in fact historically high only as of 2005; before that it remained moderate, though positive. Thus, from 2002 the high willingness was due to the favourable economic growth, while as of 2005 it was rather the supply factors that increased the value of the indicator. As a result of the crisis the adjusted factor also shows a considerable decline; however, compared to the unadjusted factor the decline of the willingness appears with delay (the real economic indicators reacted to the shock faster than the banking system's indicators; in contrast, the impact proved to be more lasting in the latter). At the end

⁸ The adjustment methodology is available in Hatzius, Hooper, Mishkin, Schoenholtz and Watson (2010): Financial conditions indexes: A fresh look after the financial crisis (NBER Working Paper 16150), where a two-step estimation process is used for this purpose. First, the variables used for the factor analysis are fitted by regressions, the explanatory variables of which include the GDP, the inflation and the lags of those, and then the principal component analysis is performed with the residuals of the regressions. In our case, in order to preserve comparability, we switched the two phases of the estimation, included also the EUR/HUF exchange rate in the explanatory variables and replaced inflation with the core inflation filtered for the indirect tax impact.

of 2013 the willingness to lend filtered for demand effects also takes a negative value – it is almost identical with the unadjusted factor – hence, on the supply side the willingness clearly restricts the growth of lending exposure. The adjusted lending capacity deviates from the original factor only to a slight extent. A significant difference was observed only in some of the post-crisis periods, when the adjusted factor signals the faster improvement of the lending capacity. In 2013, the adjusted factor also takes a positive value, and thus the lending capacity does not restrain lending activity on the supply side.

Chart 31: Distribution of the SME loans disbursed in 2014 by interest level



Source: MNB.

Given that further easing in credit conditions seems necessary, the Monetary Council decided to launch the FGS+ with a facility amount of HUF 500 billion.

As a result, on the whole together with the previous scheme, about HUF 1000 billion is available to stimulate the economy. The FGS+ programme may help to reduce the duality of the corporate lending market. Currently, a significant share of SMEs have access to bank lending only under conditions that are much more unfavourable than under the FGS programme (higher and variable interest rates, shorter maturity). The vast majority of new loan extensions outside the FGS are disbursed with interest rates ranging from 3 to 9 per cent (Chart 31). Presumably, due to the higher interest rates some SMEs appear in the market only with moderate credit demand, or not at all. Consequently, the primary target group of the FGS+ is SMEs that can be financed at an interest rate spread of 2.5-5 percentage points, but would not be eligible for the existing FGS programme, or would not be able or do not wish to borrow under market conditions with a higher interest rate (see: Box 3). Its secondary target group is enterprises borrowing on market conditions, whose loans were concluded outside the FGS and had an interest rate spread between 2.5 to 5 percentage points (nominal interest rates of 4.6 - 7.1 per cent) and accounted for a significant share of the market in 2014.

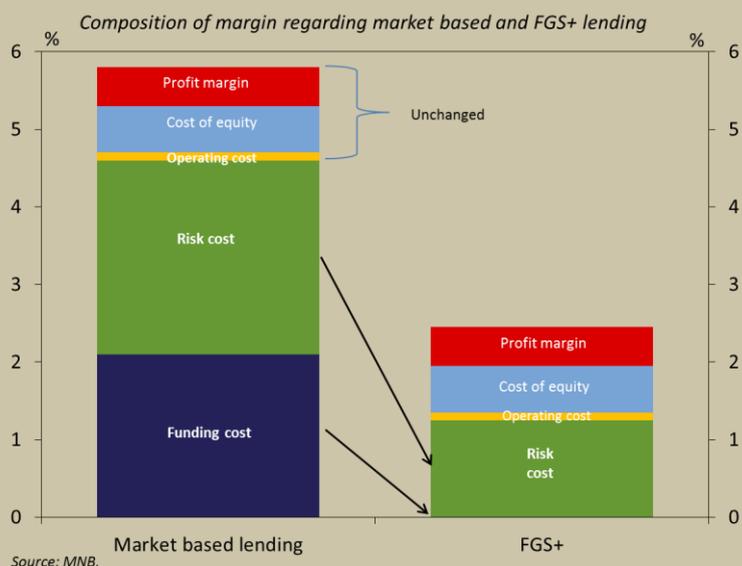
3. BOX: THE MNB'S NEW CREDIT INCENTIVE TOOL: FUNDING FOR GROWTH SCHEME PLUS (FGS+)

Until the end of March 2015, the credit institutions that participated in the first and second phase of FGS had disbursed loans under the Scheme to almost 21,000 enterprises in the amount of about HUF 1,360 billion. Due to the favourable conditions available under the FGS the willingness of small- and medium-sized enterprises to borrow increased substantially. Thanks to the favourable impacts of the programme on the lending activity, the Hungarian economy managed to avoid a credit crunch.

Despite the favourable impacts of the FGS, lending outside the FGS has still not recovered; in this segment the volume of outstanding borrowing has continued to decrease, similarly to the previous years, even though the MNB has reduced the base rate significantly in recent years. As a result of the credit institutions' excessive aversion to risk, a large share of enterprises does not have access to financing outside the FGS or it is available for them only with high spreads. Thus a number of riskier, but still viable businesses are partially or fully expelled from the credit market, particularly from the market of long-term investment loans. As a result of this, a large number of investments do not materialise or are implemented only with a smaller scope, which has an unfavourable effect both on the enterprises' competitiveness and the employment.

The above symptoms suggest a malfunction of the monetary transmission in this segment on the SME credit market. If the risk-taking channel were functioning well, banks would increase their lending activity more than what normal transmission channels justify in a low interest rate environment, thus facilitating recovery from the crisis⁹. In the case of Hungary, this would mean that as result of the interest rate cuts between 2012 and 2014 the banking sector's risk appetite should have increased, i.e. they should have expanded their lending activity towards riskier enterprises. The low interest rate environment changes banks' perception of risk through two channels: 1) the effect of low interest rates on the valuation of collateral, the incomes and cash-flows may substantially influence the way banks assess risks; and 2) banks turn to investments with higher yields, particularly when they have to achieve ambitious profitability objectives. This is referred to as the risk-taking channel of monetary transmission in the literature¹⁰.

In order to improve the efficiency of the monetary policy transmission's risk-taking channel and to restore the spreads,



the Monetary Council of the MNB decided on the launch of the Funding for Growth Scheme Plus programme on 18 February 2015. Under FGS+, the MNB provides credit institutions with a facility amount of HUF 500 billion to the debit of the HUF 2,000 billion maximum limit announced upon the launch of the second phase of the FGS. Under FGS+, similarly to FGS, refinancing loans, bearing an interest of 0 per cent, drawn down from the central bank are available for lending to small- and medium-sized enterprises in the same way, with an interest rate not exceeding 2.5 per cent. However – in contrast to the FGS – refinancing is supplemented by a sharing of risk to ensure that the small and riskier enterprises, which so far

have not been eligible for the FGS, may also have access to financing under this Scheme. The MNB takes over from the credit institutions 50 per cent of credit losses that arise in relation to the loan contracts concluded under the new Scheme, but only for a term of a maximum 5 years and annually up to 2.5 per cent of the entire loan portfolio held by the individual credit institutions under this scheme (annually, for 5 years).

Since, in addition to costs related to lending, the interest margin must cover the expected loss of the lending, as a result of the risk sharing the banks must enforce a lower risk cost in the loan interest rates; thus, despite the unchanged interest margin cap, even those riskier, but still creditworthy enterprises can participate in the new programme, which so far had no access to loans or could borrow only less than necessary. Since this market disturbance mainly impacts the long-term loans, i.e. the new investment loans, and for achieving a higher growth impact, at least 70% of the loans drawn down under the FGS+ must be a new investment loan (or leasing) and only the remaining 30% may be taken for working capital financing. In order to ensure the financing of smaller enterprises, in the FGS+ the amount of credit that may be drawn down by a single enterprise is limited to HUF 500 million, and the smallest credit amount that may be taken was also reduced to one third, i.e. to HUF 1 million. The credit institution can freely decide on the Scheme used for the financing specific enterprises; however, the credit institutions may utilise the advantages of the risk sharing the best, if they continue to finance low-risk enterprises under the FGS, while providing financing to the medium-risk enterprise within the framework of the FGS+. In addition, in order to ensure that the new Scheme is not used for financing companies with good creditworthiness, an additional condition is that the credit institution must lend one unit of credit under the FGS to be able to grant two units of credit under FGS+. The impact of the FGS+ on economic growth

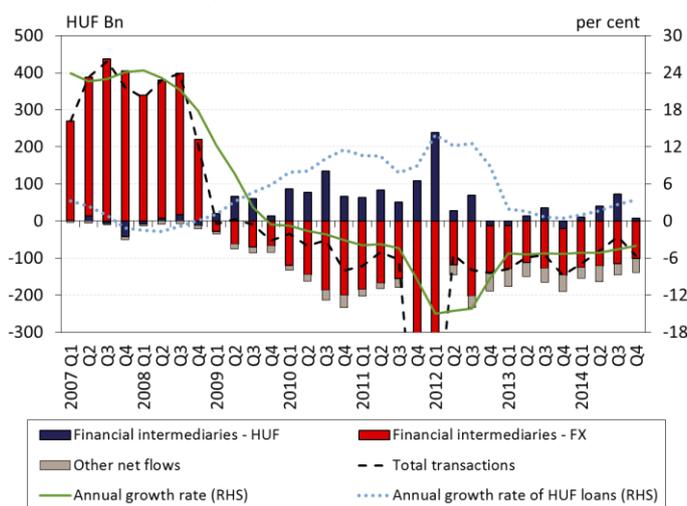
⁹ The effectiveness of risk-taking channel is proved by several empirical studies: Altunbas, Y, L Gambacorta and D Marqués Ibañez (2009): "An empirical assessment of the risk-taking channel", paper presented at the BIS/ECB conference on "Monetary policy and financial stability, 10–11 September, Jiménez, G, S Ongena, J Peydrò and J Saurina (2009): Hazardous times for monetary policy: what do twenty-three million bank loans say about the effects of monetary policy on credit risk-taking?, Bank of Spain, Working Papers, No 833.

¹⁰ Gambacorta, Leonardo (2009): Monetary policy and the risk-taking channel, BIS Quarterly Review

takes place through similar channels as in the case of the FGS. Moreover, an additional growth impact may appear due to the fact that younger and small enterprises, i.e. the target group of the FGS+, have higher growth potential.

Under the low and fixed interest available in the FGS+ programme, the investment needs of the enterprises not eligible for the FGS can be also satisfied, thereby improving their competitiveness and profitability, which may also make a material contribution to the increase in employment.

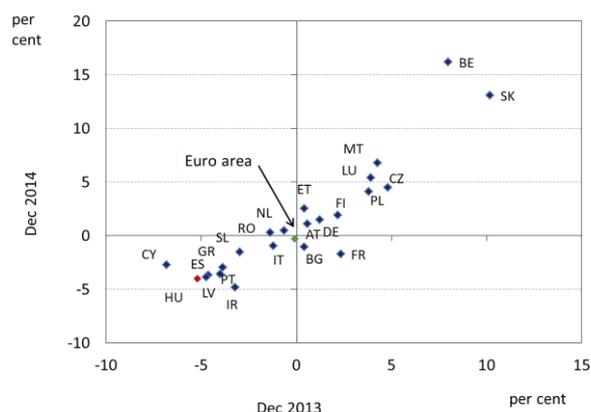
Chart 32: Quarterly transactions of household lending (domestic financial intermediaries)



Note: Seasonally unadjusted data with rolling exchange rate adjustment.

Source: MNB.

Chart 33: Annual transaction-based growth rate of household loans in international comparison



Source: ECB, national central banks.

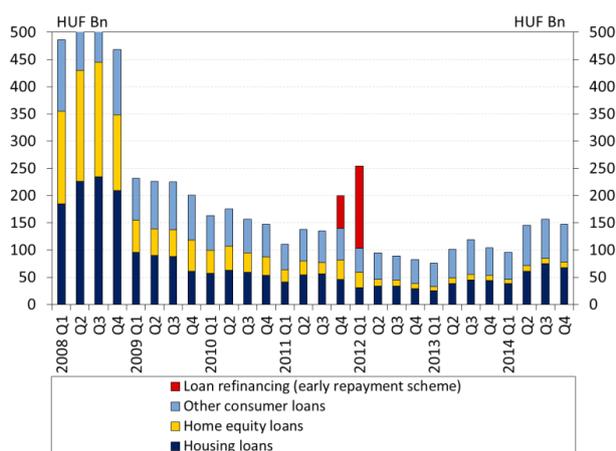
3.2. Increasing share of household lending in forint portfolio

The decline in household foreign currency loans continued, while there were signs of a turnaround in forint lending. In the second half of 2014, loans to households provided by financial intermediaries continued to decline, falling by around HUF 136 billion in total (Chart 32). The observed decline is primarily attributable to the continued contraction of foreign currency loans, both in the case of housing loans and consumer loans. As opposed to this, forint lending was essentially dominated by increasing volumes of new lending in the second half of 2014 as well. During the year, the forint loan portfolio increased by more than HUF 130 billion in total on a transaction basis, the major part of which is attributable to the growth of consumer loans. Forint lending for housing purposes amounted to HUF 30 billion in the credit institution sector in 2014, while households were net repayers of principal to the financial enterprises.

Portfolio contraction decelerated, but is still high in international comparison. The annual decline in household loans outstanding decreased from 5.3 per cent measured at the end of 2013 to 4 per cent at end-2014. The credit-to-GDP gap continued its negative widening, as already presumed in previous years, based on which current loans outstanding falls short of its equilibrium level at the end of 2014. Although the rate of the portfolio contraction has already shown a continuous, balanced decrease for three quarters, in international comparison it is still relatively high (Chart 33). In the last two years, the majority of the countries in the CEE region were able to increase or maintain loans outstanding; a decline was observed only in Latvia and Slovenia.

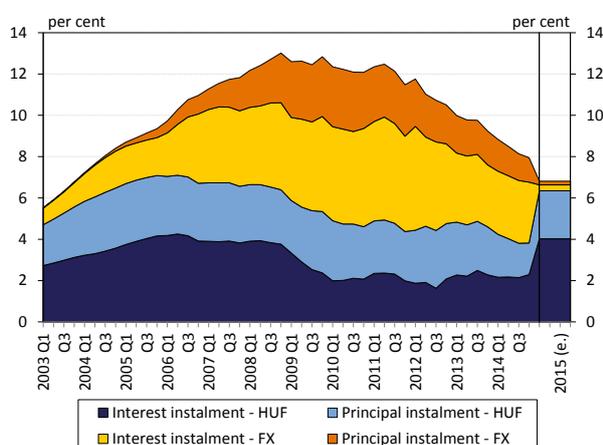
In parallel with the improvement in the economic outlook, the recovery in new lending continued throughout 2014. The gross volume of credit institutions' new loan extensions to households amounted to HUF 304 billion in the second half of the year (Chart 34). In 2014, households concluded new contracts with a volume that was almost 36 per cent

Chart 34: New household loans in the entire credit institution sector



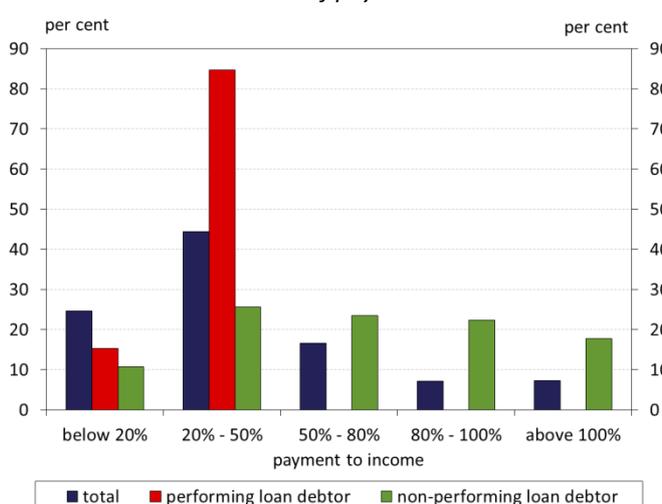
Source: MNB.

Chart 35: Effect of the settlement and FX loan conversion to HUF on the household's debt service burdens



Note: Principal and interest instalments paid by the households.
Source: MNB.

Chart 36: Distribution of payment-to-income ratio



Note: Distribution of the number of debtors weighted by the outstanding debt.

Source: MNB, based on questionnaire-based household survey - Summer, 2014.

higher than in 2013. The recovery was the highest in housing loans (almost 60 per cent), but the aggregate growth is also remarkable. The increase in real wages and employment as well, along with the lower level of interest rates, may have boosted households' consumption, housing investment and thereby also their new borrowing.

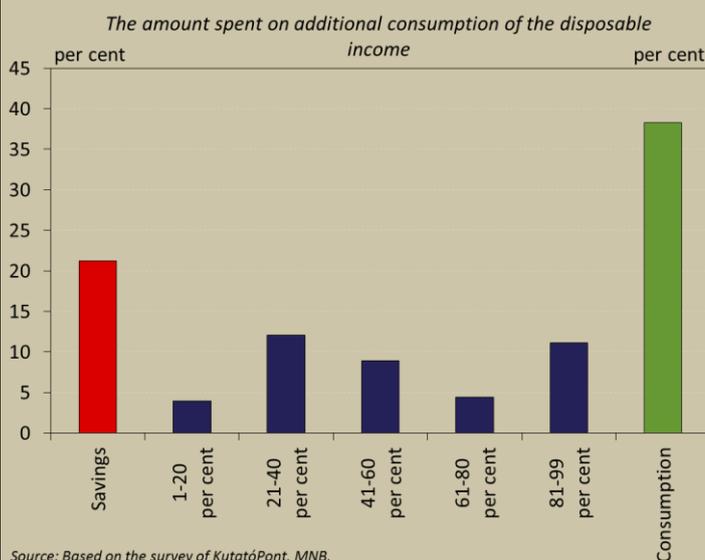
Looking ahead, settlement with the banks may further reduce households' debt while the debt service burdens will also decrease as a result of falling interest rates. As a result of the settlement arising from nullification of the exchange rate spread and unilateral contract modifications, due in 2015 Q1, the regular debt service burden of borrowers will also decrease via the decrease in interest rates. Easing of the debt service burden and the higher savings resulting from the disbursements may reduce precautionary considerations in the future, motives that formerly determined the behaviour of households, while the saving ratio of the sector may also increase. In addition to the increase in net financial worth, as a result of the measures, the debt service burden of households will decrease by about one-quarter in proportion to disposable income, thereby increasing the sector's borrowing capacity (Chart 35).

However, indebted households may continue to be characterised by precaution accompanied by deleveraging. Household demand for credit is characterised by a duality stemming from the heterogeneity of the sector. In parallel with the recovery of the housing market and the stable and increasing dynamics of retail sales volumes, a recovery in credit demand may be expected in the case of less indebted households, while the behaviour of the highly indebted households may continue to be dominated by ongoing deleveraging. In this latter group, debt service burden may remain heavy, which restrains the consumption and investment activity of these households. Based on the results of a questionnaire-based household survey (see Box 4) and the high indebtedness of mortgage borrowers in proportion to their income, the sector is still characterised by high risks. The probability of default is increased by the indebtedness in other types of debts (other mortgage, other consumer loans, public utility debts, etc.), which also hinder settlements or repayments of households' debts from own funds (Chart 36).

4. BOX: HOUSEHOLD SURVEY ON LOAN DEBTORS

Following the questionnaire-based survey in 2007 and 2013, the MNB performed a new survey in August 2014 among households with outstanding debt. The purpose of the survey was to obtain more in-depth information on borrowing and saving habits, as well as the overall financial situation of indebted households.

The settlement and the conversion of FX loans into HUF may ease the debt service burden of consumers participating in the scheme. Borrowers participating in the survey could respond to the question whether they had any payments overdue for more than 30 days, and the reason thereof. Among the possible options, the rise in instalments and an unexpected decrease in the household's income are considered relevant for settlement, as the compensation improves borrowers' financial position through the decrease of the payment-to-income ratio. When reviewing the frequencies of the selected responses we found that for the debtors included in the sample these aforementioned issues were the most significant ones (88 and 64 per cent, respectively). Thus settlement and conversion into HUF is expected to ease the repayment problems for these borrowers and the probability that the loans become performing increases.

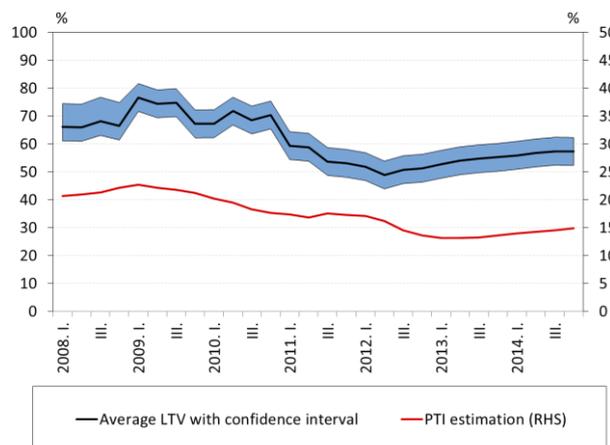


However, it is also questionable whether the decrease in instalments as a result of the compensation would be sufficient for distressed borrowers to perform again. The survey examined this issue as well. Debtors with overdue debt of at least 30 days were also asked whether a 15 per cent decrease in the instalment would be sufficient for them to eliminate their debt service difficulties. More than one-quarter of the actual respondents with a foreign currency loan participating in the survey said "yes". About one-fifth of all respondents were not able to assess how their situation would change in this case. According to the MNB's expectations, instalments may decrease on average by 20-25 per cent for performing debtors; however, it should be noted that this may be substantially lower for customers with past due debts because of the accumulated arrears.

The settlement and conversion of FX loans impacts not only non-performing debtors. Through the decrease in instalments of performing borrowers, it may also have a stimulating effect due to an increase in consumption. According to the survey, it was also assessed how performing debtors would spend their surplus income arising from a 15 per cent decrease in their instalments. It could be noticed that about half of the borrowers with a foreign currency loan would use at least 80 per cent of the available surplus income for consumption.

In the survey foreign currency borrower respondents were also asked about the maximum fixed instalment amount that would prompt them to take the opportunity to replace their present foreign currency loan with a fixed instalment forint loan, if such an option was available. Only 14 per cent of the respondents would not convert their foreign currency loan to HUF with fixed instalments. However, those who would convert their loans hope that the instalment was identical or lower than their previous instalment. Taken together, it can be concluded that the compensation followed by conversion is satisfying for the debtors as well.

Chart 37: LTV of new housing loans and average instalment in proportion to average income



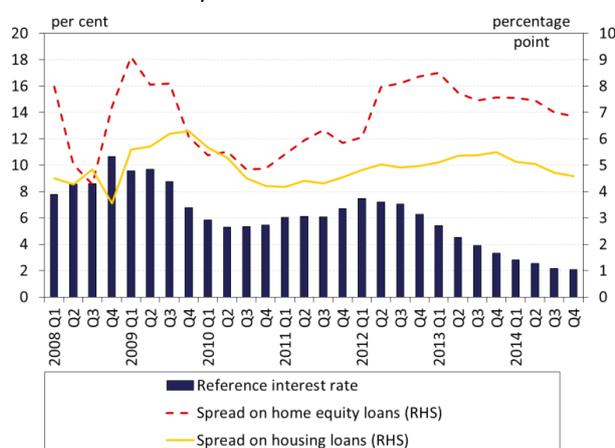
Note: For average income a household has two persons earning average income.

Source: MNB.

The average coverage with collaterals of new loans increased slightly. The increase in the average LTV ratio of realised loan transactions, which has been observed since 2012 Q1, came to a halt in the second half of 2014; it still stands at 57 per cent and falls below the average calculated for the total outstanding portfolio by 2 percentage points (Chart 37). In addition, the average instalment in proportion to average income also seems to become stable at 15 per cent. However, the LTV structure of new loans continued to change: the share of loans with an LTV ratio of below 30 per cent decreased, while the share of those over 70 per cent increased. Nevertheless, 38 per cent of the new housing loans were disbursed with an LTV below 50 per cent.

The financing costs of new loans decreased. In 2014, the interest rate on housing loans fell by 2.1 percentage points to 6.7 per cent, while the interest rate on home equity loans decreased by 1.9 percentage points to 9 per cent (Chart 38). Although the central bank's base rate cuts temporarily ended in July, the pass-through to the reference rate decreased the interest rates until the end of the year. However, the interest rates on new loans fell to a higher extent, and thus the spreads were also continuously decreasing throughout the year: the spread on housing loans fell to 4.6 percentage points, while that on home equity loans decreased to 6.9 percentage points. At the same time, both the interest and the spread level in the Hungarian banking sector are still relatively high in international comparison. The Annual Percentage Rate (APR) on housing loans is merely 2.9 per cent in the euro area and 4 per cent on average in the CEE region.

Chart 38: Spreads on new household loans

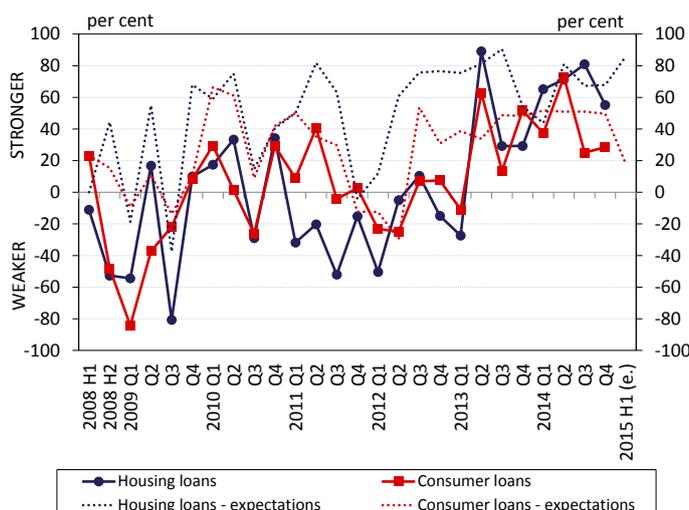


Note: Quarterly average of interest rate spreads over the 3-month BUBOR. Spreads based on the APR.

Credit conditions for consumer loans eased, while those for housing loans did not change materially in the second half of 2014. The easing of credit conditions by the banks responding in the lending survey¹¹ affected only unsecured consumer credits. For the first half of 2015, the banks plan to tighten the conditions in net terms in both segments, which will mostly impact the maximum payment-to-income ratio during implementation of the "debt cap" rules by the banks. However, this tightening is expected to affect only a small share of customers – compared to the situation before the introduction of the rules – as the

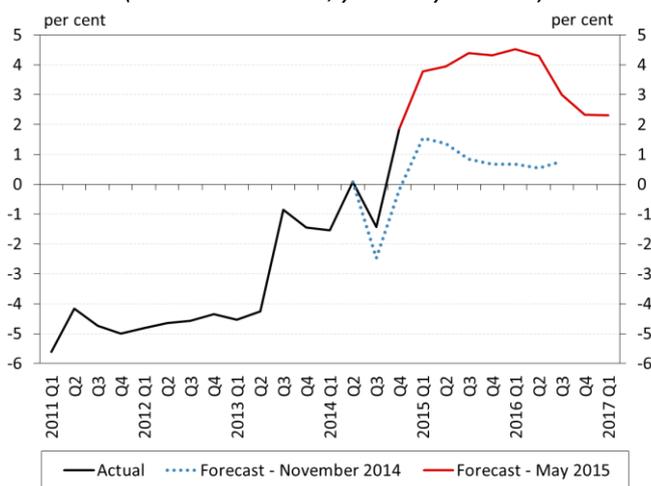
¹¹ <http://english.mnb.hu/Kiadvanyok/trends-in-lending>

Chart 39: Credit demand in the household segment



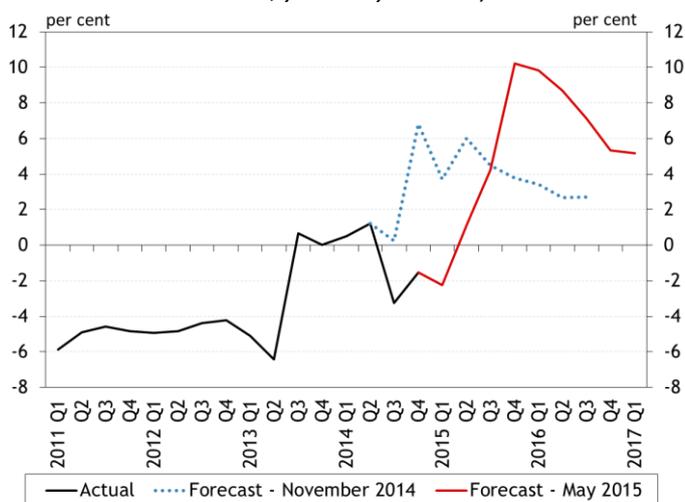
Source: MNB, based on the answers of respondent banks.

Chart 40: Forecast for lending to non-financial corporations (transaction-based, year-on-year data)



Source: MNB.

Chart 41: Forecast for lending to the SME sector (transaction-based, year-on-year data)



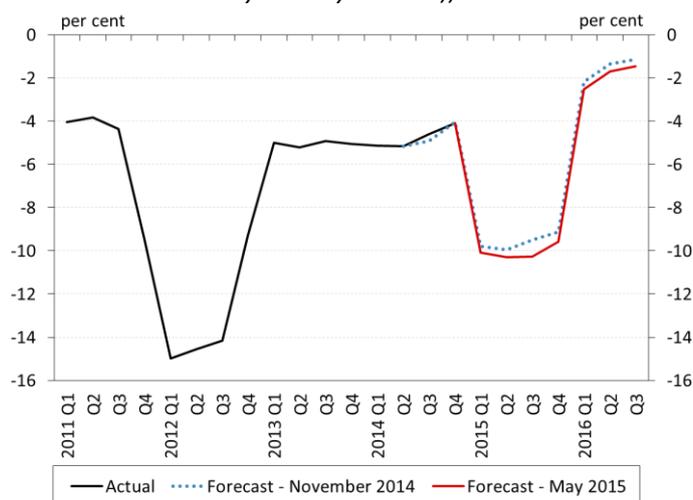
Note: The SME forecast was derived from the model-based forecast available for total corporate lending, taking into account the weight of SME lending and the FGS programme. Source: MNB.

vast majority of contracts already complied with the new rules. This can be also noticed on the demand expectations of banks: the majority expects an increase in demand for housing loans in spite of the introduction of the regulation in January 2015 (Chart 39).

3.3. With the risk-sharing under the FGS+ programme, corporate lending may increase

Corporate lending may increase to a larger extent than previously expected. The actual corporate lending figures for 2014 Q3 and Q4, filtered to one-off impacts, were basically in line with our previous forecast. With the improvement in the economic outlook, an increase may be seen in investment activity, and thus also in corporate credit demand. Based on the responses given by banks in the lending survey, a slight easing can be expected on the supply side. However, on the whole the majority of banks have not changed and are not planning to change their tight credit conditions, which is basically attributable to their still moderate risk appetite. However, looking ahead, announcements made since the beginning of 2015 may accelerate the easing of supply constraints: these include the government's commitment to decrease the levy on banks, and the central bank's FGS+ programme. The launch of FGS+ may further strengthen corporate lending with the involvement of riskier SMEs. In our forecast, we expect almost full utilisation of both the credit facility in the second phase of the FGS and the FGS+ as well, by the end of 2015. The activity of the central bank's asset management company (MARK), which would result a one-off portfolio reduction in the future, was not incorporated, however portfolio cleaning has positive effects in itself. On the whole, compared to the previous forecast, we expect higher volumes in corporate lending, gradually increasing over the forecast horizon both for the entire corporate (Chart 40) and for the SME (Chart 41) lending.

Chart 42: Forecast for lending to households (transaction based, year-on-year data)



Source: MNB.

Due to the settlement in the household segment, we expect a larger, but temporary contraction. In the period under review, the household lending of financial intermediaries developed in line with our earlier expectations. On the demand side, the volumes of new disbursements reflected the increase previously expected, while – looking ahead – the settlement with banks and conversion of FX loans into HUF may support households' borrowing through the increase in the sector's net financial worth. On the supply side, banks reported a wide-scale tightening of credit conditions, which was primarily attributable to the debt cap rules of the MNB; the expected outcome of which will not be significant on the underlying lending developments on the whole. Disregarding the one-off impact of the settlement with consumers, we still expect a gradual deceleration of loans outstanding to households' on the forecast horizon (Chart 42). As regards the expectation of banks', more information became available via Lending and Market Intelligence surveys (see Box 5).

5. BOX: DOMESTIC BANK'S BUSINESS PLANS FOR 2015

According to the MNB's forecast, a decline with a slowing pace in lending to households and a growth in corporate lending is expected. The credit-track is consistent with the GDP forecasts from the current Inflation Report:

Annual change in loans outstanding according to our forecast

(year-on-year, per cent)	2015Q4	2016Q4
Households	-9.6 (adjusted with settlement effect -2 per cent)	-1,2
Corporate (overall)	3,7	2,5
SME	10,2	5,3

Source: MNB.

The lending and GDP developments are endogenous, i.e. higher credit growth leads to stronger economic growth, and vice versa. The current forecast – in line with the MNB's Lending survey – is consistent with the assumption, that banks ease only slightly their credit conditions. This means that our forecast is cyclically not neutral in terms of the real economy, but that these figures reflect a more risk-averse bank behaviour with more restrictive lending activity. With a "neutral" banking sector, credit growth and economic growth could be higher.

Data received throughout the MNB's Market Intelligence survey (covering the largest banks of the sector) slightly nuance the MNB's forecast, since banks expect a slightly stronger decline in the household segment and a slightly lower increase regarding SMEs, however, at the same time, a more intensive lending activity is projected for large companies.

Expected trends in total assets and lending in 2015 on the basis of lending forecast of banks involved in Market Intelligence Survey

	Expected change (year-on-year, per cent)
Total assets	-4
<i>Household lending</i>	-15 (filtered out settlement's effect -5)
<i>Small and medium-sized enterprises</i>	7
<i>Large companies</i>	5

Source: MNB Market Intelligence.

Lending dynamics supportive to long-term economic growth

For the long term, a 6-8 per cent annual credit growth is considered consistent with the currently estimated potential GDP growth rate of 2-3 per cent, and the 3 per cent inflation. Due to the prolonged deleveraging, for a healthy closing of the currently negative credit-to-GDP gap requires more intensive growth in corporate lending; however in equilibrium both corporate and household lending growth rate corresponds to the dynamics mentioned above. The concerning dynamics are not only maintaining the credit-to-GDP ratio, but also result in an increase in the financial depth, which is a commonly observed phenomenon in case of converging countries.

Expected credit expansion for the next two years

For the next two years, it would be desirable to maintain a more expansive credit dynamic in corporate and particularly in SME lending, than that is expected in the MNB's forecast, for two reasons:

- (i) First, with the current economic growth and long-term convergence path, a minimum 6 percent credit growth rate is self-consistent;
- (ii) On the other hand, credit gap in the corporate segment is still negative, meaning that to achieve equilibrium, a higher than the "long-term consistent" growth rate would be required.

For these reasons, the forecasted corporate lending growth rate of around 4 per cent can be considered a minimum expectation, while supporting the economy in the medium term would be served by a rate significantly above 6 percent. At the banking sector level expected credit growth, however, does not mean that each bank would reach such a level of growth. Banks show significant heterogeneity in terms of how much expansion they would be able to produce in the near future, since it largely depends on the current size and quality of stocks hold by each credit institutions and on the determining factors of lending capacity.

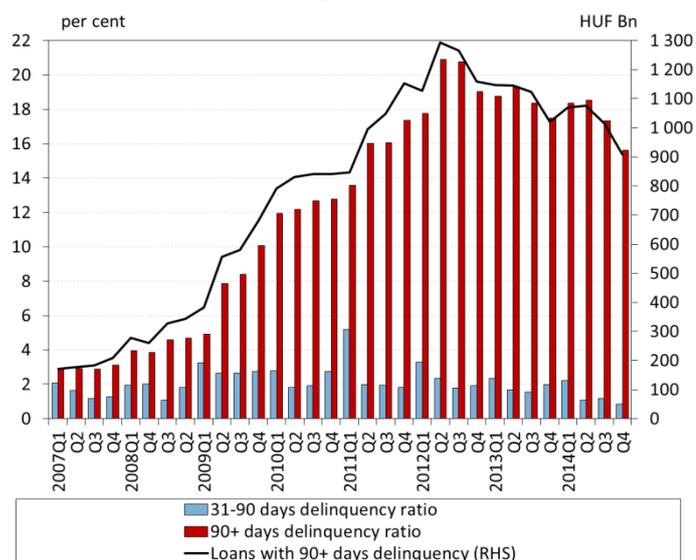
For these reasons, the sector-level required minimum is 4 per cent, but the optimally at least 6 per cent growth rate does not mean equivalent requirement for all credit institutions. At the individual bank level, we expect that according to individual capacity everyone is needed to contribute to the necessary growth of at least 4 per cent needed at the sector level, but more so to 6 percent growth. This means that banks with shrinking balance sheet, at least – disregarding the effects of MNB-supported portfolio cleaning – are expected to stop the decline in corporate loans outstanding. For banks with higher lending capacities well above the 6 percent growth is recommended, but it should be still based on prudent lending practices.

4. PORTFOLIO QUALITY –SEGMENTED PORTFOLIO CLEANING RATIO AT A LOW LEVEL

During the second half of the year, the portfolios of corporate loans overdue for more than 90 days and 30 days both decreased within the corporate portfolio. By the end of the year, the corporate NPL ratio had decreased to 15.6 per cent, which is 2.9 percentage points lower than in the previous half-year. The improvement of the corporate portfolio quality is primarily attributable to one-off cleaning and to a lesser extent to the easing of portfolio deterioration. Despite the improved portfolio quality, the high volume of non-performing project financing loans is still a problem, where the cleaning is realised at the required rate only with the help of intra-group transactions. Substantial cleaning of the project loans outside the banking group is going to be facilitated from the second half of the year by the asset management company established last November by the central bank (MARK Ltd.), operating on a market basis and pricing method.

In the second half of 2014, the ratio of non-performing loans reached its historic peak within the overall banking system's household loan portfolio. The NPL ratio increased by 0.6 percentage points compared to the end of the previous half-year, reaching 19.2 per cent at the end of the year. Within non-performing household loans, the high volume of the portfolio backed by mortgages and the sluggish cleaning rate of these loans represent a major problem. The banks are quick to remove non-performing unsecured household loans from their balance sheet; however, a substantial part of the cleaned volume is related to a single banking group, which sells the loans to an intra-group work-out company, and thus the risks are only partially managed. As opposed to this, the cleaning of non-performing mortgage loans from the portfolio encounters obstacles due to the inappropriate regulatory environment and poor market demand. At present, the cleaning of non-performing mortgage loans and the residential properties serving as collateral from banks' balance sheets is performed efficiently by National Asset Management Agency. (NET), which in the recent years purchased more than three-quarters of the properties serving as collateral sold by the financial institutions. The problem of non-performing household loans could be managed by a comprehensive solution that incorporates the institutionalised form of debt settlement and a debt relief scheme, and would facilitate the expansion of NET's activity.

Chart 43: Share of non-performing corporate loans of the banking sector

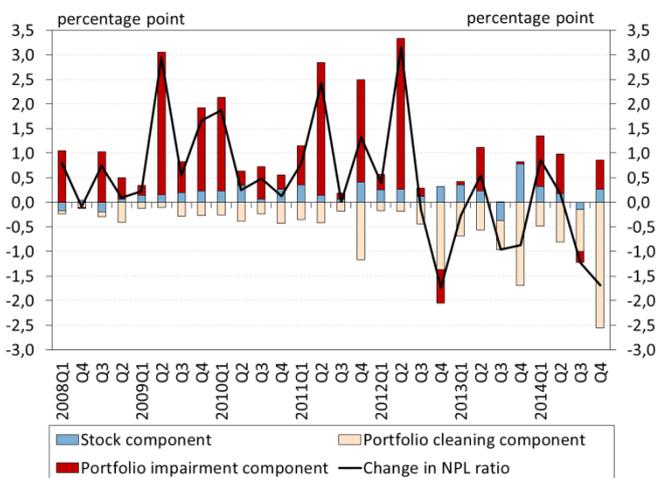


Source: MNB.

4.1. Corporate cleaning ratio is improving in a segmented way, cleaning of project loans is progressing slowly

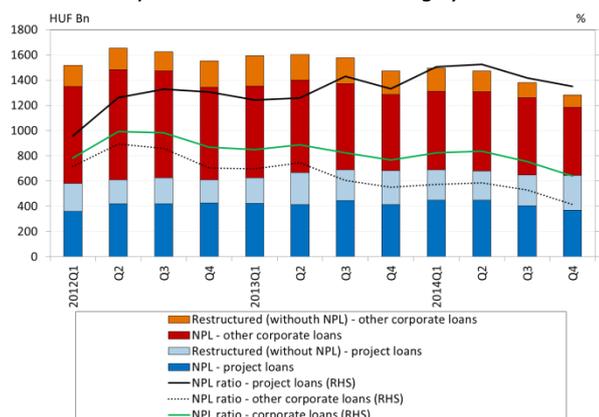
The corporate portfolio improved in the second half of 2014, primarily due to a one-off banking event. Compared to the first half of 2014, the ratio of the banking system's non-performing corporate loans within the portfolio had declined significantly by the end of the year. By the end of December 2014, the NPL ratio was 15.6 per cent (Chart 43), which is still high by international standards, but is considerably lower than the 21 per cent peak seen during the crisis. In addition to the decrease in NPLs, another favourable trend is that the ratio of the loans overdue for less than 90 days also fell, which reduces the probability of further worsening, and thereby improves this year's outlook. Breaking down the change by factors, it can be stated that the decrease in the NPL ratio is mostly attributable to the major cleaning performed at year-end, a phenomenon also observed in previous years (Chart 44). At the same time, a major part of the high cleaning ratio is related to a single bank, where the non-performing portfolio was transferred to the parent bank's balance sheet (Chart 46). In Q3, both the portfolio deterioration component and the volume impact acted towards the improvement of the portfolio quality, which was attributable to a large extent – in

Chart 44: Factors affecting changes in the ratio of non-performing corporate loans in the banking sector



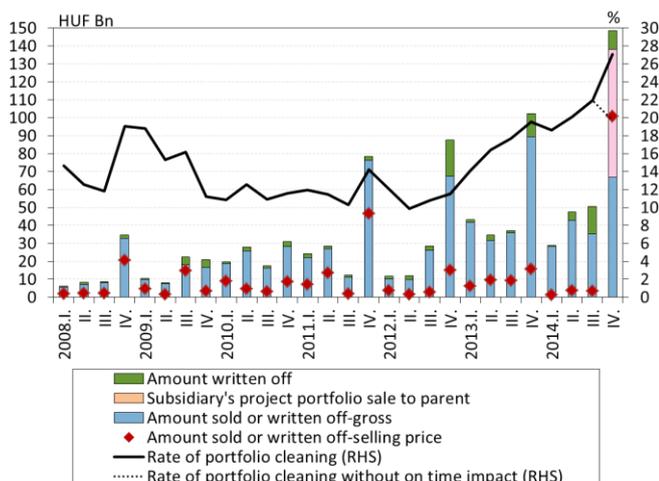
Source: MNB.

Chart 45: Non-performing and restructured project and other corporate loans in the banking system



Source: MNB.

Chart 46: Portfolio cleaning of the non-performing corporate loans within the banking sector



Note: The one-off impact comprises the sales of project loans

addition to the cleaning – to the drop of the non-performing corporate loan ratio in the second half of the year. Cleaning is still necessary for the improvement of the portfolio quality, and thus the support of cleaning is of key importance.

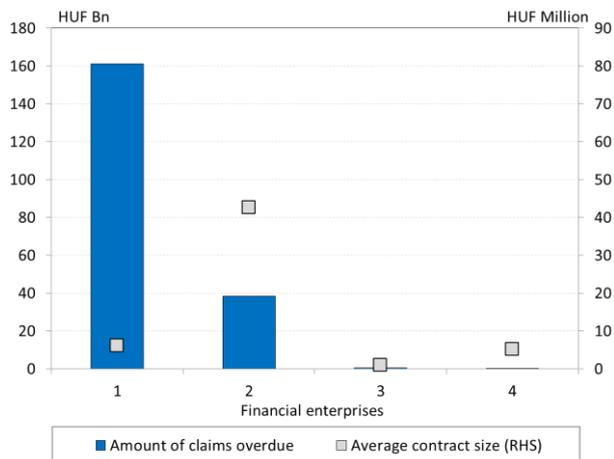
The source of problems for corporate loan portfolio quality is still commercial real estate project loans. Breaking down non-performing loans, it is clear that in the corporate segment a substantial part of the NPL portfolio, i.e. about 40 per cent, relates to project loans, a major part of which is related to commercial property (office buildings, commercial centres, hotels, industrial properties, plots). While the non-performing portfolio peaked for other corporate loans in 2012 H2 and the NPL ratio has now fallen to 12 per cent, the non-performing loan ratio of project loans is still extremely high, at 26 per cent (Chart 45). Almost 75 per cent of total restructured loans are project loans, and for these loans the chance of becoming non-performing is still high. It is an additional risk that in 2014 H2 the restructured project loan portfolio increased by more than HUF 40 billion, which in many cases serves only for the deferment of loss recognition.

The high volume of project loan sales made a substantial contribution to the increase of the cleaning ratio, but a large part of the sales were intra-group transactions. The large banks with a major share in project financing sold loans from the gross project loan portfolio in the amount of HUF 105 billion during 2014, but a substantial part of this consists of intra-group transactions (Chart 46). When considering only market transactions outside the banking groups, the cleaning ratio decreased in 2014 Q4. Under the current rate of the market-based portfolio cleaning, i.e. outside the banking group, the high non-performing portfolio would remain in place over the long run. In terms of the entire corporate sector, the ratio of problematic loans that became non-performing more than three years ago is almost 50 per cent within the NPL portfolio.

With the assistance of the asset management company established by the central bank (MARK Ltd), the portfolio of non-performing project loans may decrease considerably. The present work-out market is not suitable for supporting the efficient market-based resolution in the case of commercial real estate project loans. The average corporate transaction size of work-out factoring companies suggests that the market is characterised by other corporate loans of smaller amount rather than by high-amount project loans. It is a problem that the existing work-out market is highly concentrated (Chart 47) and its size is not sufficient for the takeover of the non-performing commercial real estate

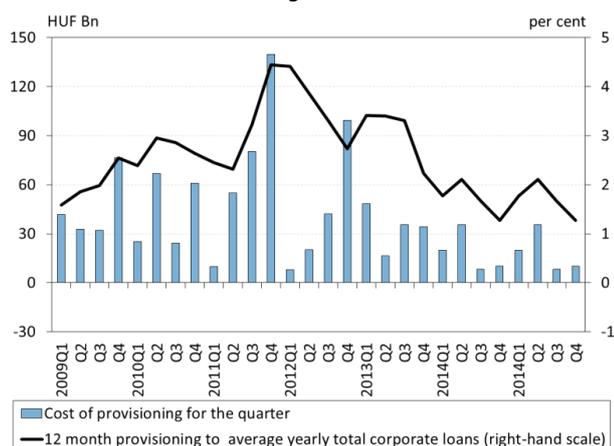
Source: MNB.

Chart 47: Non-performing corporate exposure of work-out factoring companies and median transaction size



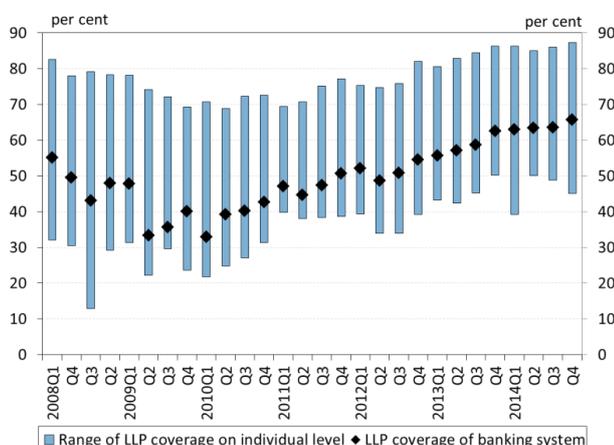
Source: CCIS, MNB

Chart 48: Cost of provisioning to total loans in the corporate segment



Source: MNB.

Chart 49: Loan loss coverage of non-performing corporate loans regarding banks with an important role in the segment



Note: Banks with at least 2 per cent share in corporate lending
Source: MNB.

project loans. With the operation of the asset management company (MARK) the portfolio cleaning will be intensified in the corporate segment, which may greatly contribute to the further decrease of the corporate NPL ratio. If the asset management company starts the purchase of property loans from the second half of 2015, then by the end of the year the non-performing project loan portfolio may considerably decrease in the banking system (see Box 6).

The cost of provisioning decreased further, in parallel with the falling NPL ratio. As a result of the reversal of substantial impairments in 2014 Q4, the level of the indicator, which may be regarded as a risk cost, fell below 1.3 per cent, which is a significant improvement in year-on-year terms (Chart 48). The AQR completed in the second half of last year inspected the failure to recognise impairments in the corporate sector for loans secured by commercial real estate, which showed a total shortfall of about HUF 150 billion in the case of a few large banks. The domestic banks are not obliged to recognise the impairments identified during the targeted inspection ordered by ECB (which would occur at group level), but if those are to be recognised during 2015 anyway, the cost of extra provisioning would increase in the corporate sector.

Loan loss coverage increased in the second half of 2014. At the end of the year, the loan loss coverage of non-performing loans increased to 65.7 per cent (Chart 49). The increase in coverage is a favourable process on the whole, but the fact that the variance among the banks is still high and even increased in 2014 Q4 represents a risk: the coverage ratio of the bank with the worst indicator is around 45 per cent, while that of the best one is almost 90 per cent. By the end of 2014, the loan loss coverage of project loans rose to 65 per cent, a four-fold increase from 2010, and thus reached the coverage ratio of the other corporate loans.

6. BOX: MARK LTD. – MARKET-BASED TOOL OF MNB FOR STABILITY AND CORPORATE PORTFOLIO RESOLUTION

The absence of a sufficiently deep market, and particularly that of foreign players, represents a major problem in terms of the corporate portfolio cleaning. In the last year, the commercial property market was picking up, and the interest of foreign players is increasing (which is also attributable to the news about the MNB's asset management company) due to search-for-yield phenomenon higher-yield investments are sought due to the permanently low yield environment, amongst others. At the same time, portfolio cleaning would occur too slowly even with the improving trend, i.e. the non-performing exposure would burden the balance sheet of banks for many years. Furthermore, there are a number of frictions in the markets, which hinder portfolio resolution.

The cooperation between the MNB and the EBRD highlighted¹² the fact that the legal and regulatory environment of portfolio cleaning should be modified in a number of places to facilitate more efficient cleaning and restructuring. The more active presence of foreign players is hindered by a number of factors. For the international investor an equity investment of EUR 45-50 million (HUF 13-15 billion) would already be sufficient to enter the Hungarian market, but in investors' opinion, the Hungarian market is too small for this and the portfolio of the individual actors is not sufficiently homogeneous to reach the desired level of investment. Foreign players need a sufficiently large portfolio to ensure that the fixed costs of market entry, the operation and the market intelligence can be recovered. Another problem is that foreign investors do not have sufficient and adequate information, as a result of which the buyer includes a discount in the bid. "Cherry-picking" can be observed on both sides in selecting the portfolio: buyers do not look for entire portfolios, but rather select and in such cases the demand and supply often do not meet, since at certain price levels banks would only sell the less attractive portfolio elements as opposed to those from which, after restructuring, continuous cash flow may be expected with low impairment. All of this contributes to the fact that in terms of pricing the seller' and buyers' expectations often differ widely. Finally, failed bids reduce investors' interest and give rise to adverse feedback.

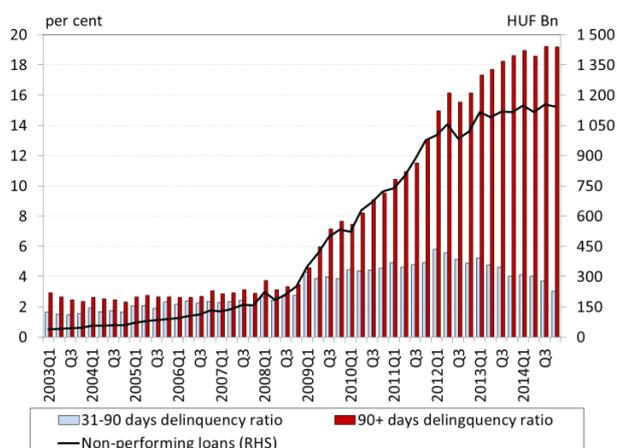
As a result of the consultations with international organisations (IMF, European Commission and ECB), the strategy of the asset management company established by the MNB in November 2014 (MARK Ltd) has changed substantially since the last Financial Stability Report. On the one hand, it shifted towards partially market-based financing opportunities, and on the other hand the purchase will take place at market price, i.e. as opposed to the former plans there will be no incentive in the price for the banks. Meanwhile, the asset management company continued to build up its operative capacities, and by 2015 Q3 it will be ready to start purchases.

MARK Ltd may accelerate the markets, since with its help a sufficiently deep buyers' market may evolve, first through the purchases by MARK Ltd, and later event without those. MARK Ltd will bid for full portfolios, without cherry-picking, since its objective is to buy out the largest possible commercial property exposures from the banks' balance sheets. This will enable the banks to focus on lending, while MARK will have a long time for the professional management and utilisation of the portfolio with wider restructuring toolkit. Through the consolidation of several smaller portfolios, the asset management company will be able to compile its potential supply under better economies of scale (also in proper portfolio sizes) for foreign investors. In addition, the experts of MARK Ltd have been cooperating with the banks for several months to ensure that the broadest and most accurate information necessary for pricing is available.

Thus, upon the full utilisation of the asset management company's planned limit, which is about HUF 300 billion, the quality of the banking system's corporate portfolio may improve substantially. The company plans to use the limit for the purchase of not only non-performing, but also restructured project loans and properties acquired as collateral. If the asset management company used two-thirds of the planned limit amount for loan purchases, it would be able to take over gross exposures even in excess of HUF 500 billion from the non-performing project loan portfolio. However, the utilization rate of asset management company's total available limit will be greatly influenced by the market pricing strategy and banks' willingness to sell. Depending on its activity, MARK Ltd may considerably decrease the corporate NPL ratio in the future, thereby contributing to the stimulation of corporate lending and economic growth.

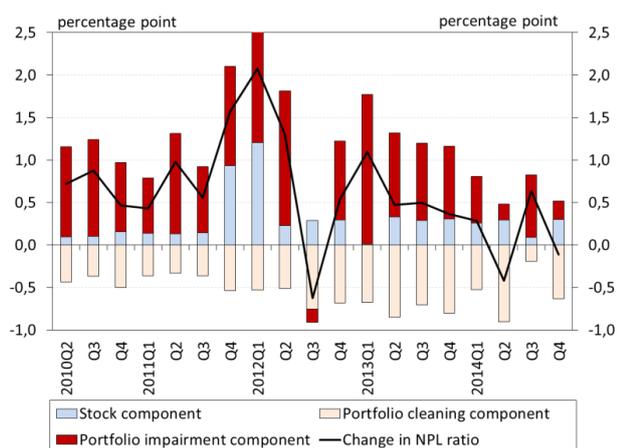
¹² The first two paragraphs of the Box is from the report of EBRD-EY-White & Case entitled "Analysis of Corporate Restructuring and Insolvency in Hungary" and the presentation of the professional forum on 3 March 2015 organised jointly by the MNB and EBRD <http://vienna-initiative.com/debt-restructuring-and-npl-resolution-workshop-march-2015-budapest/>

Chart 50: Share of the non-performing household loans in the banking sector



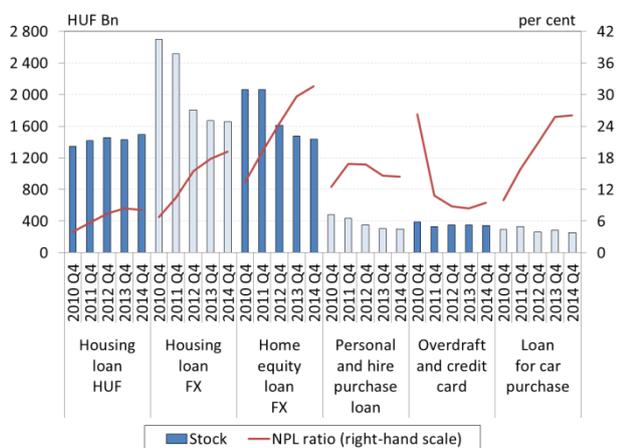
Note: Before 2010 by customers and thereafter by contracts.
Source: MNB.

Chart 51: Factors affecting the changes in the ratio of non-performing household loans in the banking sector



Source: MNB.

Chart 52: Household loan portfolio and ratio of non-performing household loans by products in the banking system



Source: MNB.

4.2. Key risks are the high NPL ratio in the household loan portfolio and foreign currency-denominated personal and car purchase loans

There is still no material improvement in the ratio of household loans overdue for more than 90 days. At the end of 2014, the ratio of the banking system's household loans overdue for more than 90 days was 19.2 per cent (Chart 50). Compared to the first half of the year, the NPL ratio increased only slightly, but the present level is already a historic high. Breaking down the change in the NPL ratio to components, it is clear that in Q3 the deterioration of the portfolio acted strongly towards growth. During the half-year, the lower cleaning rate and the continuous decline in the total portfolio also contributed to the slight increase in the non-performing loan ratio (Chart 51). In Q3, at the level of the banking system non-problematic receivables were sold and written off in the value of just about HUF 12 billion, which falls significantly short of the average quarterly cleaning of roughly HUF 38 billion registered between 2010 and 2014. This strikingly low value is presumably attributable to the uncertainties arising from the legislation, then in progress, related to the settlement of the foreign currency loans. However, looking ahead it is a positive development that the ratio of the loans overdue for 31-90 days is gradually decreasing compared to the total portfolio, which signals a lower volume of the loan portfolio becoming non-performing in the near future.

The problem of non-performing household loans is concentrated in the mortgage loans and in foreign currency-denominated personal and car purchase loans. When breaking down the banking system's non-performing household loan portfolio by product groups it is clear that the NPL ratio is the highest among the foreign currency-denominated mortgage loans and the car purchase loans. Within the foreign currency-denominated housing loans the NPL ratio exceeded 19 per cent by the end of the year, while within the foreign currency-denominated home equity loans the ratio of the non-performing ratios exceeded 30 per cent (Chart 52). In addition, within the car purchase loans, the NPL ratio increased to 26 per cent by the end of 2014. Taken together, the high NPL ratio of the latter three product groups – particularly in the case of the mortgage loans – is attributable to the more complicated cleaning arising from the longer maturity and the inappropriate regulatory environment. However, the non-performing (mostly formerly foreign currency-denominated) mortgage

loans due to their high volume, while foreign currency based personal and car purchase loans due to their roughly 200,000 contracts represent a major problem (see Box 7).

7. BOX: SYSTEMIC RISKS OF HOUSEHOLD FOREIGN CURRENCY LOANS NOT AFFECTED BY CONVERSION

The foreign exchange rate exposure of households decreased considerably after the conversion of household foreign currency mortgage loans, and the macroprudential risks related to banks' foreign currency lending also diminished. However, there has been no conversion of foreign currency loans for a segment of households that is smaller but that altogether still affects a considerable number of them: car purchase loans and personal loans. The repayment burden of the affected households has increased substantially due to the shock-like appreciation of the Swiss franc at the beginning of 2015, which indicates that the FX loans still outstanding pose a serious threat to financial stability.

Household foreign currency loans not affected by conversion

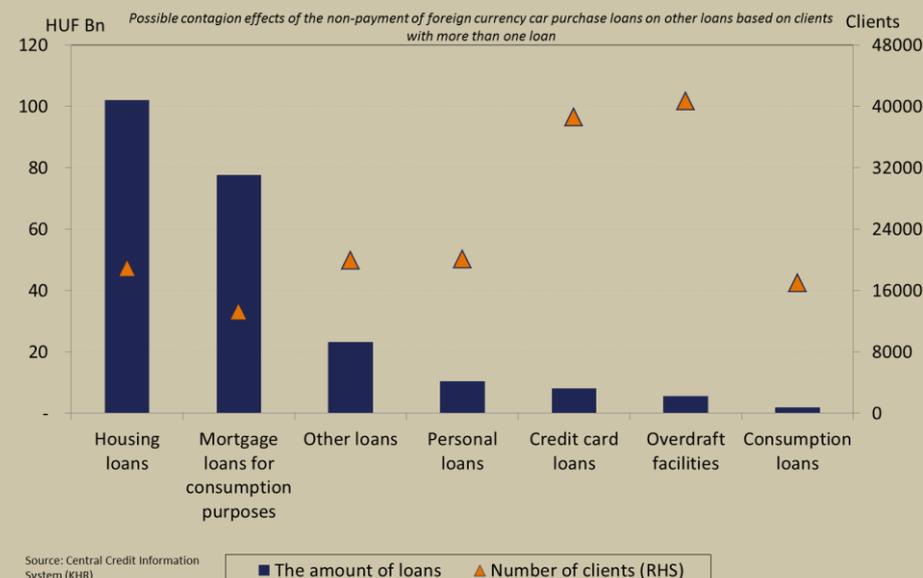
2015 Q1	Credit institutions		Financial Enterprises						Total	
			Bank owned		Other		Total			
	Outstanding amount (HUF Bn)	Number of contracts (thousands)	Outstanding amount (HUF Bn)	Number of contracts (thousands)	Outstanding amount (HUF Bn)	Number of contracts (thousands)	Outstanding amount (HUF Bn)	Number of contracts (thousands)	Outstanding amount (HUF Bn)	Number of contracts (thousands)
Personal loans	17	38	0	0	1	29	1	29	18	67
of which: not EUR	14	33	0	0	0,5	28	0,5	28	15	61
Car loans	135	102	95	50	57	10	152	60	287	162
of which: not EUR	132	95	85	41	50	8	135	49	267	144

Note: The table contains residential and sole proprietor (together: household) loans with leases comprised together. Factoring receivables are not included, the row „not EUR” primarily contains CHF loans. The number of contracts of financial enterprises and the number of not EUR contracts of credit institutions are estimated based on Central Credit Information System data.

Source: MNB.

The problem can be deemed considerable from a systemic risk point of view. On the one hand, the amount of loans in question is not insignificant (around HUF 300 billion, 1 per cent of the 2014 year-end balance sheet total of the banking system, 12.6 per cent of regulatory capital); on the other hand, the number of loans in question is very high (more than 250,000 contracts at the end of 2014). It poses further risks that the geographical distribution of foreign currency car purchase loans is uneven, and that the default of these loans can have serious contagion effects (so-called cross-defaults) in terms of the

increase of non-paying mortgage loans.



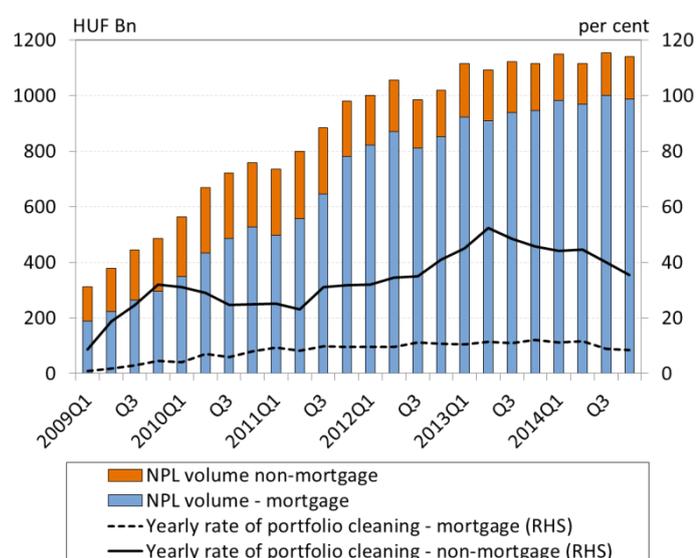
According to our estimates based on the Central Credit Register, there are approximately 30,000 clients with foreign currency car purchase loans who also have mortgage loans (around 19,000 of these are housing loans); the affected gross amount of loans reaches up to HUF 180 billion. Accordingly – in the case customers with foreign currency-denominated car purchase loans face payment problems because of their rising instalments – the number of non-paying mortgage loans might increase

considerably in an extreme scenario. If other loans (overdraft facilities, personal loans, etc.) are also taken into account, the effect is even more significant: the default of foreign currency car purchase loans can induce problematic loans in the amount of HUF 230 billion. A number of other special risks come up regarding foreign currency car purchase loans, which are mostly related to the quick depreciation of the value of the collateral and to the peculiarities of repayment constructions (e.g. bullet loans), and which can be further amplified by the realisation of exchange rate risk.

In order to mitigate the systemic risks, the central bank is considering the introduction of macroprudential tools that would incentivise the management of the risks stemming from the amount of currently outstanding household foreign currency loans through conversion and the reduction of the stock of loans in question by making it more expensive to hold them.

In order to manage risks, the need for conversion can occur either at the institutional level, or by legal ways. The latter option would purge these loans and the risks attached to them from the financial intermediary system by virtue of law. This would be warranted by two factors: on the one hand, the willingness of customers to cooperate is often low, which considerably limits the successfulness of bank programmes; on the other hand, individual management also means significant administration burdens due to the large number of contracts.

Chart 53: Cleaning ratio in the banking system's household segment by product



Source: MNB.

Statutory resolution of the problems related to foreign currency-denominated loans reduces the risks.

Looking ahead, the settlement of the unilateral contract modifications and conversion of foreign currency-denominated mortgage loans into forints may act towards improvement of the portfolio quality through two channels. On the one hand, the lower debt service burdens arising from the closing of the open foreign currency position and decreasing principal debt and interest rates reduce the probability of default on household loans, and on the other hand, with the completion of the regulation those clients who so far did not perform due to the uncertainties around the legislation may become performing once again. Despite these measures, due to many technical effects the household NPL ratio will not reflect the reality for several months.

The impact of the increase in the debt service burden attributable to the termination of the exchange rate cap is settled by the Act on conversion to forints.

Pursuant to the Act on conversion to forints (Act LXXVII of 2014), the exchange rate cap arrangement is terminated. However, pursuant to the statutory provisions, the instalment of the roughly 168,000 customers participating in the arrangement may not increase after settlement. Should it increase anyway, the bank is obliged to prevent the significant increase of the customer's debt service burden by its own pool account arrangement and later by the extension of the maturity.

The cleaning of non-performing mortgage loans is hindered by the absence of an appropriate regulatory environment.

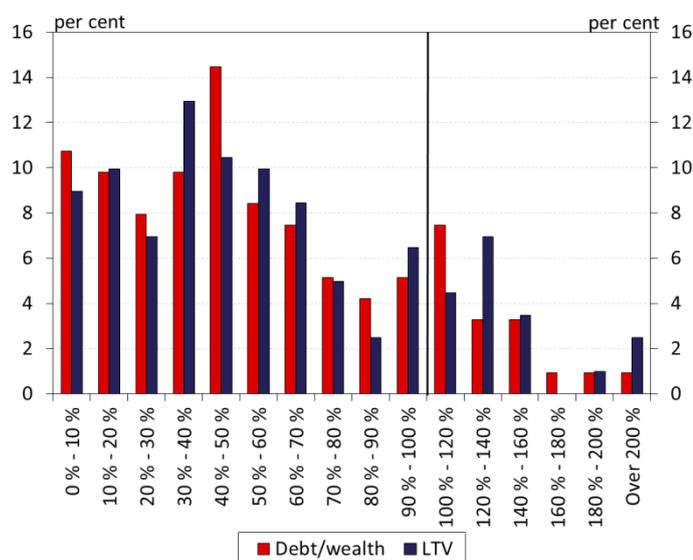
In contrast to unsecured loans, where the annual cleaning ratio was between 30 and 40 per cent in recent years (Chart 53), the banks are unable to efficiently remove the mortgage loans from their balance

Table 1: Certain features of the properties purchased by NET

	2013 H1	2013H2	2014H1	2014H2	Total between 2013 and 2014
Number of properties serving as collateral sold by financial institutions (pcs)	1 944	3 450	5 658	5 211	16 263
-of those purchased by the NAMA (pcs)	1 337	2 695	4 632	4 089	12 753
Share of NAMA from the purchases by pieces	69%	78%	82%	78%	78%
Gross volume of mortgage loans purchased by NAMA (HUF Bn)	7	12	32	29	80
Net volume of mortgage loans purchased by NAMA (HUF Bn)	4	9	22	18	54
Average LTV ratio of claims taken over by NAMA	78%	86%	89%	87%	87%

Source: MNB.

Chart 54: Distribution of the non-performing housing loan holders' (forint and foreign currency) debt in proportion to the assets and of the LTV



Note: Distributions based on number of transactions

Source: MNB, Kutatópont, Personal bankruptcy research

sheet. In the case of mortgage loans, in recent years the annual cleaning ratio was fluctuating around 10 per cent. The sale of the mortgage loans is also hindered by the fact that it is difficult to enforce the lien, and there is no appropriate market demand either; therefore, the management of the non-performing mortgage loans may need the regulator's intervention. However, it should be noted that the market of the non-performing unsecured receivables is also concentrated; the buyer is often a member of the group, and thus on consolidated basis the risks partially remain.

A large percentage of the sold collateral residential properties is purchased by NET. The market of the non-performing mortgage loans is mostly dominated by National Asset Management Agency (NET). NET takes over the residential properties serving as collateral at a pre-defined discount determined on the basis of their location¹³. Between 2013 and 2014 the financial institutions sold a large volume of properties, slightly more than 12,000, to NET even despite the fixed discount, which represents the takeover and write-off of mortgage loans in the gross value of almost HUF 80 billion (Table 1). Thus about 78 per cent of the residential properties serving as collateral sold in the last two years were purchased by NET. The efficiency of NET is primarily attributable to the social aspect of the programme, according to which upon selling the property the debtor is not evicted, but may continue to use the property for a fair rental price. According to the latest plans, the asset management agency is prepared for the takeover of 35,000 residential properties serving as collateral in total, and a number of transactions are being concluded at present as well. NET plays an outstanding role in the resolution of mortgage loans and the properties serving as collateral, and therefore it may be necessary to give consideration to the extension of the programme.

In the case of the excessively indebted and non-performing households the primary objective is to restore solvency. The excessive indebtedness of part of the household sector is clearly reflected by the fact that at the end of 2014 the loan-to-value ratio (LTV) of slightly more than 60 per cent of the banking system's consumers with foreign currency-denominated housing loans exceeded 90 per cent. Moreover, the ratio of customers with a non-performing housing loan where the market value of the property serving as collateral is

¹³ Upon the purchase, NAMA applied fixed takeover prices as opposed to the collateral value. The weighting used in Budapest and in the towns of county rank was 55 per cent, in the rest of towns 50 per cent and in the villages 35 per cent.

less than the outstanding principal – i.e. whose LTV ratio is over 100 per cent – is also significant, amounting to almost 20 per cent (Chart 54) –. Looking ahead, the settlement of the unfair contract modifications will significantly reduce the total debt of borrowers, and thereby often their debt service burden as well. In parallel with settlement, additional debt relief may help the presently insolvent households become performing once again. In the light of these facts, the excessive indebtedness of non-performing mortgage loan holders may be resolved by the introduction of the institutionalised form of debt restructuring (see Box 8).

8. BOX: HOUSEHOLD PORTFOLIO CLEANING – AS PART OF THE DEBT RESTRUCTURING PROCEDURE

NAMA is dealing with a part of the non-performing mortgage loans successful – while also taking into account welfare aspect –, but due to institutional frictions and the full quota, it can't help any more on debtors already in trouble without an expansion. The introduction of personal bankruptcy this year may be a solution partly, which may present an ordered option for restructuring with tight conditions for even 25.000 debtors.

2014 Q4	Credit institutions			Financial corporations			Total financial intermediary system		
	Non-performing loans			Non-performing loans			Non-performing loans		
	Volume (HUF Bn)	Share (%)	Number of contracts (thousands)	Volume (HUF Bn)	Share (%)	Number of contracts (thousands)	Volume (HUF Bn)	Share (%)	Number of contracts (thousands)
Mortgage loans	1 095	20%	133	361	70%	49	1 456	24%	182
Non-mortgage loans	182	16%	538	648	55%	1 351	830	36%	1 889
Total	1 277	19%	671	1 009	60%	1 400	2 286	28%	2 071

The problems of non-performing household debtors is an extremely complex issue. In the case of such mass defaults as experienced in Hungary, one must not merely think about the realisation of collateral, which from the customer's aspect means eviction. Moreover, a solution that is solely based on the realisation of collateral may put significant

pressure on the property market, which may have negative impact on all property owners through the decreasing assets and also on the banks' balance sheet and lending activity through the depreciation of the collateral of performing debtors. The solution may be is to set the customers on a sustainable debt path, which does not necessarily mean costs for the banks, since the impairment already recognised for example, already approximates half of the debt. The risk is represented by the fact that such solution may erode the performing customers' willingness to pay, which may generate severe losses for the banking system. On the other hand, it also erodes the willingness to pay if nothing is done about the non-performing debtors; international examples also confirm that the countries where the severity of the problem is similar to that of the Hungarian situation make attempts to remedy to non-performing loans and make them performing once again.

In Ireland, the proposals made for resolving the problem of non-performing household loans were built on several pillars. First of all, a code of conduct was developed to support the debtors, which outlined common guidelines – to be complied with by the banks – with regard to the treatment of defaulting customers and sustainable restructuring. In order to reduce the instalments, the state helped the debtors with interest subsidy; at the same time, debtors could also rely on official counselling to settle their situation. Meanwhile, revamping the obsolete legislative environments, three types of personal bankruptcy procedures were introduced to address the special features of the problems arising from the different debt types. Finally, the central bank also participated actively in the resolution of the programme by defining target numbers for the large banks in respect of the sustainable restructuring of the mortgage loans. The Irish central bank publishes targets to be met quarterly with regard to (1) the percentage of defaulting customers to whom the banks propose the sustainable restructuring of the debt (including the management under personal bankruptcy and the voluntary agreement to sell the collateral); (2) the percentage of the non-performing transactions where the restructuring materialised in a sustainable way;

and (3) the percentage of the restructured transactions that actually remained performing. If a bank falls short of the agreed target figures, it faces stricter impairment requirements.

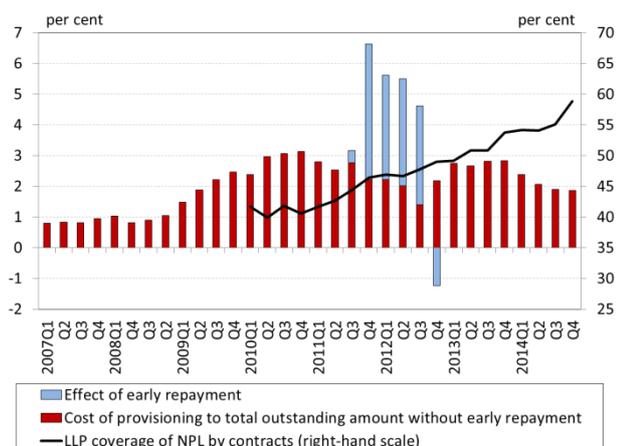
In Spain, as a first step the central bank modified the reporting rules applicable to the restructured loans to avoid specious solutions ("evergreening"). They responded to the problem of excessively indebted households by gradual restructuring, forgiving part of the debt and by providing first temporary and later ultimate exemption from eviction. In Iceland, the moratorium on eviction was implemented as the first step, and then the use of the pension fund payments for loan repayment was authorised. Later on, in the case of foreign currency-denominated loans, they decided to fix the exchange rate of the instalment and then the debt was forgiven depending on the value of the collateral and the fluctuation of the exchange rate. In Croatia, in the case of socially needy households, part of the bank, public utility, tax and telecommunication debts were forgiven.

According to the data from 2014 Q4, there are 182,000 non-performing mortgage loan contracts in Hungary. After conversion into forints and settlement, some of these may once again become performing as a result of the lower instalments. In the case of the debtors whose situation remains difficult even after this and who are threatened by losing their property, the government is currently contemplating two solutions: amendment of the National Asset Management Agency (NET) (for approximately 10,000 extra debtors) and an institutionalised personal bankruptcy (also for about 25,000 debtors). MNB also provides substantial professional assistance for such, but it may be worth considering other portfolio level solutions. In order to help debtors with little wealth, and with no or only with minimal debt service capacity to escape the debt trap, the conditions of the arrangement offered by the National Asset Management Agency (NET), instead of the debt restructuring procedure, should be changed to enable the financial institutions to offer these properties to state. For the excessively indebted household groups, the judicial debt settlement procedure, with the involvement of all creditors, may provide an opportunity to escape the debt trap, provided that they have at least minimal wealth and debt servicing capacity. In order to ensure the payment discipline of the society and the stability of the financial institutional system it is stressed that the primary purpose of the procedure is to formulate the legal framework and rules of debt settlement, rather than to exempt the debtor from the payment of the debts and let him "walk away". Those debtors may benefit from the procedures (debt relief or temporary moratorium as part of composition in bankruptcy or by court resolution) who comply with the rules of procedures, do not cheat the creditors and use their assets/income for debt settlement.

Bearing in mind the institutional and capacity constraints, these solutions will be able to address only part of the problems, which may necessitate additional steps. It could be worth considering the Irish way, i.e. motivation of the banks by the central bank, setting quotas for the highest possible rate of cleaning with sustainable restructuring. Consideration should be given to the adaptation of this practice to the Hungarian environment. The advantage of the solution is that the banks have sufficient capacity and better knowledge about the customers to devise sustainable restructuring arrangements. Such a solution could be an integral part of and supplement to the government's solutions mentioned above, considering that in Ireland as well the state debt settlement procedures are included in the quotas.

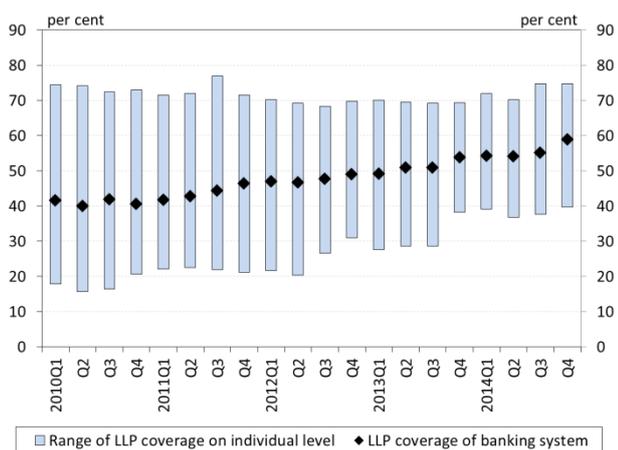
Finally, it should be emphasised that any intervention should be accompanied by curbing the decline of the willingness to pay (moral hazard), which may be achieved by sanctions. On the one hand, the obstacles to efficient, fast realisation of collateral must be removed, so that the client understands that the lack of cooperation ends with losing his property. On the other hand, it must be ensured that the new non-performing customers may only choose the debt settlement procedure, which imposes strict rules and supervision on the client.

Chart 55: Cost of provisioning to total loans and coverage in the household segment



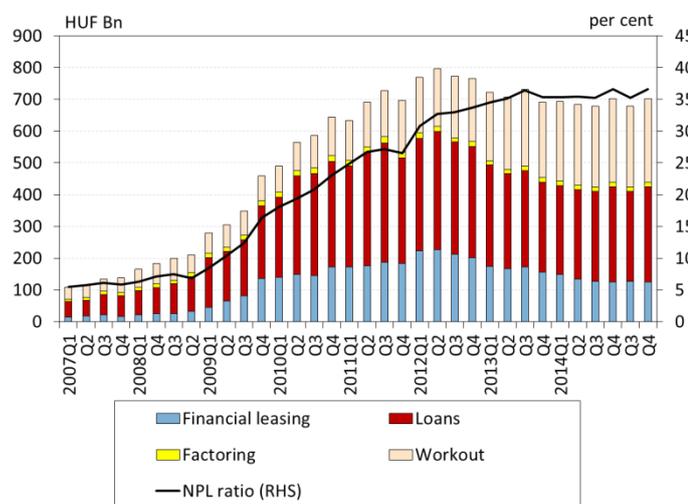
Source: MNB.

Chart 56: Loan loss coverage of non-performing household loans



Note: Banks with at least 2 per cent share in household lending.
Source: MNB.

Chart 57: Non-performing loans at financial enterprises by products



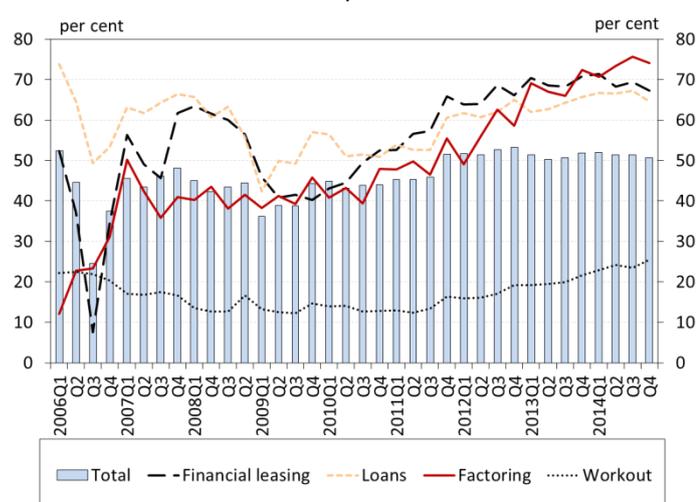
Source: MNB.

New provisioning requirements decreased during the second half of the year. The 12-month cost of provisioning, as a proportion of the portfolio, decreased to 1.9 per cent by the end of 2014 from 2.1 per cent measured at the end of the previous half-year (Chart 55). However, the value of the indicator, which may also be regarded as a risk cost, is still high in terms of its level, as it is substantially higher than the below 1 per cent average value seen before 2008. In the second half of 2014, the loan loss coverage ratio of non-performing household loans increased significantly. By the end of the year its value had increased to 59 per cent from the 54 per cent measured at the end of June 2014 (Chart 56). In terms of loan loss coverage, the heterogeneity among the banks is still high; however, it should be noted that mortgage banks are usually at the bottom of the distribution, which are subject to stricter collateral assessment rules and thus the required loan loss provisioning is also lower.

4.3. Quality of financial corporations' portfolio is deteriorating

In 2014 H2, the quality of the financial corporations' portfolio continued to deteriorate. At the end of 2014, the ratio of non-performing receivables rose above 37 per cent, marking a historic high (Chart 57). This ratio considerably exceeds the values of the banking system, which may be regarded as a natural phenomenon, as part of these institutions are specialised in the purchase and management of overdue receivables. The loan loss coverage also continued to decrease at the financial enterprises, amounting to on average at only 50.6 per cent (Chart 58). Although the loan loss coverage of factoring, loan and financial lease products decreased, it is still within the band of 65-75 per cent, which is substantially higher than the level in the previous years. The average is lowered by the work-out companies' loan loss coverage level of 25.6 per cent; however, in their case the purchase price already contains the expected losses, and thus the lower collateral coverage does not necessarily represent a risk.

Chart 58: LLP coverage of non-performing loans at financial enterprises



Source: MNB.

Table 2: Key indicators of corporate portfolio quality at cooperative credit institutions

per cent	2011 H1	2011 H2	2012 H1	2012 H2	2013 H1	2013 H2	2014 H1	2014 H2
90+ days delinquency ratio	24,9	25,9	27,0	28,8	28,7	22,8	22,1	20,6
Loan loss coverage of NPL	30,4	32,2	35,6	36,1	36,8	40,2	48,6	57,2
Cost of provisioning to total loans	2,3	2,0	1,9	1,9	1,8	1,3	1,0	0,6

Source: MNB.

Table 3: Key indicators of household portfolio quality at the cooperative credit institutions

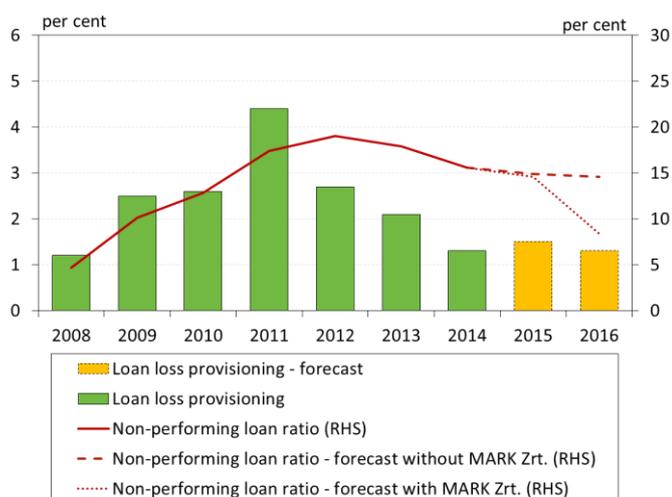
per cent	2011 H1	2011 H2	2012 H1	2012 H2	2013 H1	2013 H2	2014 H1	2014 H2
90+ days delinquency ratio	16,3	16,0	14,6	15,3	15,4	14,6	12,8	12,4
Loan loss coverage of NPL	47,0	48,7	49,8	50,4	53,4	56,8	64,6	67,8
Cost of provisioning to total loans	1,2	1,7	1,3	1,6	0,9	-0,1	-0,4	-0,3

Source: MNB.

4.4. Mild improvement in portfolio quality at cooperative credit institutions

The portfolio quality of the cooperative credit institutions improved slightly, both in the corporate and the household segments. In 2014 Q2, both the corporate and the household portfolio quality of the cooperative credit institution sector improved to a small degree. Within the total corporate portfolio, the non-performing corporate loan ratio decreased from 22.1 per cent measured at the end of the previous quarter to 20.6 per cent by the end of 2014 (Table 2). The household portfolio improved to a lesser extent than that. During the same period, the NPL ratio fell from 12.8 per cent to 12.4 per cent (Table 3). The significantly lower household NPL ratio for cooperative credit institutions compared to the banking system is attributable to the fact that these institutions granted only very small volumes of foreign currency-denominated loans. Within the sector, the loan loss coverage ratio of the non-performing corporate loans materially increased compared to the end of the previous half-year, which resulted in a decreasing NPL volume with an almost identical impairment balance. In the household segment, the loan loss coverage ratio for non-performing loans also increased. The profit deteriorating impact of the impairment in the corporate segment fell below one per cent, while in the household segment it still has a negative value, i.e. there was a reversal of impairment loss, which had a positive profit impact.

Chart 59: Ratio of non-performing loans and the cost of provisioning in the corporate segment

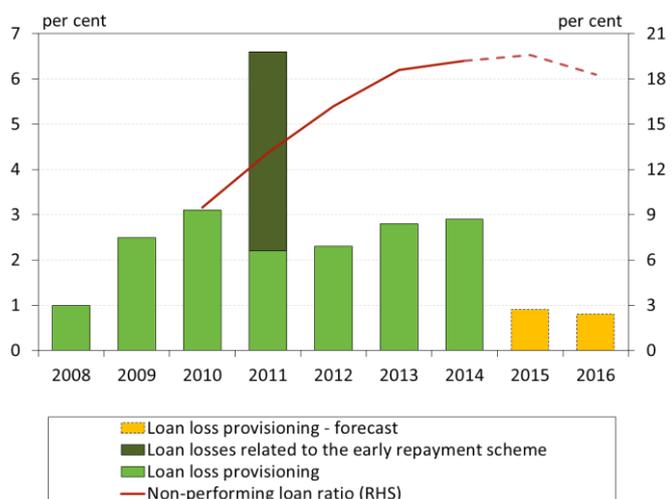


Note: The forecast is based on the full utilization of MARK Ltd, which may differ depending on the market based free-will transactions.
Source: MNB.

4.5. According to our forecast, there may be improvement in the corporate loan portfolio, mainly due to MARK, but further incentive is needed for the cleaning rate in the household segment

The NPL ratio of the banking sector's corporate loans may significantly improve. The activity of MARK Ltd will be critical for the prospective development of the corporate portfolio quality. Although the underlying processes also have a favourable impact on the future development of the NPL ratio, it follows from the capacity of the asset management company that it can take over a high percentage of the non-performing and restructured projects loans from the balance sheet of the banking system, thereby reducing the corporate NPL ratio by almost 50 per cent. According to our forecast, the corporate loan portfolio is expected to increase in the next two years, which will increase the denominator of the NPL ratio. Together with this, also considering the slightly improving cleaning ratio, in the baseline scenario we can expect the modest decrease of the corporate NPL ratio (Chart 59). However, upon full utilisation of MARK Ltd's capacity, the non-performing corporate loan ratio in the banking system may fall as low as below 9 per cent. Looking ahead, in parallel with the improvement in corporate portfolio quality, the annual cost of provisioning may remain at a similarly low level as in 2014.

Chart 60: Ratio of non-performing loans and the cost of provisioning in the household segment



Source: MNB.

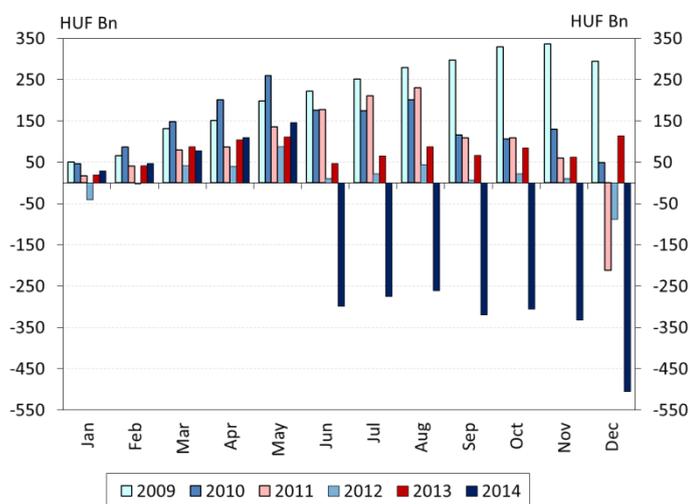
Disregarding the one-off impact of the settlement, the household NPL ratio of the banking system may improve. In the case of foreign currency-denominated loans, the settlement of the exchange rate spread and the unilateral contract modification in 2015 Q1 reduces the denominator of the NPL ratio through the decrease in outstanding debt. Thus the ratio, partially as a result of this, may increase from 19.2 per cent measured at the end of 2014 to 19.6 per cent in 2015. However, the household NPL ratio is expected to decrease temporarily through 2015, which is due to a technical effect, that the settlement first lowers the oldest arrears in case of non-performing loans, thus several debtors, who have not honoured debt for a long time may be reclassified as performing ones. According to our forecast, the contraction in the household loan portfolio will decelerate further in the next two years; in addition, on the forecast horizon we expect the cleaning rate of mortgage loans to improve, which may help the banking system's household NPL ratio fall close to 18 per cent by the end of 2016 (Chart 60). The decrease in the debt service burden as a result of settlement and removal of the exchange rate risk due to the conversion into forints all point to the household loans' lower probability of default, and thus the cost of provisioning need may fall below one per cent at the annual level, which already corresponds to the value measured in 2008.

5. PROFITABILITY AND CAPITAL POSITION OF THE BANKING SYSTEM – THE NET INCOME OF THE BANKING SYSTEM IS AT ITS HISTORIC LOW, BUT PROFITABILITY COULD IMPROVE WITH THE PHASING OUT OF ONE-OFF ITEMS

In 2014, the profitability of the banking system was dominated by one-off items both in the entire sector and at the level of the individual institutions. At the sector level, the net result is at a historic low, i.e. a loss of HUF 506 billion, as a consequence of the foreign currency loan settlement. The return on equity of the banking system was -17.5 per cent, and its return on assets was -1.8 per cent. Nevertheless, the capital position of the banking system is adequate, primarily due to the capital injection of some HUF 340 billion made by the owners during the year. However, the concentration of the capital buffer continued to increase in the second half of the year even compared to the previously high level. Looking ahead, a change may be expected in the income structure of the banking system due to the changing legislative environment. Due to the measures related to the household loan contracts, interest income and provisioning requirements are expected to decrease, while the planned reduction of the bank levy will improve banks' other incomes. With the termination of the one-off impacts – that have been burdening the banking system's profit for several years – and with the decline in loan losses, the profitability of the banking system may improve, but will still remain relatively low by international standards. The replenishment of NDIF and IPF contribute to the relatively low profitability as well.

The annual profit of the co-operative credit institutions was also impacted by the settlement of the consumer loan contracts, but due to the relatively lower exposure only to a lesser extent. Accordingly, the sector realised a loss of HUF 2.7 billion, while its capital position is still extremely robust, even despite the loss.

Chart 61: Pre-tax profit/loss of the banking sector and the branches



Source: MNB.

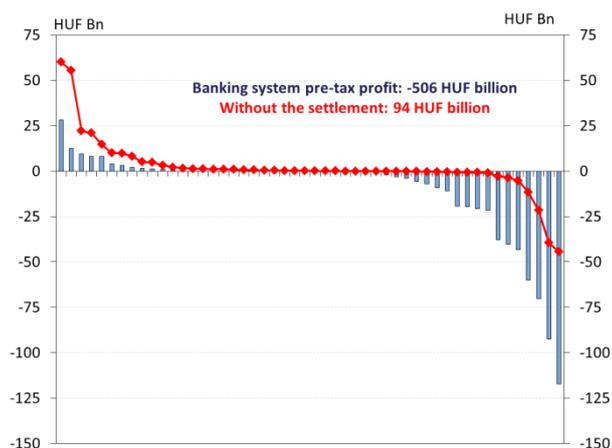
In 2014, the profitability of the banking system fell to a historic low due to the settlement of foreign currency loans.

After the passing of the Curia's decision ensuring uniformity, financial institutions recognised in several steps the profit impact of the reimbursement of the exchange rate spread and the unilateral interest rate increases in the form of provisioning¹⁴. The volume of this in annual terms amounted to about HUF 600 billion, in line with the earlier MNB estimates. Due to these factors, the profit of the banking system decreased further compared to the figures of the first half-year, and its annual value reached a record low, i.e. a loss of HUF 506 billion (Chart 61). As a result of the foregoing, the profitability ratios deteriorated further and are solidly in the negative range: the banking system's pre-tax 12-monthly rolling return on assets (ROA) was -1.8 per cent, while its return on equity (ROE) was -17.5 per cent.

The vast majority of banks booked a loss; only banks that formerly did not participate in foreign currency lending were able to report a profit. This year, the banking system's net pre-tax profit of HUF -506 billion consists of a loss of HUF 588 billion and a profit of HUF 82 billion. Profitable banks mainly include institutions (mostly small banks, building societies and branches) that did not build up large portfolios of household

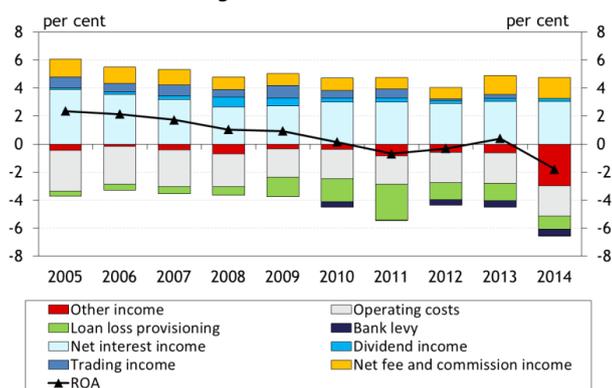
¹⁴ According to the Act on accounting, banks must recognise provisions for already known loss that will definitely be incurred in the future. The provisioning, similarly to the recognition of impairment, has a profit-reducing impact, but contrary to that it is a liability item, thus it does not reduce the balance sheet total.

Chart 62: Pre-tax loss and profit of banks and branches on individual level (December 2014)



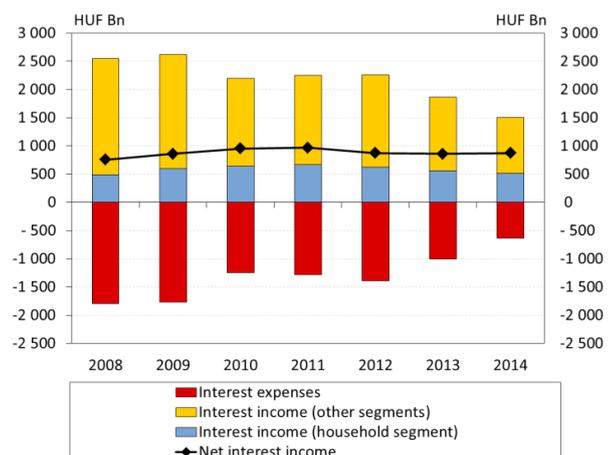
Note: Both the actual data and data calculated with the elimination of the settlement are sorted by size, thus the data being in the same line vertically do not necessarily belong to the same bank. Source: MNB.

Chart 63: Aggregate 12-month main rolling profit items of the banking sector and branches as a proportion of the 12-month average balance sheet total



Source: MNB.

Chart 64: Annual interest income and expenses of the banking sector and the branches



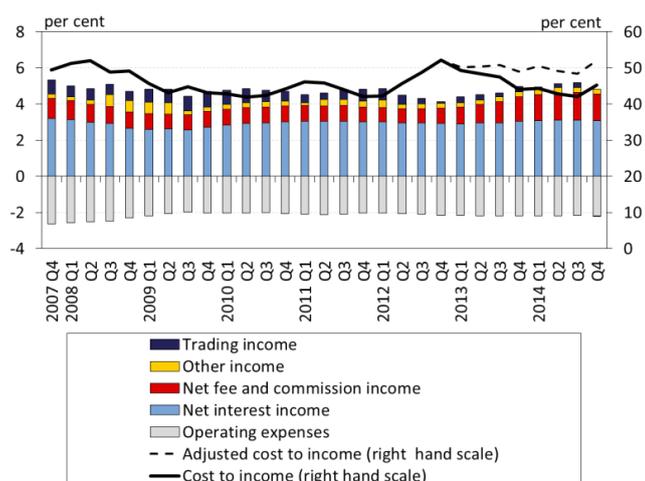
Note: Due to the different statistical data structure before 2010 we approximated household interest income by summing the interest income from housing and consumer loans. Source: MNB.

foreign currency loans, and thus the related measures also have only a minor impact on their profit. The profit that the sector would have realised without the income effect of the settlement would reach almost HUF 94 billion (Chart 62). Beyond the one-off effect of the settlement impacting the entire sector, the value of the banking sector's profit was also distorted by individual items: the owner of one of the large banks forgave a liability in Q3, while another large bank sold a mostly non-performing portfolio to its parent bank in Q4 at a price that exceeded the net value. These two measures – while technically may be regarded as a capital injection – also impact the profit/loss items: due to these transactions, in 2014 H2 the loss of the banking system decreased substantially, by about HUF 140 billion in total.

The legislative changes may modify the income structure of the banking system. In 2014 H2, the revenue side of the banking system decreased slightly, due to the lower income from trading, while expenditures increased. Interest income has not changed significantly and remains the most dominant source of income for the banking system. On the cost side, the additional provisioning arising from the settlement had an increasing effect, while the decrease of the net impairment recognition – even if adjusted with the previously mentioned portfolio sale – had a minor decreasing effect on the expenses compared to the previous years' figures (Chart 63). After the settlement, on the income side we expect a decrease in interest income, being the major income item, while on the cost side the need for recognising additional impairments is expected to decrease.

Resetting the fair interest rates will reduce the banking system's annual interest income by about HUF 90 billion. In recent years, a gradually increasing part of the interest income of the banking system came from the household segment, which is partially the result of the significant unilateral interest rate increases implemented by banks on the portfolio (Chart 64). The legislation on settlement and conversion to forints also prescribes, in addition to the reimbursement of overpayments, the resetting of the "fair" (typically the initial) interest rate of the individual transaction, which – together with the impact of the decreasing portfolio arising from settlement – will lower the annual interest income of the sector by about HUF 92 billion, according to our estimates. All of this – also bearing in mind the falling funding costs attributable to the decreasing portfolio – reduces the banking system's return on equity by almost 3 percentage points. This impact is partially softened by the termination of the exchange rate cap scheme, in which the amount of claims exempted by the banks was around HUF 13-15 billion annually. The statutory possibility to terminate the loan free of charge at certain in-

Chart 65: Banking system's cost to income ratio and its components



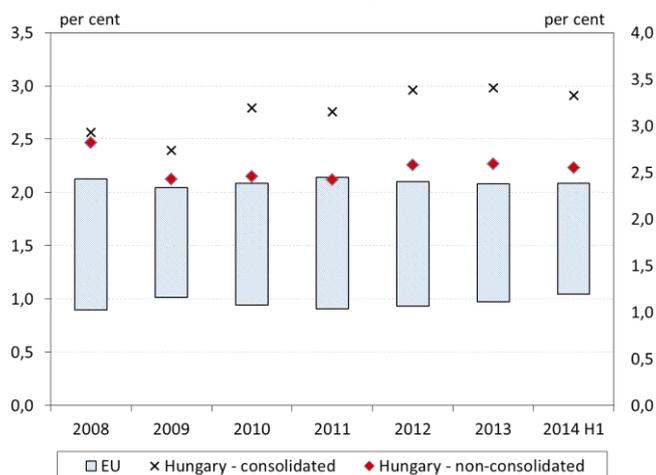
Note: The individual components are stated in proportion to total assets. Source: MNB.

Table 4.: Main effects on the future profitability of the banking system

Negative effects	Positive effects
Decreasing interest rate spreads (settlement): HUF - 90 billion	Decrease in bank levy payable: HUF +60-83 billion
Premium payable to NDIF, IPF: HUF -15-20 billion	Termination of the exchange rate cap scheme: HUF +13-15 billion
Low interest rate environment	Stronger economic growth

Source: MNB

Chart 66: Distribution of the EU's banking systems' operating costs as a percentage of assets



Note: The columns of the chart show the 20–80 percentile value of the member states' banking sectors. Credit institution sector.

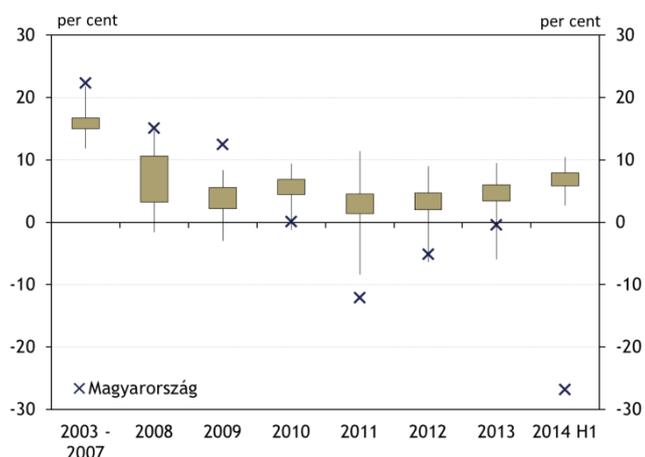
Source: ECB CBD

tervals – which weighs on lending rates by stimulating competition – also acts towards a steadily lower profitability of the household segment, as compared to the previous periods.

The ratio of operating expenses increased compared to the income of the banking system. The banking system's operating expenses in proportion to income excluding impairment, provisioning and the bank levy, increased in the second half of the year. The change is primarily attributable to the decrease in income items – and particularly the result of financial trading – while operating expenses as a percentage of assets have remained practically constant since the end of 2012. The index capturing the cost efficiency is materially distorted by the fact that a major part of the fees and commissions stated among income items are from recharging of the transaction tax. With the elimination of this impact, the value of operating expenses as a percentage of income is 7 percentage points higher, exceeding 50 per cent (Chart 65). Thus, the cost efficiency of the banking system is at the pre-crisis level, but this is materialised at a lower level of costs and income in proportion to assets. Due to the decreasing interest income attributable to settlement, this indicator may deteriorate by around another 3 percentage points, and at the same time the already existing significant difference, compared to the region, in the level of the operating expenses in proportion to assets may increase as well (Chart 66).

The government and the EBRD agreed on a reduction of the bank levy, which will substantially improve the profitability of the sector. The bank levy payable by the banks exerted continuous pressure on profitability in recent years, the annual amount of which – ignoring any potential deduction – exceeded HUF 130 billion. Based on the agreement concluded between the government and EBRD, starting from 2016 the basis of the bank levy will be the adjusted balance sheet total of 2014, and the tax rate will decrease from the current 0.53 per cent to 0.31 per cent, and from 2017 to 0.21 per cent. The Government also announced a commitment that the rate of the bank levy - in the period following 2017 – will further approach to the international average. According to analysis based on econometric and statistical tools, the credit gap is substantially negative, which cause damage mainly to the corporate credit segment. This problem can be mitigated by increased lending activity of banks. In the scope of the agreement between the EBRD and the Government, the Erste bank has already made such commitments, primarily regarding lending to the household segment. The Central Bank of Hungary expects that the improving profitability caused by the decline of bank levy and business environment substantively change the other banks' willingness of lending; and the banking sector contribute to sustainable economic growth

Chart 67: After-tax ROE of the European banking sector



Note: The chart depicts the 46–60, 20–80 percentile values. The first half years' data from 2014 data from the data point of June's year-long projection, thus the Hungarian data - due to the provisioning of June - distorts significant downwards.

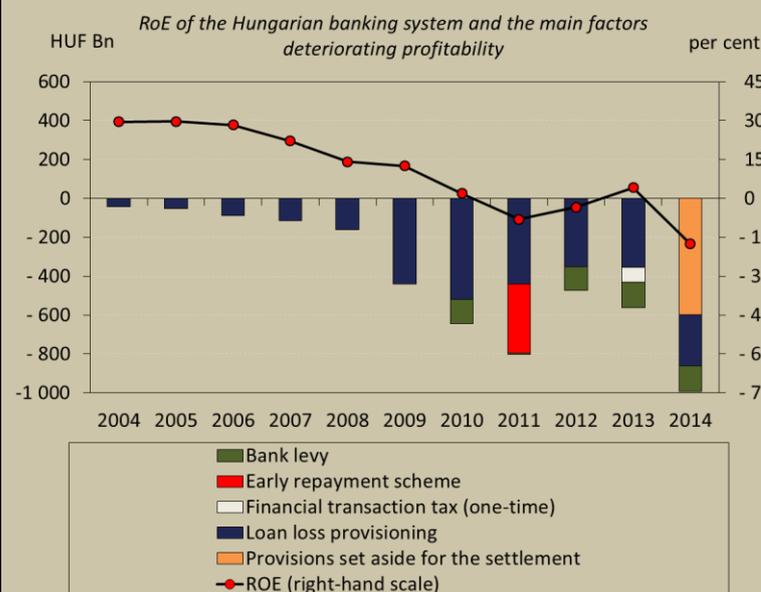
Source: ECB CBD, World Bank Database.

through corporate lending, especially in the SME segment.

With the improvement in profitability, the Hungarian banking system will only be competitive by international standards to a limited degree. Eliminating the one-off impacts incurring in the income statement of the entire sector and of the individual institutions gives a better view of the actual profitability of the Hungarian banking system after (see box 9). The result net of the impacts of the settlement and the major one-off items was a loss of about HUF 46 billion in 2014. In the case of the phase-out of the bank levy and the credit losses approximating their pre-crisis level, the profitability of the Hungarian banking sector could increase to a level 0-10 percent ROE that is more in line with that of the countries of the region (Chart 67), while at the same time profitability will negatively impacted by the payments into the NDIF and IPF funds (Table 4).

9. BOX: STRUCTURAL PROFITABILITY OF THE BANKING SYSTEM

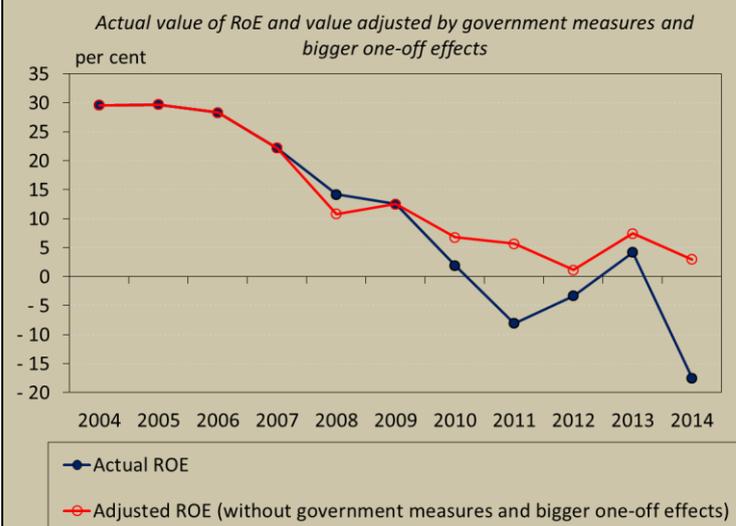
During the crisis the profitability of the Hungarian banking system significantly deteriorated from its high pre-crisis level, by the 2010s it turned negative and now belongs to the worst-performing banking systems of the region and Europe. The largest part of the losses is directly attributable to the deterioration in the quality of the portfolio. In addition, the bank levy introduced in 2010, as well as a few one-off measures, such as the early repayment scheme at a preferential exchange rate in 2011, the one-off financial transaction tax in 2013 and the provisioning due to the settlement in 2014 represented significant cost factors.



In view of the fact that the early repayment scheme and the settlement were one-off measures, the sector's tax burden may significantly decrease with the planned reduction of the bank levy, and the credit loss may decrease to a "normal" level once economic growth becomes permanent, the profitability indicators will better reflect the sector's actual profit-generating capacity in the coming years. However, based on the data from previous years, it is difficult to directly infer the level of underlying profitability, and thus it is not easy to assess whether the structure of the Hungarian banking sector and/or the business models of the domestic banks are viable, or if a substantial consolidation and business model switch is still necessary.

In order to determine the structural earnings potential, first we have to eliminate from the profitability indicators (we used the pre-tax return on equity, ROE) the above mentioned fiscal measures, the effect of government programmes, and some larger idiosyncratic effects that can be easily quantified, and that in the strict sense do not reflect the credit institutions' earnings potential. The indicator obtained this way is much more suitable for measuring the performance of the individual banks. The ROE filtered to remove the government measures, the fiscal burdens not recharged directly and the major idiosyncratic technical effects, fell significantly from the pre-crisis level of 30 per cent to around 5 per cent. The deterioration in profitability is rather significant in this approach as well, but contrary to the rough figures – even despite the high loan losses – the banking sector cannot be regarded as loss-making.

However, the banking system's profitability was also deteriorated by factors that reflect faulty business policy decisions of the past and were amplified by cyclical effects related to the crisis and the economic downturn. Among them, the most important one is loan loss provisioning, which is expected to stabilise at a lower level than in the past years, owing to sustained economic growth and the decrease in loan defaults. The deterioration of the portfolio reduces profitability not only because the one-off effect of loan loss provisioning, but also because, if it stays on balance sheet, the bank finances an asset not generating any interest or fee income, which causes a loss until it is removed from the portfolio. Finally, regulatory capital needs that have increased because of the rising risks during the crisis, and capital buffers accumulated to fulfil precautionary motives caused a fall in return on equity by increasing the denominator. Given the fact, that after the full recovery from the crisis, the need for loan loss provisioning and the non-performing loan portfolio is likely to fall while leverage is expected to increase, we estimated the profitability effect of these cyclical factors under a few simple assumptions. We chose the value of cost of provisioning under normal circumstances to be 7.5 per cent, based on the period right before the crisis (in 2007 and 2008), and the ratio of non-performing loans to be 3 per cent. We considered the 10.5 per cent level, in line with the CRR/CRD IV regulation, as the capital adequacy adjusted by cyclical factors.



normal circumstances to be 7.5 per cent, based on the period right before the crisis (in 2007 and 2008), and the ratio of non-performing loans to be 3 per cent. We considered the 10.5 per cent level, in line with the CRR/CRD IV regulation, as the capital adequacy adjusted by cyclical factors.

The cyclical factors of portfolio deterioration (loan loss provisioning and the cyclical cost of the NPL portfolio) reduced the sector's return on equity by 5-10 percentage points, i.e. we could have observed a ROE of 10-15 per cent in the absence of these factors. Given that in the long term the banking system can meet the regulatory minimum with lower capital adequacy, the potential return on equity may rise to 15-20 per cent with improving circumstances.

However, looking ahead, there are several reasons why it cannot be expected that the sector reach this level of profitability. One of the reasons is that in the wake of the settlement the credit institutions lose a considerable interest income, 3 per cent compared to the equity, on the outstanding portfolio. On the other hand, the bank levy will remain in place, even though its level will converge to the European average, which represents a further decrease in the return on equity of about 2 percentage points compared to the structural indicator. Third, the replenishment of NDIF, IPF, and the Indemnification Fund of Quaestor Victims means an additional burden, which exceeds 1 per cent of equity, for years to come. Overall, these factors have a loss effect of about 10 per cent compared to the cyclically adjusted capital need, i.e. ROE higher than 10 per cent cannot be expected even in the medium term. Although this level is consistent with the current regional average, the phasing out of cyclical factors will improve profitability in neighbouring countries as well. The lagging behind of the Hungarian banking system may be terminated by closing the credit gap at a healthy pace (by restarting market-based lending) and orderly consolidation of the sector.

Table 5.: Premium payment obligation of the NDIF and the Investors Protection Fund (IPF) members

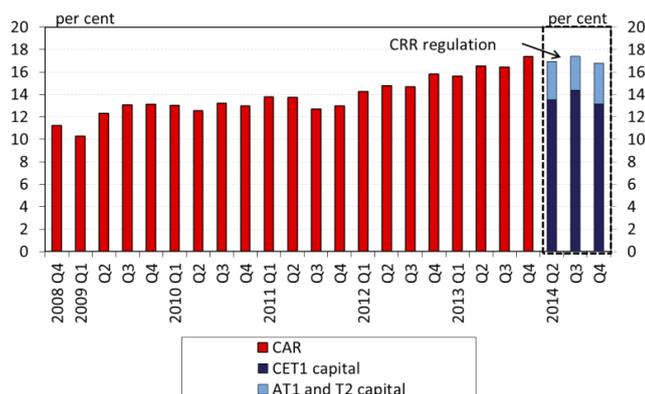
	NDIF	IPF
Base of the regular annual premium	Secured deposits outstanding (HUF billion 12.1 thousand)	Secured stock
Current value of the regular annual premium	0.14 per cent (17 HUF billion)	0.045 per cent (1.2 HUF billion)
Maximum value of the regular annual premium	0.2 per cent (24 HUF billion)	0.3 per cent (8-9 HUF billion)
Maximum value of the extraordinary annual premium - in case of borrowing	0.2 per cent (24 HUF billion)	Annual value of the regular premium (8-9 HUF billion)

Source: MNB.

Due to the exhaustion of the National Deposit Insurance Fund and the Investor Protection Fund, the banking system may be burdened by a higher premium payment obligation.

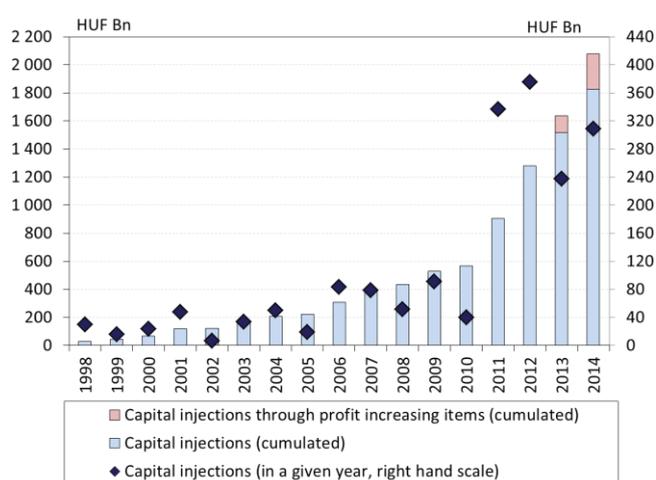
Looking ahead, the income situation of the banking system is influenced by several factors: the cleaning up of balance sheets and the phasing out of the bank levy improve the profitability of the banks, while the loss generated by the claims purchased by the central bank's asset management company and the decreasing household interest rates may lower the profitability of the banks. The shortcomings revealed in respect of investment firms and the resulting indemnification obligation may also represent a material risk. The National

Chart 68: CAR of the banking sector



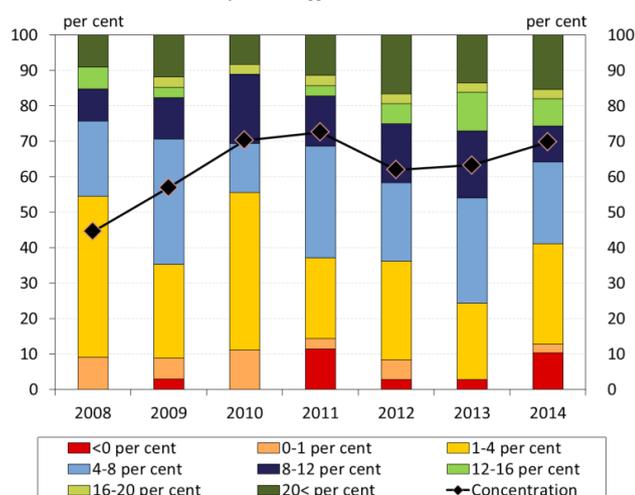
Source: MNB.

Chart 69: Cumulated value of capital injections in foreign-owned banks



Source: MNB.

Chart 70: Distribution of the individual institutions by the size of the capital buffer under SREP



Note: Distribution based on the number of banks; the SREP capital buffer is expressed as a percentage of risk-weighted assets. Concentra-

Deposit Insurance Fund (NDIF) was able to meet its indemnification obligations – related to the banks that went bankrupt recently – only with the assistance of a loan from the MNB; in order to repay this loan, NDIF may increase the present premium rate and also order an extraordinary contribution (Table 5). The premium payable to the Investor Protection Fund may also increase: at present the annual payment made by the members is around HUF 1.2 billion, which the Board of the Fund may increase to HUF 8-9 billion on a statutory basis. Furthermore, the members may be obliged to make an extraordinary contribution, the maximum of which will be the annual premium (see Box 10).

The parent banks compensated losses arising from the settlement with substantial capital injections. The capital adequacy ratio decreased slightly in 2014 compared to the 17.4 per cent measured in the previous year and stood at 16.8 per cent at the end of year (Chart 68). In order to offset the large loss arising as a result of the settlement, the value of capital injections in the banking system during the year was almost HUF 340 billion in accounting terms, while the negative balance sheet profit/loss reduced the regulatory capital by HUF 427 billion (Chart 69). The major part of the regulatory capital qualifies as the highest quality common equity tier 1 capital component (CET1 capital) under the CRR regulation¹⁵.

The size of the available capital buffers is still significant, but its asymmetry among institutions increased further. The banking system's surplus capital in excess of the prescribed capital requirements totalled HUF 1,250 billion at the end of 2014. In access of the supplementary capital requirement under SREP, prescribed by the supervisory authority (HUF 470 billion) there is still a substantial, HUF 779 billion capital surplus. However, the concentration of the free buffer is still extremely high, and it even increased in the last half-year: 47 per cent of the capital buffer belongs to one institution, while 70 per cent belongs to three institutions. The free capital may serve as a basis for future expansion opportunities, or its existence may also be justified by precautionary considerations. At the end of 2014, all institutions complied with the capital requirement of 8 per cent, but if the supplementary capital requirement under SREP is also taken into account, then there was a minor shortfall at four institutions (Chart 70). Therefore the system-wide capital position is adequate, but at individual level there is significant asymmetry. Furthermore, during the second half of the year the reorganisation of one large bank commenced within the restructuring framework, which was primarily justified by the future foreseeable capital shortfall

¹⁵ Due to switching to the new statistical method, the proper quality thereof is guaranteed only in the case of the Q2 figures. For this reason the 2014 Q1 data are not published.

tion: share of the 3 banks that have the highest capital buffer from the capital surplus at sector level.

Source: MNB.

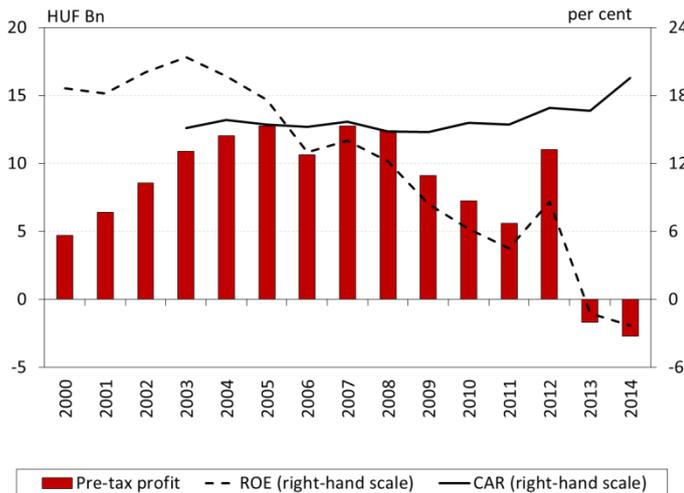
Table 6.: Pre-tax profit/loss of financial enterprises

HUF Bn	Financial enterprises owned by banks	Financial enterprises without bank ownership	Sector total
2008	31,9	11,6	43,5
2009	-17,8	7,9	-9,9
2010	-47,7	5,2	-42,5
2011	-51,0	-3,1	-54,1
2012	-53,5	6,0	-47,5
2013	-14,9	12,5	-2,4
2014	-38,8	6,1	-32,7

Note: Bank ownership means domestic ownership and direct ownership by non-resident banks

Source: MNB.

Chart 71: CAR and ROE indicators and pre-tax profit of cooperative credit institutions



Source: MNB.

10. BOX: EXPECTED DEVELOPMENT OF THE MEMBERSHIP PREMIUM PAYMENTS TO NDIF AND IPF

The increase of the costs of banks in the upcoming years could arise from the raised membership premiums to the National Deposit Insurance Fund (NDIF) and the Investor Protection Fund (IPF). In the case of the Quaestor Fund, the banks will have to pay advance, which could be recovered from the sale of the assets of Quaestor Group, and the part not recovered will be deductible from the tax base. All that will not cause a loss for the banking system. The revenues from NDIF will increase because customers of DRB Bank Group will receive indemnification of up to 100 thousand euros. The reason for the increase of the premium revenues of IPF is the indemnification of the customers of Buda-Cash, Hungária Értékpapír and Quaestor (holders of fictitious bonds) of up to 20 thousand euros. In the case of the Quaestor Fund the victims will be indemnified for up to 100 thousand euros (in addition to the IPF indemnification), the coverage for these amounts is collected in the form of advance pay-

arising from the expected losses.

The profit/loss of financial enterprises¹⁶ deteriorated further in H2. The half-year pre-tax profit/loss of the sector was HUF -32.7 billion, which compared to the loss of HUF 27.6 billion in June represents a further decrease (Table 6) Beside the deterioration of net interest income the sector's loss was primarily caused by the loss realised on financial trading, as well as by the provisioning of roughly HUF 61 billion, mainly attributable to the foreign currency loan-related measures. The loss appeared primarily at the financial enterprises owned by banks, while the institutions with non-bank owners closed the year with a positive result on the whole. It should be emphasised that comparison with the previous years at sector level is distorted, because the financial corporations restrained their activity and a number of banks merged its subsidiaries.

Co-operative credit institutions also closed the year with a loss, but it was lower than that suffered by the banks. The pre-tax income of co-operative credit institutions at the end of June was a loss of HUF 2.7 billion. The sector's profit/loss comprises a profit of HUF 2.9 billion of 64 profitable co-operative credit institutions, and a loss of HUF 5.6 billion realised by 46 loss-making institutions. More than 70 per cent of the sector's household foreign currency loan portfolio is included in the balance sheet of these latter institutions, accordingly, the provisioning related to the settlement was also the highest here. Despite the losses the sector has a high capital adequacy ratio, which stood at 19.5 per cent at the end of the year, which is also attributable to the composition impact (exit of certain institutions characterised by lower capital adequacy ratio from the sector) (Chart 71).

¹⁶ The aggregates do not contain the data of enterprises that operate as a financial enterprise holding a supervisory licence, but perform only financial intermediation within a foreign group. We treat these as special-purpose enterprises (SPE) in the economic statistical reports, but at the same time they form part of the supervisory authority's statistics.

ments, but these amounts will be returned in 10 to 15 years and consequently do not mean a loss for the banking system.

In the first quarter of 2015, as a result of the broker scandals the NDIF and the IPF have to pay significant indemnification. It poses an additional problem that the funds have been depleted, and significant funds would have to be obtained to replenish them to the "normal" level. On 14 April 2015 the Parliament also accepted the Act on the establishment of Indemnification Fund Quaestor Victims, which will ensure that the clients of Quaestor will be indemnified up to a limit of EUR 100 thousand. NDIF, IPF and the newly established Quaestor Fund could raise the amount necessary for the indemnification from borrowing or bond issue. Currently the net worth of NDIF is HUF 13 billion, which is a fragment of the losses suffered by the clients owing to the default of DRB Banking group. For the indemnification of the depositors of the DRB Banking Group the Fund borrowed a loan of HUF 107 billion from the Central Bank of Hungary¹⁷. Because of the type of the loan that it must be repaid by the end of June; thus during this period a probable issuance of bond will occur at the level of loan received. At present the net worth of IPF is about HUF 10-11 billion, which is significantly less than the amount necessary for the indemnification. An additional amount of HUF 90-100 billion is required for the indemnification of the customers of Buda-Cash, Hungária Értékpapír and Quaestor to a limit of 20 thousand euros, which is expected to be covered by borrowing from the market. In addition, the Quaestor Fund will also need to obtain funds in the amount of about HUF 100 billion, to be able to indemnify the victims up to 100 thousand euros. This means a total indemnification payment of about HUF 300 billion for the three funds, while raising NDIF and IPF to normal level requires the involvement of additional funds of about HUF 100-150 billion.

The Boards of both NDIF and IPF are authorized to order the member institutions to pay extraordinary premium, to the extent of the annual membership fee, and to apply premium diversion. Act CCXXXVII of 2013 on Credit Institutions and Financial Enterprises will be amended as of July 2015, with regard to the repayment of the bridging loan taken by NDIF. If the Board demand an extraordinary premium payment, then the rate thereof must not exceed 0.5 per cent of the premium basis (HUF 41 billion) for any of the credit institutions. If the amount of the loan taken by NDIF (to cover the indemnifications) exceeds 0.8 per cent of the deposit portfolio covered by obligation for indemnification (HUF 65 billion), then the members may be obliged to make payments exceeding the required limit, with the approval of Central Bank of Hungary. In the case of NDIF a risk-based premium payment may be introduced, if one of the members does not comply with the Fund's equity, regulatory capital or surplus capital requirement. In the case of IPF the risk level of the members is expressed by a composite risk factor; however, the broker scandals made it clear that this system has become obsolete. If the risk level of a member exceeds the level of Fund's regulation, the Board of IPF may officially modify and divert the member's premium payment¹⁸.

Partner institutions of The National Deposit Insurance Fund of Hungary and the Investor Protection Fund payments in 2015 and 2016

	Payments in 2015			Payments in 2016		
	NDIF payment (Bn HUF)	IPF payment (Bn HUF)	Total (Bn HUF)	NDIF payment (Bn HUF)	IPF payment (Bn HUF)	Total (Bn HUF)
Banks with over 5 % market share	12,1	2,3	14,4	20,1	7,7	27,8
Banks with under 5 % market share	2,5	0,10	2,6	4,2	0,3	4,5
Other IPF's partner	-	0,16	0,2	-	0,5	0,5
Total:	14,6	2,6	17	24,3	8,5	33

Source: MNB, NDIF, IPF

In 2015 member institutions of NDIF will pay at least HUF 15 billion annual premium according to a predefined premium rate. In 2015 the Board of the Fund will presumably not order extraordinary premium payment, however, due to the high indemnification it may increase the premium rate to the statutory maximum, i.e. 2 per thousand, even during the year. If the Board raises

¹⁷ Section 36. on the National Bank of Hungary: „In the event of any circumstance arising in which the operation of a credit institution jeopardizes the stability of the financial system, the MNB may provide an emergency loan to the credit institution, subject to the prohibition on monetary financing set out under Section 146.”

¹⁸ With regard to the NDIF premium payments for 2016, we expect that the annual premiums will be defined on the basis of the maximum premium rate, i.e. 2 per thousand. The base of our IPF calculation was a rate of 0.45 per thousand approved in 2014 for 2015, while for 2016 we calculated with a rate of 3 per thousand. Difficulties arise from the uncertainty of the estimation concerning the sales of the brokerage firms' assets. The analysis is based on a recovery rate of 30 per cent.

the annual premium rate to the statutory maximum, the annual premium payable by the members will increase to HUF 24.3 billion. This year IPF is expected to collect HUF 2.6 billion of premiums, on the one hand based on the 2014 decision of the Board and on the other hand because of the extraordinary payment ordered in April 2015, to the extent of the annual premium. Due to this year's broker scandals, the present premium rate of 0.45 per thousand is expected to increase to 3 per thousand next year, reaching the maximum statutory level, thereby increasing the Fund's premium income to HUF 8.5 billion. Extraordinary premium payments with regard to IPF may occur every year; in order to disburse its market-based loan of HUF 90-100 billion.

The Indemnification Fund for Quaestor Victims was specifically established for taking active part in the indemnification of Quaestor's customers. According to our expectation the amount of indemnification will be HUF 180-190 billion, of which HUF 80-90 billion will be paid by IPF and the remaining part will be financed by bond issuance of Quaestor Fund, and the repayment of the bonds will be collected from members of IPF in a form of advance premiums. If the Quaestor Fund is unable to refund fully the advance payments paid by IPF members from the sale of the assets of the Quaestor Fund, then the tax liabilities of the paying members will be reduced to the extent of the advances not recovered. Because of deductibility from the tax base, the advances payable to the Quaestor Fund will not impose a loss on the banking system, therefore we do not take into account this increase of burdens¹⁹.

Partner institutions of NDIF and IPF payment share

	Share		
	NDIF payment share (%)	IPF payment share (%)	NDIF and IPF payment share (%)
Banks with over 5 % market share	83%	90%	85%
Banks with under 5 % market share	17%	4%	14%
Other IPF's partner	-	6%	2%
Total:	100%	100%	100%

Source: MNB, NDIF, IPF

As can be seen in the table, proportionally the large banks pay the highest annual premium in respect of both funds: 83 per cent of NDIF and 90 per cent of IPF annual premium. Due to the broker scandals, the burdens of the banking system are expected to increase, in part due to the extraordinary contribution, and in part due to the higher premium rates. Based on our analysis the funds would be able to repay the loans borrowed to cover indemnification, moreover NDIF and IPF would reach their normal level of replenishment if the premium payments of the two funds (HUF 24.3 and

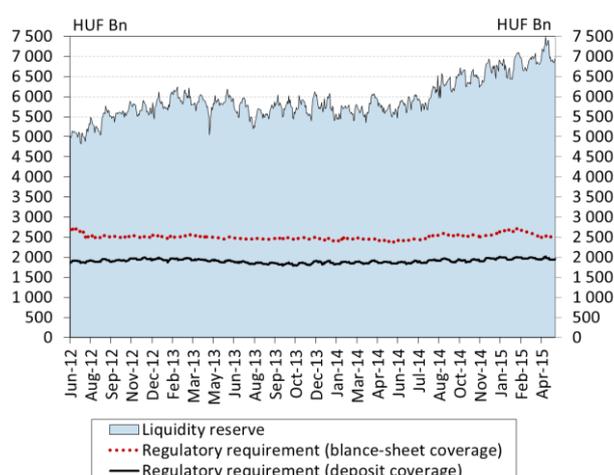
8.5 billion, respectively) would be raised. Therefore, the total amount of premium paid by financial system could be annually HUF 33 billion from 2016 to 2025, which is HUF 16 billion more than the premium payments in 2015. As a result, the premium revenues of the Funds will not only finance the issuance, but also their replenishment to "normal" level by the end of the 10th year.

¹⁹ The anticipated annual amount of the advance on a 10-year and a 15-year horizon may be around HUF 9.3 billion and 7.5 billion, respectively. However, this should not be regarded as a loss, as it is recovered during the liquidation, or the irrecoverable part can be deducted from contributors' tax base.

6. BANK LIQUIDITY – DUE TO THE CONVERSION INTO FORINT AND THE SETTLEMENT, THE MATURITY MISMATCH BETWEEN THE BANKING SECTOR'S FORINT ASSETS AND LIABILITIES INCREASES

The liquidity position of the banks continued to strengthen, but due to conversion into forint, the maturity mismatch between forint assets and liabilities will increase considerably at several domestic banks. This has a negative impact on the banking sector's liquidity through the increased refinancing risk, but the mortgage lending adequacy regulation, anticipated by the MNB, may incentivize the banks' adjustment in the proper direction. A major part of the short-term external funds may flow out of the banking sector, which is a positive development in terms of the external vulnerability both of the banking sector and the economy. On the other hand, it is an important consideration to ensure that these imbalances should not be built up in the future again, which can be facilitated by the implementation of the foreign exchange equilibrium regulation and the tightening of the foreign exchange funding adequacy ratio, as planned by the MNB. As a result of the central bank's self-financing concept, the banks' government bond portfolio further increased, which also made a contribution to the growth of the liquidity reserves.

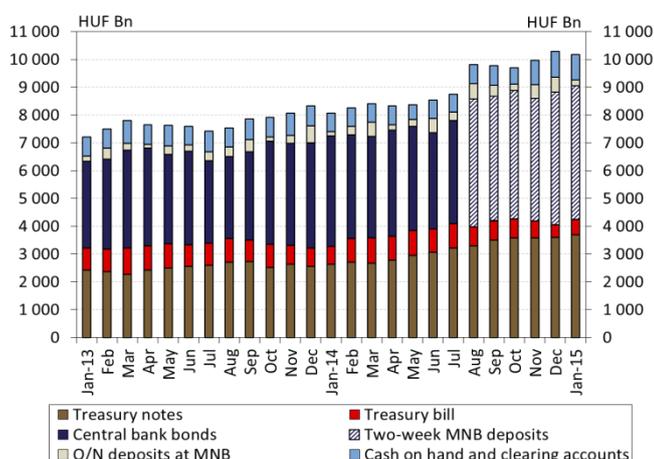
Chart 72: Liquidity reserve and the regulatory (deposit and balance-sheet coverage) liquidity requirements



Note: Liquidity reserve means the balance of the eligible assets and the 30-day funding gap.

Source: MNB.

Chart 73: Composition of liquid asset in the banking sector



Source: MNB.

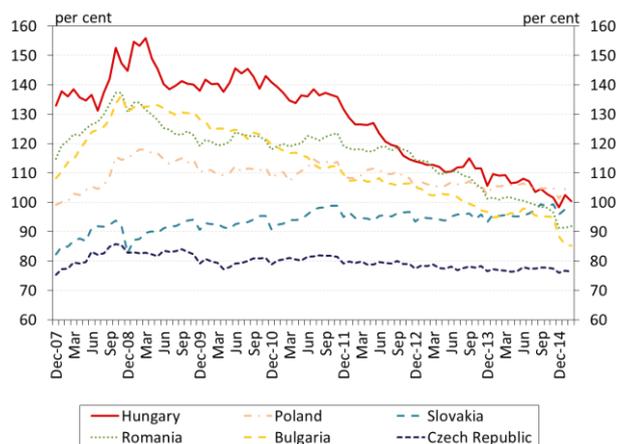
6.1. Banks' liquidity situation is improving, but the forint maturity mismatch remains in the balance sheets after the conversion into forint

The liquidity position of the banks further strengthened. The liquidity reserve of the banks increased by more than HUF 800 billion between June 2014 and February 2015, approximating HUF 6,700 billion (Chart 72). This is two and a half-time higher than the stricter regulatory minimum level. With this liquidity reserve, the sector's deposit coverage ratio stood at 68 per cent, and its balance sheet coverage ratio at 24 per cent at the end of February. The banking sector's high liquidity is also reflected in the LCR index to be introduced on 1 October 2015. Although the regulatory minimum with this latter index would reach 100 per cent gradually by the beginning of 2018 starting from 60 per cent, the value of the index estimated for the entire banking sector was 140 per cent at the end of February in a way that all banks complied with the 60 per cent minimum.

As a result of the central bank's self-financing concept banks' portfolio of government bonds increased. Since the announcement of the MNB's self-financing programme in April 2014, the portfolio of longer-term government bonds in the banks' government securities portfolio increased by HUF 833 billion, while the portfolio of the short-term treasury bills decreased by HUF 227 billion until the end of February 2015 (Chart 73). With this, the ratio of government bonds on the balance sheet total went up from 10 per cent to 11.9 per cent, while the share of treasury bills fell from 3.1 per cent to 2.1 per cent. The growth of the government securities portfolio also made a contribution to the increase in liquidity reserves mentioned above.

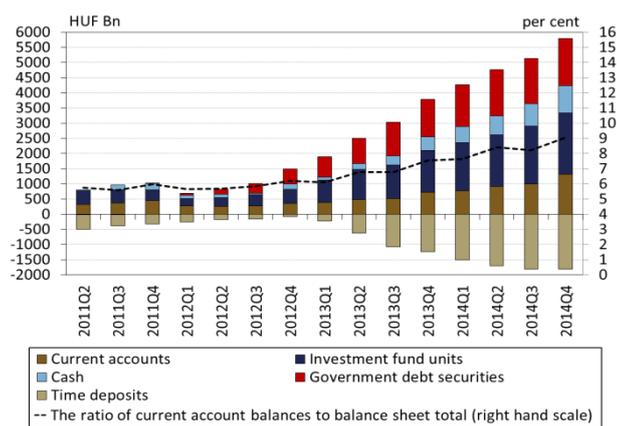
The value of the loan-to-deposit ratio has decreased further since the second half of 2014. The decrease in the ratio is primarily attributable to the increase in new deposits of the

Chart 74: Loan-to-deposit ratio in international comparison



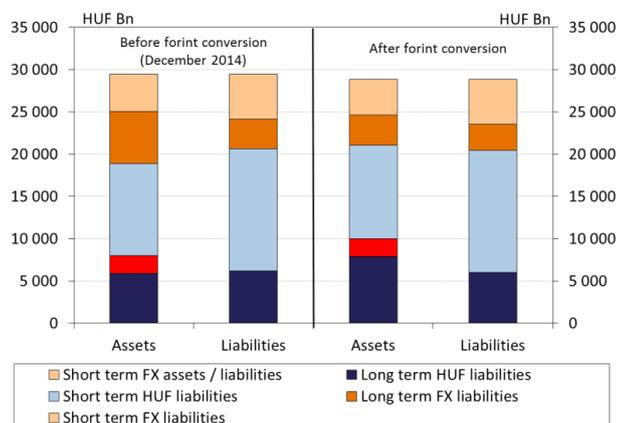
Source: ECB.

Chart 75: Households' cumulated financial transactions and the ratio of their current account balances to the banks' balance sheet total



Source: MNB

Chart 76: Changes of the FX structures and the maturity mismatch in the banking system's balance sheet due to the forint conversion



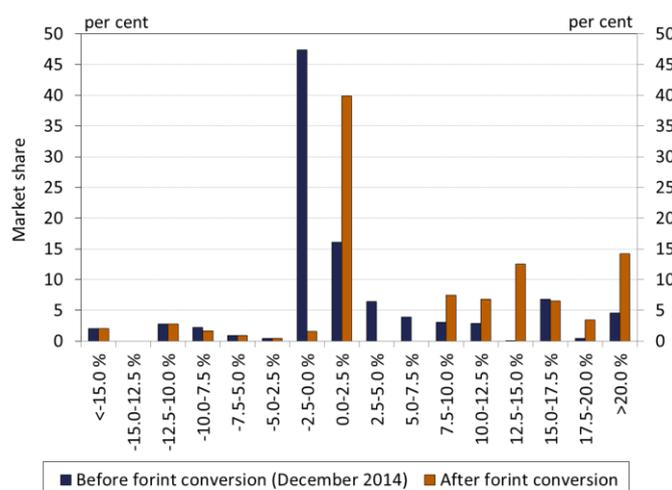
Source: MNB

corporate and the household sector, but the decreasing trend was also supported by the contraction of the households' outstanding borrowing. As a result of this, the ratio fell close to 100 per cent (Chart 74). In 2015 Q1, the one-off impact of the foreign currency loan-related settlement resulted in an additional decrease of the loan-to-deposit ratio by 4 percentage points.

The deposit outflow of households stopped in 2014 Q3, but an increase was still only experienced in the current account balances. In terms of financing, it is a favourable development that the outflow of households' deposits stopped in 2014 Q3, and in Q4 we already observed an inflow of HUF 300 billion (Chart 75). However, in terms of liquidity risk it is unfavourable that the rise occurred almost completely on current account balances, which in the longer run may increase the refinancing risk. This trend is strengthened by the fact that the state still strongly competes for shorter- and longer-term savings, which is somewhat compensated by the fact that the banks are able to channel part of the longer-term savings back to their own balance sheet via their investment funds.

As a result of conversion into forint in 2015, the maturity mismatch between forint assets and liabilities at several domestic banks may increase considerably. The maturity mismatch of the assets and liabilities is not a new problem in the domestic banking sector, as it already existed in the period of foreign currency lending. In addition to this, since financing the FX loans took place mainly through FX swap transactions, the maturity mismatch contains both the maturity mismatch of on- and off-balance sheet items. However, this problem was managed partially by the foreign exchange funding adequacy ratio (FFAR) introduced in 2012, as a result of which the mismatch between the long-term foreign currency asset and the long-term foreign currency funding (balance sheet liabilities and swaps) fell to 2.5 per cent of the banking sector's balance sheet by October 2014, but the maturity mismatch computed without the long term swaps could not have been significantly reduced. After the conversion this mismatch appears amongst the forint denominated items of the banks' balance sheets. At the end of 2014 – disregarding the eligible long-term securities – the balance of the long-term forint liabilities still slightly exceeded the value of the long-term forint assets. However, as a result of conversion into forint the banking sector's net long-term forint assets increase by roughly HUF 2,000 billion, generating a maturity mismatch of HUF 1,800 billion in the banking sector's balance sheet (Chart 76). This has a negative impact on the banking sector's liquidity through the increase in the refinancing risk.

Chart 77: Distribution of the long-term forint maturity "gap" in proportion to the balance sheet total by market share



Note: Maturity gap = (long-term forint assets minus long-term forint liabilities)/balance sheet total

Source: MNB.

After conversion into forint the maturity mismatch at the sector level accounts for 6 per cent of the balance sheet total, which is significant alone as well, and its distribution among the individual institutions is highly dispersed. While prior to conversion, over 70 per cent of the sector had long-term forint liability surplus or a minor (below 2.5 per cent) shortfall, after conversion 40 per cent of the banks are characterised by a minor shortfall, while another 40 per cent by a maturity mismatch over 10 per cent in proportion to the balance sheet total (Chart 77). This latter group also includes – not surprisingly – the four large banks holding half of the foreign currency mortgage loan portfolio. In view of the fact that the largest institutions showing a large maturity mismatch have significant mortgage loan portfolios, the mortgage loan adequacy regulation anticipated by the MNB could be an efficient tool to mitigate the refinancing risks arising from the maturity mismatch (see Box 11).

11. BOX: ON THE BANKING SECTOR'S BALANCE SHEET FORINT MATURITY MISMATCH AND THE MORTGAGE LOAN FINANCING ADEQUACY RATIO (MFAR)

Pursuant to Act LXXVII of 2014 (the so-called Forint Conversion Act), almost all of the outstanding household foreign currency mortgage loan portfolio will be converted into forint at a fixed exchange rate. As a result of conversion, a significant systemic risk, i.e. the exchange rate risk, no longer burdens consumers; however, a material liquidity risk appears in the banking sector as a result of the drastic increase in the forint maturity mismatch. The residual maturity of the vast majority of the mortgage loans to be converted into forint is more than 10 years, while the banking sector's forint liabilities – typically in the form of deposits – mature within one year. Although maturity mismatch is a natural phenomenon in banking – since an important element of the banks' operation is maturity transformation – an excessive maturity mismatch may give rise to systemic liquidity risks. In order to address the problem, it is justified to introduce a targeted macroprudential regulatory instrument.

The objective of the new macroprudential requirement is to ensure that institutions mitigate the accumulated forint maturity mismatch by raising long-term covered forint liabilities. It is expected of the regulatory instrument to provide targeted incentives for the financing from long-term covered liabilities to be raised, to be relatively simple and transparent, and could be maintained in parallel with the anticipated European regulatory tools. Due to the regulation that mitigates investors' risks, the long-term instruments secured by mortgage (e.g. mortgage bonds, other securities issued under mortgage collateral, mortgage bank refinancing loans) are regarded as liabilities of favourable risk rating and as such they are relatively cheap. Due to conversion, the forint mortgage loan portfolio that can be used as collateral is also available. The encouraging of the involvement of the securities issued with mortgage loan collateral in the financing is known in international practice as well. In Denmark, this is the only way that the household mortgage loans can be financed, but the minimum expected ratio of the mortgage bond financing in the case of mortgage loans is also prescribed in Slovakia.

The stock of net HUF residential mortgage loans after conversion and the amount of new secured funding to be raised (estimate based on February 2015 data, HUF Bn)

Net HUF residential mortgage loans (estimate, after conversion)	3923
Eligible, long-term liabilities secured by mortgage (mortgage bonds, refinancing mortgage loans)	357
New mortgage bond/other secured security issuance needed (MFAR: 15%)	279

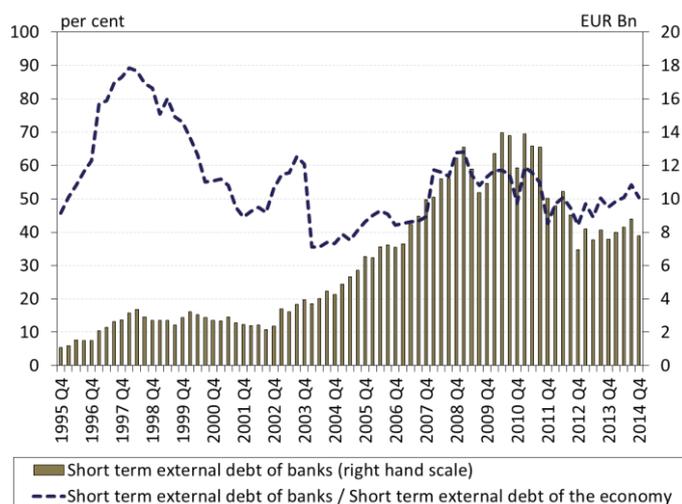
Note: The effects of settlement as presented in the Financial Stability Report of November 2014 and expected amortization have been taken into account.

Source: MNB.

The new requirement of Mortgage Loan Financing Adequacy Ratio (MFAR) also agreed with the market participants, is to be

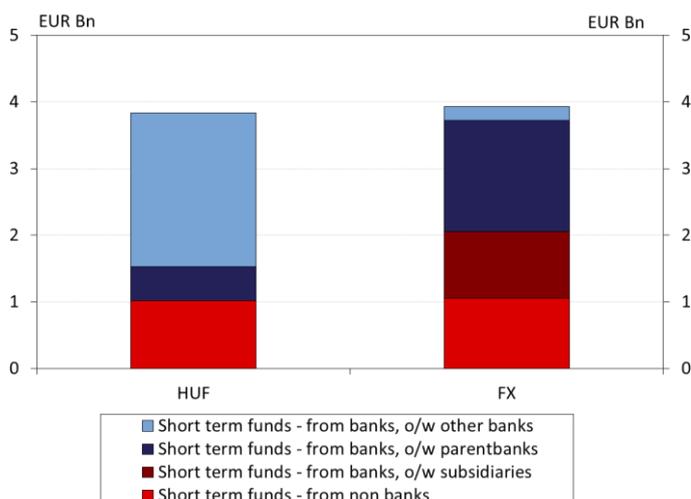
calculated at a consolidated level as the quotient of the forint liabilities raised with the collateral of household mortgage loans and the net household forint mortgage loans with a residual maturity over 1 year. The numerator contains the mortgage bonds secured by the household mortgage loans and other covered securities, but institutions which do not have a mortgage credit institution may also include the so-called refinancing mortgage loans received from mortgage banks. As of 2016 H2, a minimum value of 15 per cent would be prescribed; at this level the risk arising from the maturity mismatch would decrease slightly at the banking sector level, but at the same time it would not force market participants to adjust in a shock-like manner. According to our preliminary estimate, the new regulation may generate new mortgage bond issuance of about HUF 280 billion. In connection with the new regulation, it is also justified to provide sufficient time for the preparation: part of the institutions which do not have a mortgage bank would presumably set up one and the time required for that – including the issuance of the first mortgage bonds – is 12-15 months.

Chart 78: Short-term external debt of the banking sector



Source: MNB.

Chart 79: Breakdown of the short-term external funds at the end of 2014



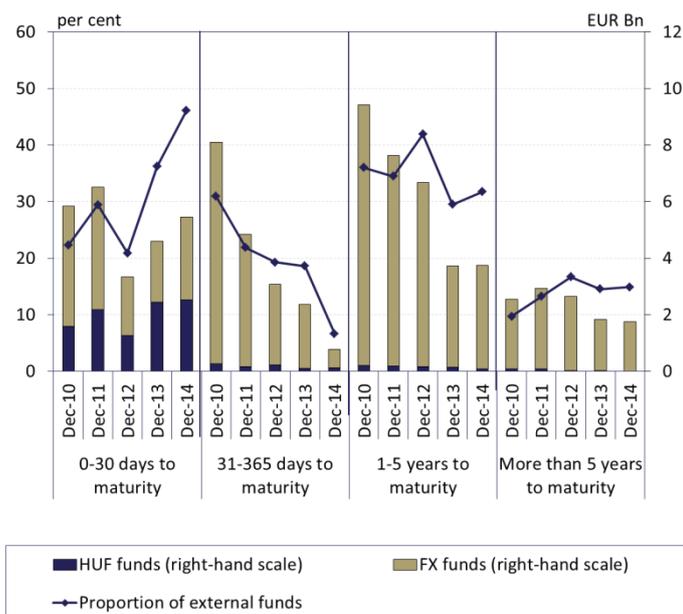
Source: MNB.

6.2. After the conversion, short-term external debt may decrease, but the renewed build-up of the portfolio entails risks

The banking sector's large volume of short-term external funds may decrease as a result of the settlement and conversion. Short-term external debt at the national economy level is still a source of major vulnerability, almost half of which is included in the balance sheet of the banking sector (Chart 78). At the end of December 2014 the banking sector had short-term external funds of EUR 7.8 billion. Of this, the equivalent of EUR 3.8 billion was denominated in forint, while EUR 4 billion was foreign currency liability. The settlement related to the foreign currency loans the conversion will open the banks' foreign currency position by about EUR 9.5 billion, part of which may be covered by the repayment of short-term external funds. Another method of the adjustment could be the closing of FX swap positions, or the increasing of the foreign currency assets.

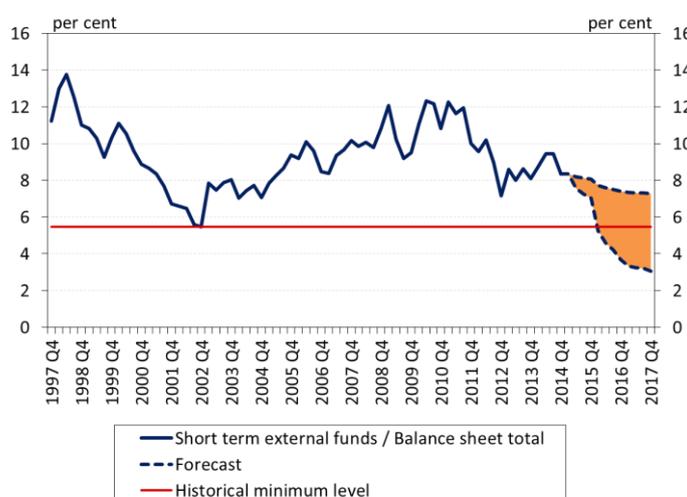
Part of the short-term foreign currency-denominated external funds may remain on the balance sheet of the banking sector over the longer run as well. The deposits of non-bank entities should be regarded in some respect as a basis, if the repayment thereof does not depend on the bank's decision. The volume of these was around EUR 1 billion at the end of 2014 (Chart 79). The external funds originating from the liquidity management of a domestic large bank's foreign subsidiaries amounted to further EUR 1 billion, which may also remain in the balance sheet of the banking sector in the long run. The remaining EUR 2 billion could be repaid in theory, since the vast majority of this is comprised of parent bank liabilities expiring within 30 days, and therefore repayment of these items has minimal liquidity reserve-reducing impact (Chart 79). Due to the foregoing, we expect that short-term external foreign currency funding may fall by not more than EUR 2 billion after conversion. However, the banks that participated in the tenders of the MNB's conditional facility only committed to the repayment of half of this amount, i.e. short-term external funds of EUR 1 billion, which suggests

Chart 80: Maturity structure of external interbank liabilities



Source: MNB.

Chart 81: Short-term external funds of the banking sector compared to the banking sector's balance sheet total



Note: For calculation of adjustment path we set out from maturity structure of the MNB facilities used for settlement and forint conversion.

Source: MNB.

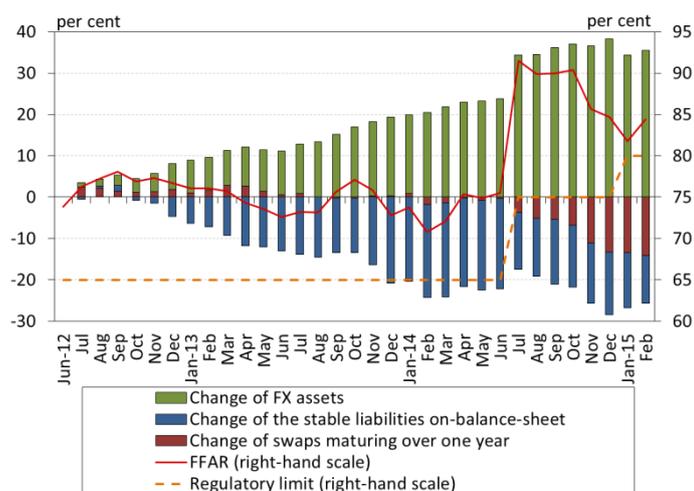
that the banks will still need part of the short-term foreign currency funding, which in part may be justified by providing liquidity for corporate foreign currency lending.

A significant part of the short-term forint-denominated external funds may disappear from the balance sheet of the banking sector after the decrease of the net FX swap position. A major portion of the short-term forint-denominated external funds come from short-term interbank deposits, which suggests that most probably these could be the liquid forint assets of the non-resident swap counterparties providing the Hungarian banks with foreign currency²⁰. Via the diminishing supply of foreign currency risk hedging, the decreasing FX swap positions may also force the above mentioned non-residents to adjust and they may respond primarily by reducing their short-term forint assets. Thus, following conversion, a major part of the short-term forint-denominated external funds may disappear from the balance sheet of the banking sector. While we calculated with the repayment of not more than EUR 2 billion under the repayment of foreign currency denominated external funds, the swap market adjustment may be much stronger than that, reducing the net FX swap position of non-residents by up to EUR 7.5 billion. As a result of this, short-term forint-denominated external funds may also decrease significantly, i.e. by up to EUR 2-3 billion. However, it should be noted that the adjustment by foreign actors may take place not only in bank deposits but also in other forint-denominated instruments, such as government securities; therefore the degree of decrease in short-term foreign forint-denominated external funds currently in the banking sector is rather uncertain. Taken together, as a result of the settlement and conversion, the short-term foreign liabilities may decrease in a pretty wide band, i.e. between EUR 1 and 5 billion, pushing the ratio of the short-term external liabilities in the banking sector to a historic low or even below (Chart 81).

Although the structure of FX funding of the banking sector can improve significantly due to conversion the former imbalances may build up again. Therefore it will be necessary to revise the FFAR regulation and to establish the foreign currency equilibrium ratio. The banking sector's foreign exchange funding adequacy ratio (FFAR) at the end of February 2015 was 84 per cent (Chart 82). This marks a decline of almost 6 percentage points compared to October, which is primarily attributable to the decrease of the net long-term

²⁰ Domestic banks have usually acquired the necessary foreign currency funding via FX swap transactions with non resident banks. This basically means that the banks – in a specific time – changed their HUF liquidity to foreign currency at the respective market exchange rate, and they also agreed in a future date to change back their foreign currency to forint at a forward exchange rate. Thus, the non resident banks have forint liquidity during the maturity of the swap that can be deposited at domestic banks.

Chart 82: The Foreign Currency Funding Adequacy Ratio (FFAR) and the decomposition of its changes



Source: MNB.

currency swap positions. The decline of the net currency swap positions is attributable to the use of the central bank's facility related to the settlement and conversion. However, it should be noted, that the deterioration of the foreign currency funding adequacy after October 2014 is merely ostensible, because the exchange rate used for conversion was fixed in November 2014, and thus thereafter these items did not generate further foreign currency financing need. Moreover, after the booking of the conversion of the foreign currency loans into forint in March, the foreign currency adequacy ratio would considerably increase, if the adjustment of the banks took place primarily in the short-term foreign currency liabilities or in the short-term FX swap positions. Therefore, with the phase-out of the foreign currency mortgage loans it becomes necessary to revise the FFAR and with that also the regulatory requirement related to long-term stable foreign currency financing. At the same time, it is an important aspect that imbalances generated by the short-term external funding and the high FX swap exposure do not reappear, which justifies – in addition to tightening the FFAR – the introduction of a foreign currency equilibrium regulation (see Box 12).

12. BOX: MACROPRUDENTIAL TOOLS FOR MANAGING THE BANKING SECTOR'S CURRENCY DENOMINATION AND MATURITY MISMATCH

As became obvious during the financial crisis, the excessive dependency of the banking sector on short-term foreign currency liabilities entails major financial stability risks. This is because short-term foreign currency liabilities carry systemic refinancing and liquidity risks, thereby increasing the vulnerability of the banking sector. The foreign exchange funding adequacy ratio (FFAR) was introduced as of July 2012 in order to mitigate this problem²¹. However, in addition to managing the excessive reliance on on-balance sheet short-term foreign currency liabilities, it is also justified to manage the excessive currency mismatch in the balance sheet of the banking sector. Due to the excessive currency mismatch, the banks' dependency on the off-balance sheet instruments (typically on the swap market) is rather high, which may generate systemic risks through the significant refinancing, liquidity and margin call risks. Upon a sudden exchange rate movement, the margin requirement arising from the margin call may generate foreign currency liquidity shocks both at individual bank level and at systemic level. However, it is important to note that the problem arising from the excessive dependency on the swap market is independent of the swap direction (foreign currency buyer or seller), as the risks may arise in the case of both types of swaps.

Following the conversion of the household foreign currency mortgage loans, regulatory intervention is deemed justified to prevent the rebuilding of the systemic liquidity risks. The macroprudential tools to be introduced after conversion may encourage market participants to move in a direction that bears less systemic risk, i.e. to reduce short-term foreign currency liabilities and the on-balance sheet currency mismatch, and may also help prevent the rebuilding of the risks arising from denomination and maturity mismatch. The regulatory response to be given to the risks is built on two pillars, namely, on the modification of the foreign exchange funding adequacy ratio (FFAR), and the introduction of a new macroprudential requirement, managing the risks arising from the currency mismatch of assets and liabilities, i.e. the foreign currency equilibrium ratio.

The modification of FFAR would have two components: it would be no longer possible to take the long-term net currency swap position into account (thereby bringing the ratio closer to the net stable funding ratio (NSFR) concept) and the required level would be also raised (100 per cent minimum requirement). Since FFAR – as follows from its nature – is not able to influence the

²¹ With regard to this topic see: Financial stability report (May 2014) Box 9.

entire spectrum of the on-balance sheet currency mismatch, it is justified to apply a new tool to manage the risks arising from the on-balance sheet denomination currency and the excessive dependence on the swap market. In order to take account of the differences arising from the size of the institutions, the foreign currency equilibrium ratio (FCER) would limit the on-balance sheet currency mismatch in 15 per cent in proportion to the balance sheet total.

New regulatory tools to mitigate systemic liquidity risks

	Modifying the Foreign Exchange Funding Adequacy Ratio	Introduction of the Foreign Exchange Coverage Ratio
Objective	To mitigate maturity mismatches in foreign currency positions	To mitigate the excessive currency mismatch on the balance sheet
Contents of regulation	Long-term swaps are no longer accepted The required minimum level is increased (100%)	The on-balance sheet currency mismatch is limited in proportion to the balance sheet total (max. 15%)
Risks managed	Mitigated currency and maturity mismatches in the banking system	
	Reduced overreliance on off-balance sheet instruments (e.g. swap markets)	

Source: MNB.

The new macroprudential tools are expected to be introduced in 2015 Q4, following consultation with the market participants and experts from the European Central Bank. According to our estimates the new regulations may reduce the banking sector's short-term foreign currency debt by roughly EUR 2-3 billion, and

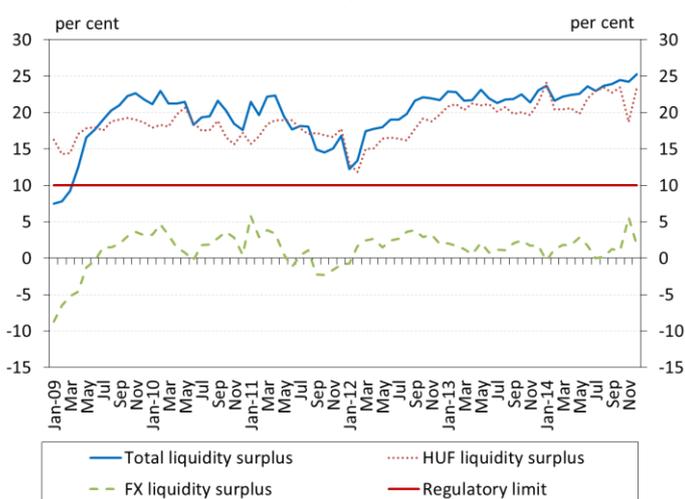
facilitate a decrease in external vulnerability, and indirectly of the banking sector's reliance on the swap market.

7. BANKING SYSTEM STRESS TESTS – THE BANKING SYSTEM IS CHARACTERISED BY OUTSTANDING SHOCK ABSORPTION IN TERMS OF LIQUIDITY AND IMPROVING, BUT HETEROGENEOUS RESILI- ENCE IN TERMS OF SOLVENCY

The liquidity buffer of the banking system moved on an upward trend throughout 2014, reaching a historic high by the end of the year. As a result of this, upon the occurrence of a more severe shock the banks would not only have remained liquid, but the vast majority of them would have also been able to satisfy the 10 per cent regulatory minimum calculated in proportion to total assets. This liquidity buffer is still held in forint, which now represents only a moderate risk due to the conversion of foreign currency-denominated mortgage loans into forints.

The Solvency Stress Index signals an improving shock absorption capacity compared to six months ago, which is attributable – to a large extent – to the capital injections, but the conversion of the foreign currency mortgage loans into forints also materially improved the bank's profit/loss calculated in a stress scenario, due to the decreasing potential loan losses. In the baseline scenario, the capital adequacy of all banks exceeds the regulatory requirement of 9.25 per cent at the end of the two-year time horizon, while in the stress scenario there is a manageable, concentrated need for a capital injection. Although average capital adequacy is high at the systemic level, it still masks significant differences: a considerable part of the capital buffers is concentrated at a few large banks

Chart 83: 30-day liquidity surplus as a proportion of balance sheet total by currencies



Source: MNB.

Table 7.: Main parameters of the liquidity stress test

Assets			Liabilities		
Item	Degree (per cent)	Currencies affected	Item	Degree (per cent)	Currencies affected
Default on interbank assets	20	HUF	Withdrawals in household deposits	10	HUF/FX
Exchange rate shock on swaps	15	FX	Withdrawals in corporate deposits	15	HUF/FX
Depreciation of assets eligible at the central bank	10	HUF			

Note: The forward-looking treasury gap assumes no active treasury management on the part of the bank; hence it does not take into account the rollovers of maturing interbank and foreign funds.

Source: MNB.

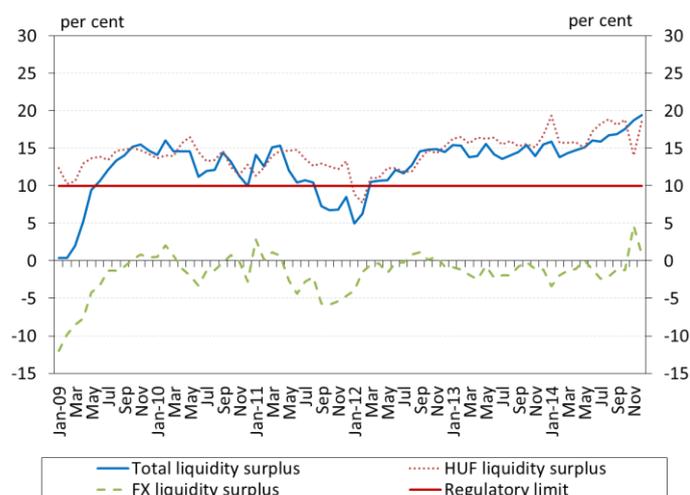
7.1. The liquidity of the banking system is at a historically high level, and would be adequate in a stress situation

The 30-day liquidity of the banks was high throughout 2014; however, their liquidity surplus was mostly available in forint. In 2014, the level of the 30-day forward-looking liquidity surplus materially exceeded the 10 per cent regulatory limit calculated as percentage of total assets; furthermore, it was also continuously increasing. The surplus was mostly available in forint. The very modest foreign currency liquidity surplus increased only temporarily in November, due to the transactions related to the conversion of the household foreign currency loans into forints (Chart 83).

The short-term, complex liquidity stress test measures the impact of the assumed simultaneous occurrence of financial market disturbance, deposit withdrawals and exchange rate shocks. In order to define the household and corporate deposit withdrawals, and the decrease in the price of eligible securities, we applied Value at Risk-based (VaR) stress event calculated on the basis of historic data. The extent of the exchange rate shock is consistent with the scenario of Solvency Stress Index. The calibration of other shocks is based on the experiences of the crisis (Table 7).

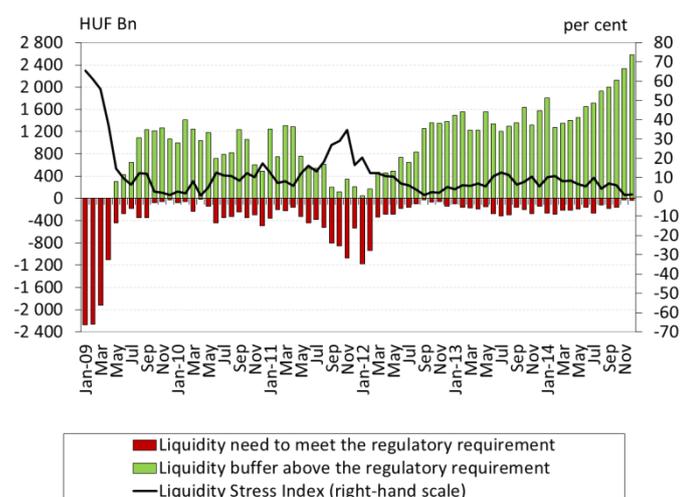
The liquidity surplus of the banks after the stress materially exceeds the regulatory minimum, but it only includes forint reserves. For most of the year, a minimal shortfall in foreign currency would have occurred as a result of the examined shock. The 30-day forward-looking post-stress liquidity surplus was well above the required minimum level; moreover, this surplus moved on an upward trend in 2014. However, as a result of the assumed massive negative shock only forint liquidity would have remained; furthermore, for most of the

Chart 84: 30-day stress liquidity surplus as a proportion of balance sheet total by currencies



Source: MNB.

Chart 85: Liquidity Stress Index



Note: The LSI is the sum of normalised liquidity deficits relative to the 10 per cent level, weighted by the balance sheet total in stress scenario. The higher the value of the index, the higher the liquidity risk.

Source: MNB.

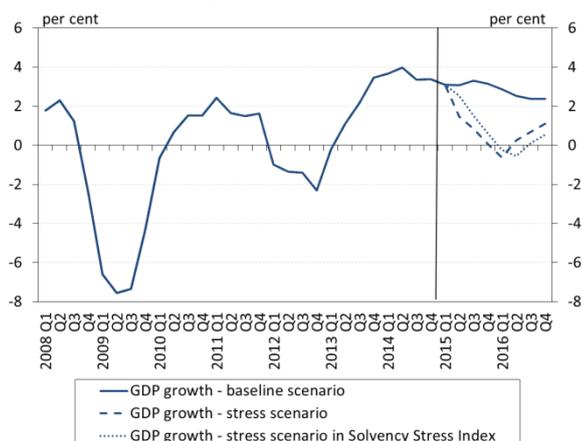
year a minimal foreign currency shortage would have evolved (Chart 84). On the other hand, due to conversion, the considerable overweight of the forint buffers will represent a significantly lower risk for the banking system in the future.

Based on the Liquidity Stress Index, the liquidity of the banking system increased in 2014 not only at the aggregate level, but the reserves also increased at those banks that formerly used to operate with more moderate buffers. The Liquidity Stress Index aggregates the liquidity shortfalls calculated in the stress situation at the level of the individual banks compared to the regulatory limit by considering the size of the given banks. Thus, on the one hand, potential asymmetries become visible, as the liquidity shortfalls are not offset during the aggregation by the surplus of another institution; and on the other hand taking into consideration the size of the institutions makes it possible to draw conclusions about the extent of the problem within the banking system. During 2014 the value of the Liquidity Stress Index showed a decreasing trend and stood at an extremely low level at the end of the year. This means that upon the realisation of the stress scenario the banking system would be only slightly below the regulatory minimum, and thus all banks would remain liquid. The free buffers increased continuously during 2014 and reached a historic high at the end of the year (Chart 85).

7.2. In terms of solvency, the banking system's resilience improved but remained heterogeneous

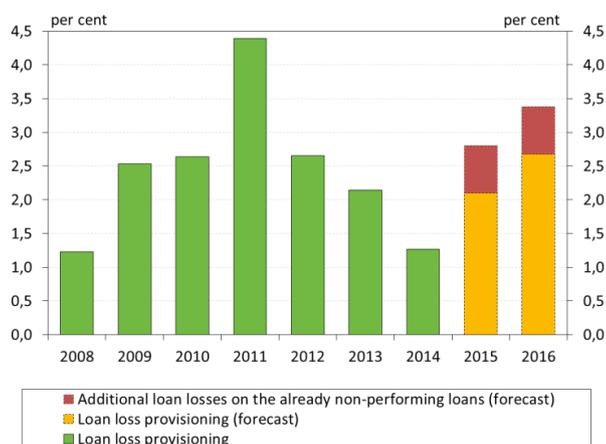
In the stress scenario we projected a considerable economic downturn, and an exchange rate and interest rate shock occurring as the aggregate result of several unfavourable external and internal shocks. The current macroeconomic baseline scenario corresponds to the forecast published in the Inflation Report of March. While in the baseline scenario we outline the most probable outcome, in the stress scenario we examine the consequences of a low probability, severe but plausible series of events for the next two years. We quantified this scenario assuming the simultaneous occurrence of external and internal shocks. In the stress scenario, the growth of the European economy is lower than expected and the prolonged geopolitical conflicts increase the risk premium and also constrain Hungary's export opportunities. These impacts result in a higher interest rate level and weaker forint exchange rate than in the baseline scenario. In addition to the external shocks, we assumed that households maintain their prudent consumption and saving behaviour, as a result of which internal demand considerably declines. Thus, economic growth would fall short of that in the baseline scenario in two years cumulatively roughly by 4.3 percentage points. Due to the increase in the risk premium, the HUF/EUR exchange rate would weaken significantly, i.e. by 12.5 per cent, and the for-

Chart 86: GDP growth rate in the scenarios (compared to the corresponding period of the previous year)



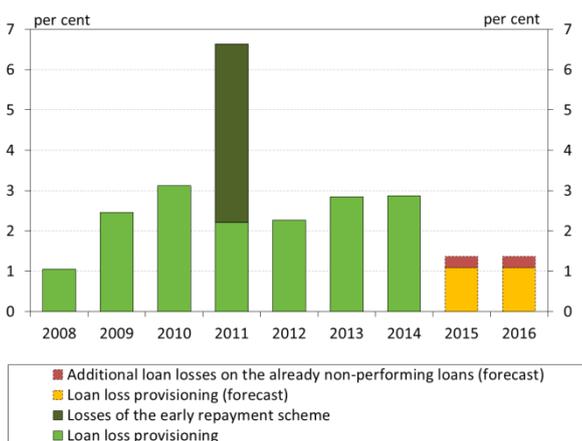
Source: MNB.

Chart 87: Loan loss rate for the corporate portfolio in the stress scenario



Source: MNB.

Chart 88: Loan loss rate for the household portfolio in the stress scenario



Source: MNB.

int interest rate would also increase on average by 145 basis points compared to the baseline scenario by the second year of the horizon. This stress scenario, reflecting the current risks is very similar in real economic terms to the risk scenario used for the calculation of the Solvency Stress Index, which is based on a fixed shock²². (Chart 86) The two risk scenarios somewhat differ in the extent and time profile of the exchange rate and interest rate shocks.

Due to the decreasing exposure and the conversion, the expected loss on the household loan portfolio is lower over the time horizon of the stress test. While in the credit risks of the corporate portfolio we did not anticipate any major changes, in the household portfolio the settlement of the foreign currency loans based on the decision of the Curia, followed by the conversion of the mortgage loan portfolio into forints, substantially reduced the probability of default (PD), the loss given default (LGD) and the exposure at default (EAD). Thus not only in the baseline, but also in the stress scenario we conducted our calculation using lower loan losses on the stress test time horizon than the actual figures observed in previous years (Chart 87 and Chart 88).

Similarly to the previous exercises, we expect the poor profitability to remain. For the time being, there is no sign of improvement in the earnings potential of the banking system at the two-year time horizon: the profitability on the outstanding portfolio is deteriorated by the high non-performing portfolio and the decreasing interest margin of the mortgage loans, and without a recovery in lending activity the development of a more lucrative new portfolio is unlikely. Thus, according to our expectations, in the baseline scenario, the earnings before loan losses may be at about 90 per cent of the average of the 2010-2014 period, while in the stress scenario it may reach roughly two-thirds of the last five years' average at the systemic level.

From 2016, we anticipate a decrease in the bank levy and an increase in the deposit insurance and investment insurance fees. In addition to the expected reduction of the bank levy from next year, we also projected an increase in the deposit insurance and investment insurance fees. Although at the time of the stress test no final decision was made about the extent of these measures, we also considered them based on relatively simple assumptions. In the case of the membership fee of the National Deposit Insurance Fund and the Investor Protection Fund we assumed the highest possible increase, while in the case of the Indemnification Fund for Quaeator

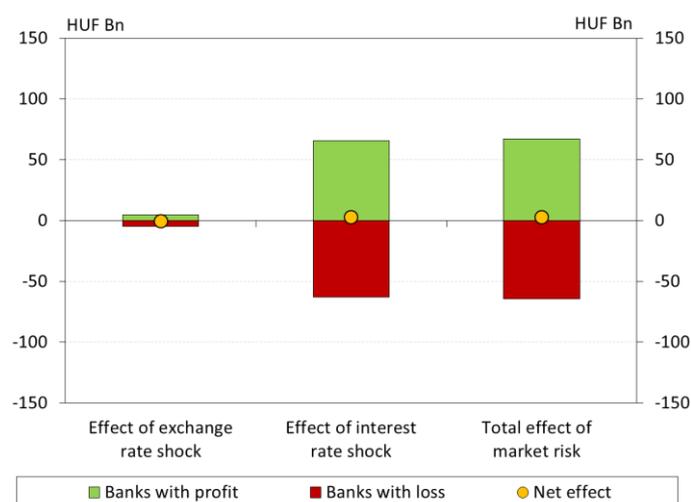
²² When we calculate Solvency Stress Index we assume every time a one-off permanent interest rate increase by 300 basis points and a one-off permanent depreciation of the HUF exchange rate by 15 per cent. The fix stress measures promote the comparability of stress tests in different time periods. See: MNB Occasional Papers 109, 2013.

Table 8.: Impact of main risks on the profit of the banking sector in the stress test, over a two-year time horizon

	Main components of losses of banking system in eight quarter horizon (HUF Bn)	
	Baseline scenario	Stress scenario
Loan losses on corporate and household portfolio	277	565
Loan losses on new non-performing corporate loans	171	306
Loan losses on new non-performing household loans	106	137
Additional loan losses on the already non-performing loans		122
Exchange rate risk of open position		0
Interest rate risk		-3
Bank levy and increase of the insurance fees	213	213

Source: MNB.

Chart 89: Market risk stress test impacts



Source: MNB.

Table 9.: Capital need of banks in the stress test

	Capital need of banks (HUF Bn)		
	End of first year	End of second year	
	8 per cent required capital adequacy ratio	8 per cent required capital adequacy ratio	9.25 per cent required capital adequacy ratio
Baseline scenario	0	0	0
Stress scenario	0	13	28

Source: MNB.

Table 10.: Capital buffer of banks above required capital level in the stress test

	Capital buffer of banks above required capital level (HUF Bn)		
	End of first year	End of second year	
	8 per cent required capital adequacy ratio	8 per cent required capital adequacy ratio	9.25 per cent required capital adequacy ratio
Baseline scenario	1 557	1 782	1 611
Stress scenario	1 333	1 315	1 152

Source: MNB.

Victims we considered the recoveries. Thus, on the whole we expect a moderate decrease in the banks' burden from 2016 (Table 8).

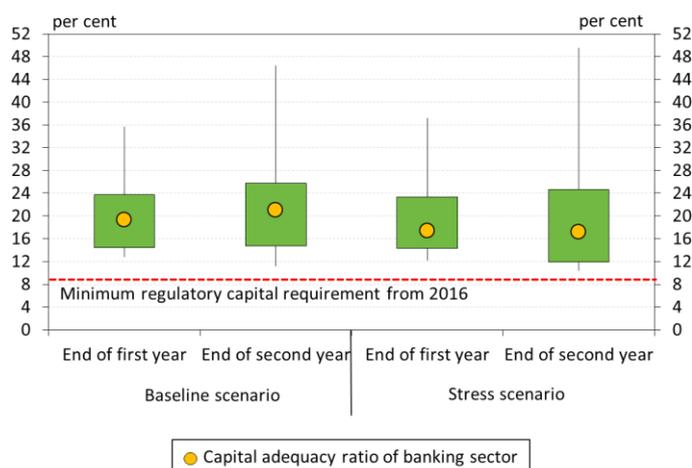
The profit/loss from market risk is close to zero at the systemic level; however, in the event of an interest rate shock significant impacts may appear at the level of the individual institutions. In the framework of the market stress test, we examined the effect of interest rate and exchange rate shocks via the immediate revaluation of the market exposures. In the case of an interest rate and exchange rate shock, we considered the second year average of the difference between the baseline and stress scenario as the extent of the shock. We distributed the calculated profit impact evenly over the two years of the forecast horizon. The effect of the exchange rate shock is negligible both at the institutional and systemic level, since the exchange rate position of the banking system – apart from the strategic open positions – is almost fully closed. Although the profit impact of the interest rate shock is also minor at the systemic level, when examining it by institutions, we find some banks that realise significant profits, while others suffer considerable losses (Chart 89).

Several parent banks compensated the one-off losses from the settlement of the foreign currency loans by capital injection. Last year, the foreign currency loan settlement generated considerable one-off losses for the banks; in order to offset this several parent banks provided their Hungarian subsidiaries with a capital injection in 2014 H2. Based on preliminary announcement we could take into account several of these capital injections in our stress test performed half a year ago, but not all of them. Thus the capital injection not announced until the time of the test but which have materialised since then improved the initial capital level at the respective banks compared to the situation half a year ago.

While in the baseline scenario all banks meet the regulatory requirement, in the stress scenario a capital injection need of a manageable size appears. In the baseline scenario, despite the recurring losses, the high initial capital level of the banks appears to be sufficient to satisfy the examined capital adequacy level of 9.25 per cent at the end of the two-year time horizon. In the stress scenario this cannot be stated in respect of all institutions, but the capital injection requirement is manageable (Table 9). The extent of the shock quantified in the stress scenario is reflected in addition to the already mentioned capital shortfalls, also in the material decrease of the capital buffers (Table 10). On the whole, the assumed stress generates a loss or unrealised revenue of almost HUF 460 billion during two years at the systemic level.

There is considerable heterogeneity among banks: both the capital injection requirements identified in the stress scenar-

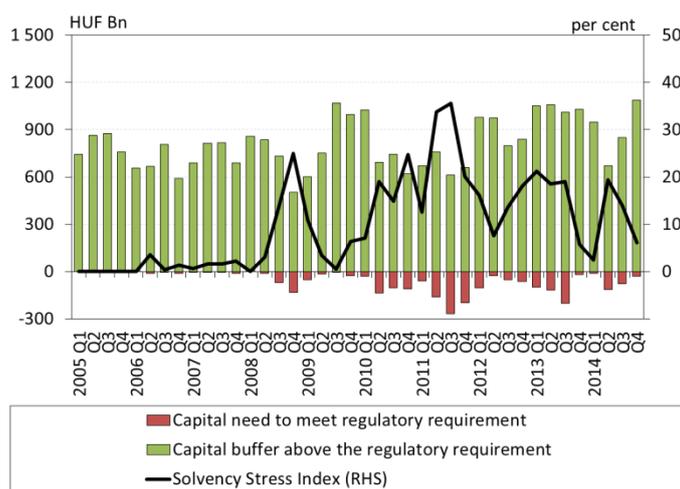
Chart 90: Distribution of the capital adequacy ratio based on number of banks



Note: Vertical line: 10-90 per cent range, rectangle: 25-75 per cent range.

Source: MNB.

Chart 91: Solvency Stress Index



Note: The indicator is the sum of normalised capital shortages relative to the regulatory minimum level, weighted by the capital requirement in a common stress scenario calculated with fixed shock. The higher the value of the index, the higher the solvency risk.

Source: MNB.

io and the capital buffers are concentrated. The banking system is characterised by a high, i.e. 17.1 per cent average capital adequacy even at the end of the stress scenario, but this covers considerable differences across institutions. Three-quarters of the capital buffer calculated along the stress path is provided by four institutions, while the need for capital injection is concentrated at only one large bank. The shape of the unweighted distribution of the capital adequacy ratios in the upper range is attributable to the smaller institutions (Chart 90).

According to the Solvency Stress Index the banking system's shock absorption capacity strengthened in the last half-year mainly as a result of the capital injections, while the conversion of mortgage loans into forints is primarily reflected in the increase of the capital buffers. The one-off losses arising from the settlements after the decision of the Curia significantly deteriorated the profit/loss half a year ago: in addition to the increased capital shortfalls, the capital buffers also declined substantially, accompanied by a surge in the Solvency Stress Index value, signalling that this is not just a problem of individual institutions. Contrary to this, in the last half-year the capital injection need and the value of the Solvency Stress Index both fell, mostly due to the capital increases (Chart 91). The positive impact of converting the mortgage loans into forints primarily appeared in the increase of the capital buffers, but without conversion the capital needs would have been higher. On the whole, the existing capital injection need is possible to be reduced by mergers; in addition, through rebuilding the structural profitability the ability for capital accumulation will be attainable.

8. INSTITUTIONAL INVESTORS – INSURERS’ OPERATIONS ARE STABLE, WHILE FUNDS AND CAPITAL MARKET ACTORS FACE MORE CHALLENGES

The profitability of the insurers is stable at the sector level, but there are major differences between institutions: one-third of the sector is persistently in the red, primarily due to economies of scale reason. The increase of the premium level of the motor third-party liability insurance may have a positive impact on profitability, but the extent of this is uncertain due to the increasing risks. The capital position of the sector is still stable, but with Solvency II entering into force, the volatility of the capital adequacy ratio is expected to increase.

As a result of the legislative changes applicable to the payment of the private pension fund membership fees, it is expected that the size of the sector will further decrease in the long run. In the last two years, the membership fee revenues allocable to the coverage reserve of the voluntary pension funds increased compared to the pay-outs, which reflects the active members' willingness to make higher membership fee contribution and keep their savings in the fund even after the expiry of the waiting period. The high number of non-paying members carries no significant risk at present, since the deduction from the non-payers' yields and the operating costs from the investment activity result exceed the required, but unpaid membership fee revenues.

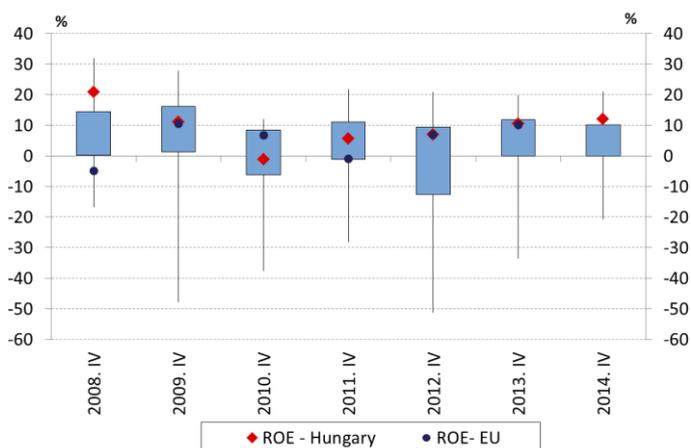
In the decreasing interest environment, capital inflows into investment funds continued, although at a slower pace. The serious frauds that involved three investment firms did not shake the general confidence in the capital market; there was no extreme fluctuation or decrease in the value of the customer receivables managed by the sector. The decrease in the investment firm's profitability as a result of the CHF exchange rate shock and the frauds, the consolidation of the investment firm market is expected

8.1. Stable profitability, but with high heterogeneity

Institutional profitability is distributed in a wide range. The average after-tax ROE of the insurance sector has been continuously rising since 2010 and reached 12 per cent in 2014 (Chart 92). At the level of individual institutions, there is a significant spread in ROE, although the rate of this decreased in 2014; one-third of the insurers were loss-makers in the last seven years. The high ratio of the loss-making institutions is primarily attributable to economies of scale reasons; however, additional factors may be identified by insurance branches. In the life insurance business, the profitability is significantly curbed by the high level of the acquisition costs (commission), where the adjustment process has not yet started. In the non-life branch, the losses of the Motor Third Party Liability (MTPL) insurance business reduce the insurers' profitability, but there are already some positive signs in this segment.

The fall in MTPL premiums has stopped, which may stabilise the operation of the sector. In part due to the decrease in the significance of the campaign, and in part due to the increase of risks (bodily injury claims, number of accidents) in 2014 the fall in MTPL premiums stopped, which may stabilise the operation of that sector. The insurance companies spend the highest ratio of the premiums, i.e. 86 per cent, on the claims and claim settlement expenses in 2012. By 2014, this ratio fell to 82 per cent. The premium level on 1 January 2015 (after the campaign) continued to increase: the aver-

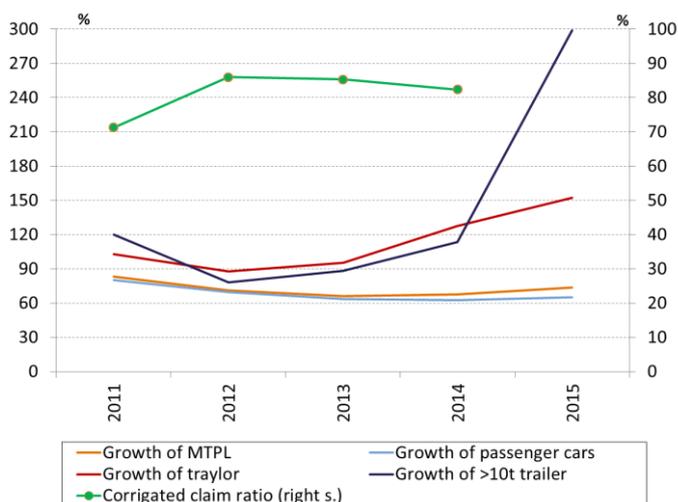
Chart 92: Average after-tax ROE of the insurance sector and the variance thereof



Note: Vertical line regarding to Hungarian data: 10-90 per cent range; rectangle: 30-70 per cent range.

Source: MNB, EIOPA.

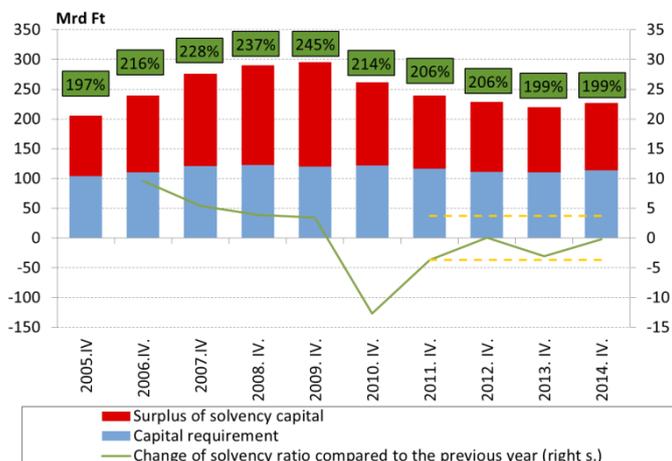
Chart 93: Change of the portfolio premium per contract (2010 = 100%) and the impact thereof (change of loss ratio)



Note: Average portfolio premium at the start of the given year. Adjusted loss ratio: Taking all claim reserves into account, adjusted by the change of the reserve for pending claims.

Source: MNB.

Chart 94: Capital level of the Hungarian insurance sector and the change thereof



Note: On the top of the columns the capital level of the current year is shown.

Source: MNB (unaudited figures for 2014).

age annual premium per vehicle increased to HUF 21.2 thousand from last year's HUF 19.5 thousand (Chart 93), that is also desirable due to prudential considerations. 1.9 per cent of this growth of 8.6 per cent accounts for the increase of the risk level of the vehicle portfolio (shift of the total market portfolio to a higher risk vehicle composition, and distribution by age and area).

The capitalisation level of the insurance sector at the end of 2014 did not change compared to the previous year.

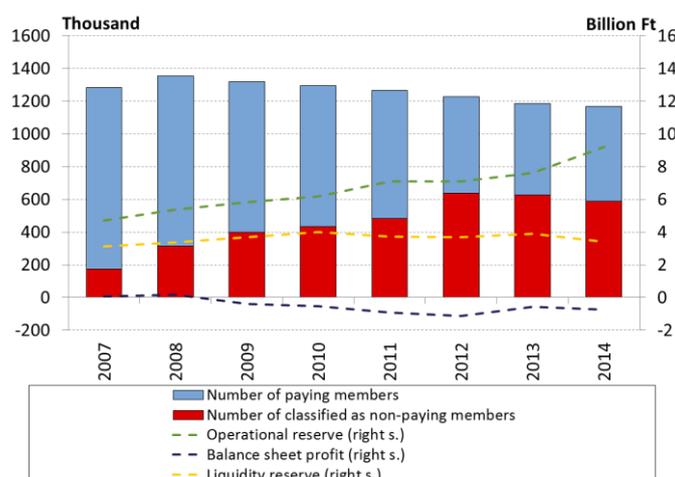
The capital position of the sector is still stable, but its capitalisation level lags well behind the average of the Club Med and the Visegrád countries. Since 2011, the capitalisation level has been fluctuating in a relatively narrow band (Chart 94), however the volatility of the capital adequacy ratio is expected to increase after Solvency II entering into force. The results of the quantitative impact studies conducted in the past years also confirm this: in the period between 2011 and 2013 the capitalisation level under Solvency I increased by 8%, while the Solvency II ratio increased more than twofold compared to that, i.e. by 21 per cent. In special cases the increasing volatility may also jeopardise capital adequacy, especially at those four insurers whose Solvency II capitalisation (based on the results of the impact analysis of 2014) is below 120 per cent. Due to the calculation of the technical reserves, the risk-free yield curve has a significant impact on the capital adequacy. The risk-free yield curve has a significant importance in the methodological framework, because it plays a crucial role in the calculation of the technical reserves, which are the largest item on the liability side. In order to assure the consistency of the technical reserves calculation for the European insurance companies, EIOPA calculates and publishes the risk-free yield curve every month.

8.2. Changing operational environment for pension funds

The modifications of the Act on Private Pension Funds, which entered into force on 1 January 2015, impacted the operational condition of the private pension fund sector in several areas.

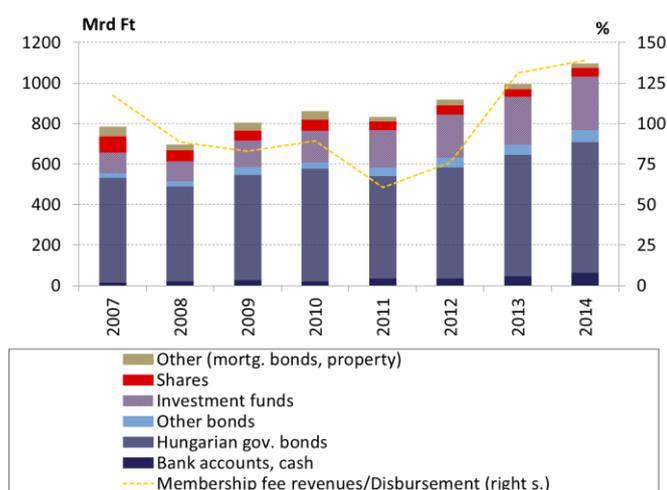
Within the new provisions, one received special attention according to which if the number of membership fee-paying members falls below seventy per cent of the members' headcount for at least two months on the average of the preceding six months, the fund is liquidated without a legal successor by final settlement. The MNB will inspect compliance with this rule, i.e. the ratio of the paying members, after 30 September 2015 for the first time in respect of the preceding 6 months (April - September). Presumably, not every currently operating private pension funds will be able to comply with the statutory requirements in the long run. Therefore the further shrinking of the sector may be ex-

Chart 95: Ratio of non-paying members; change in operating reserves and liquidity reserves in recent years



Source: MNB.

Chart 96: Composition of the portfolio underlying the voluntary pension fund coverage reserve and ratio of the membership fee payments and disbursements



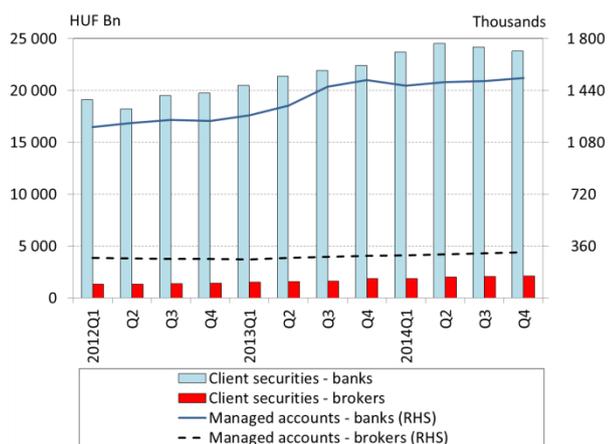
Note: Disbursement include the lump-sum and annuity payments related to retirement age, as well as the disbursement made after the expiry of the waiting period, but still within the accumulation period.
Source: MNB.

pected.

In the voluntary pension fund sector, the number of members who were classified as non-paying members in accordance with the statutes significantly increased in the last three years compared to the total number of members. In the case of the three largest funds, the ratio of non-paying members exceeds the sector's average by 10 per cent, which in part may also represent a potential reserve in respect of membership fee revenues. Based on this, the continued increase in the TOP3 funds' share in the membership fee revenue can be expected, thus the concentration of the voluntary pension fund sector may further increase in line with the recent years' trend. Furthermore, the strength of the largest funds is also evidenced by the fact that in those years when membership fee revenues decreased (2008, 2009, 2010 and 2012) the three largest actors were able to increase their market share throughout the period except in one year. At the same time, the high ratio of non-paying members in the sector (Chart 95) does not entail significant risk in the operation of the funds, since it can be concluded from the growth of operating reserves and the steadiness of the liquidity reserves that in part the yield withdrawn from non-paying members (maximum the part of the membership fee that may be withdrawn for operating purposes) and the investment profit realised on the reserves offset the operating revenues lost a result of the unpaid membership fees.

The ratio of the membership fee revenues of the voluntary pension funds compared to the disbursements continuously increased in the last two years and exceeds the pre-crisis level (Chart 96). As a result of the increased lump-sum payments in 2008, attributable to the distrust generated by the crisis the revenue/expense ratio fell below 100 per cent, and in 2011, during the final early repayment, this ratio decreased further. However, this could not be felt in the coverage reserves due to the high yields realised by the funds. Following this, both the membership fees that soared as a result of the favourable yields realised by the funds and declining disbursement was able to significantly increase the pension funds sector's coverage reserves, which mainly reflected surging bond and investment unit purchases.

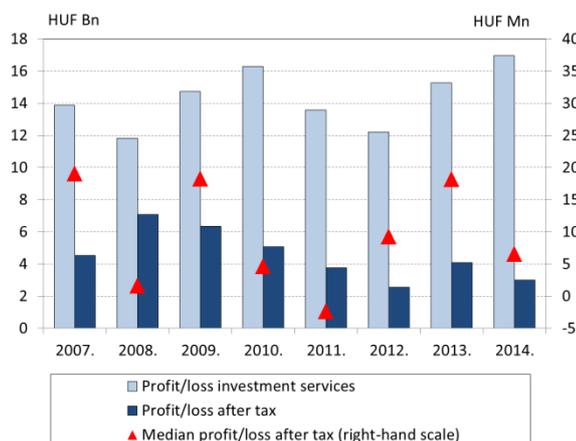
Chart 97: Client securities and managed client accounts



Note: The chart does not contain the data of the three investment firm charged with fraud.

Source: MNB.

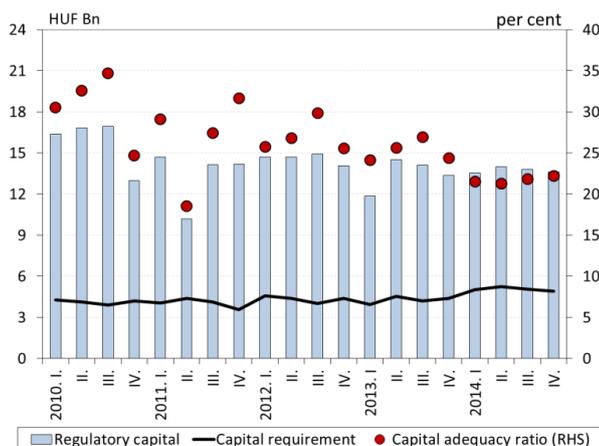
Chart 98: Profit/loss after tax of the investment firms



Note: The chart does not contain the data of the three investment firm charged with fraud

Source: MNB.

Chart 99: Capital adequacy of investment firms



Note: The chart does not contain the data of the three investment firm charged with fraud

Source: MNB.

8.3. Decelerating, but continued capital inflows

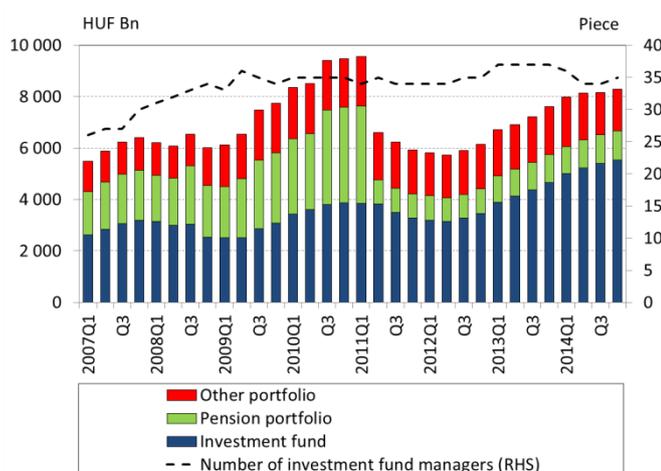
Increasing turnover and portfolio at investment firms. The prompt capital market turnover of investment firms increased in 2014 Q3 and Q4, and reached the level of 2011 Q4 for the first time after three years, while the prompt capital market turnover of banks declined substantially in this period both in quarterly and annual terms. The customer securities portfolio managed by investment firms continued to grow – the quarterly growth was 2-3 per cent, while the customer securities portfolio of banks shrank – the quarterly decrease was 1-2 per cent (Chart 97).

On the whole, the profitability of investment firms was practically stable in 2014, but the variance is rather high at the institution level. The profitability of investment firms at the sector level was practically unchanged in 2014: the return on equity ratio (ROE) fell from 23.7 per cent in 2013 to 22.3 per cent by 2014. However, the profitability greatly varies by institution and the profitability concentration is still high: the profit after tax of the first three market player with the highest profit in 2014 accounted for 139 per cent of the entire sector's profit after tax, while this ratio in 2013 was 97 per cent. In the longer run, some of the smaller institutions are expected to have difficulties in acquiring sufficient number of clients and the size of business necessary for profitability and to achieve long-term positive profitability. Due to the 2015 Q1 impacts – see CHF exchange rate shock, and the frauds involving investment firms (see Box 13) – a turning point may come in the profitability of certain institutions (Chart 98).

The capital adequacy ratio of investment firms continues to be high. The available regulatory capital at the end of December 2014 was HUF 13.6 billion in total, accounting for 277 per cent of the prescribed capital requirement (HUF 4.9 billion). The capital adequacy ratio of investment firms practically did not change in 2014: the sector's CAR of 21-22 per cent materially exceeds the regulatory level of 8 per cent. However, similarly to profitability, the distribution of the surplus capital (i.e. the regulatory capital exceeding the capital requirement) is also asymmetric by institutions. (Chart 99)

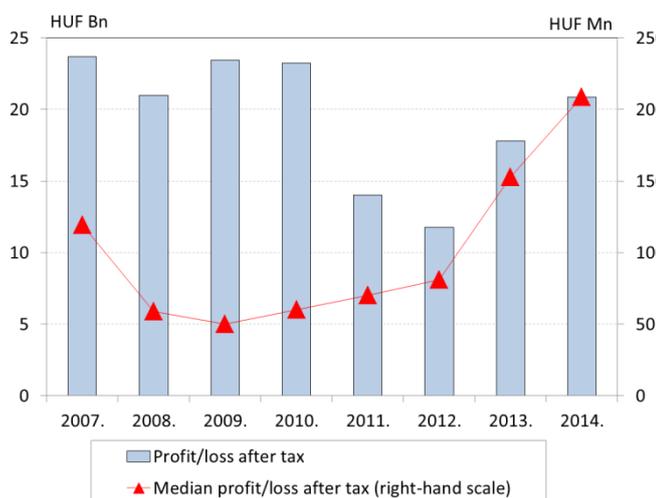
The managed assets of mutual funds continued to grow in a falling interest rate environment, but the rate of capital inflows decelerated further. The assets of mutual funds managed by investment fund managers reached HUF 5,526 billion by the end of 2014. However, the growth rate of mutual funds' assets under management decreased steadily: while the quarterly growth rate was 7.4 and 4.3 per cent in 2014 Q1 and Q2, respectively, the growth rate fell to 3.4 and

Chart 100: Changes in managed assets and investment fund managers



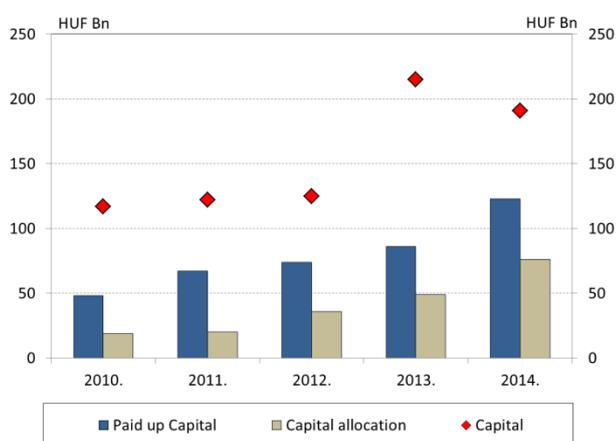
Source: MNB.

Chart 101: Profit/loss after tax of investment funds managers



Source: MNB.

Chart 102: Capital and capital allocation of venture capital funds



Source: MNB.

2.3 per cent in Q3 and Q4. The source of this asset growth is attributable mainly to net capital inflows. When examining the capital flows, we found that there was restructuring within the funds with a fixed income investment policy: while the liquidity and money market funds were characterised by a disinvestment of HUF 166 billion in H2, HUF 206 billion fresh capital flowed in the short-term and long-term bond funds. In addition, there was also a substantial capital inflow to absolute-yield funds and to balanced mixed funds (Chart 100).

The profitability of fund managers improved further in 2014. The fresh capital that flowed into the mutual fund sector further improved the fund managers' profit in 2014, thus the profit after tax at sector level rose to HUF 21.1 billion from HUF 17.5 billion in 2013: accordingly, ROE increased from 44.1 per cent in 2013 to 50.6 per cent by 2014. The sector concentration is still high: the first five fund managers account for 68 per cent of the total profit after tax. The high concentration is also evidenced by the fact that the difference between the profit after tax weighted by assets under management and median profit is tenfold. In 2014, four out of the 34 fund managers realised a loss, however the assets managed by them is negligible (HUF 10 billion). The sector is characterised by outstandingly high capital level: its equity amounted to HUF 41.5 billion at the end of 2014 (Chart 101).

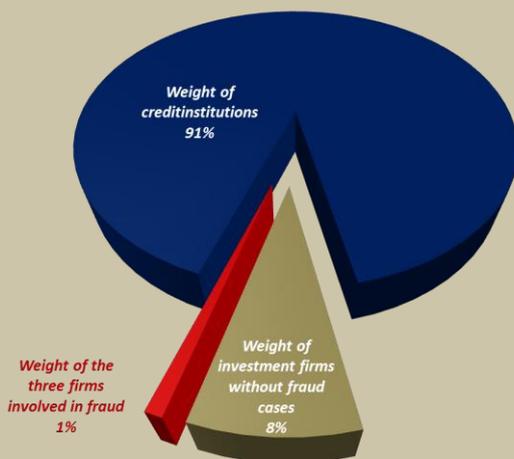
Venture capital resources for the financing of the SME sector continued to increase in 2014. The assets of venture capital funds – investment and loans granted – increased significantly, primarily due to the JEREMIE funds, and by the end of last year it came close to HUF 84 billion. The amount of JEREMIE funds available for the SME sector amounted to HUF 132 billion at the end of December, of which so far about HUF 53 billion (40 per cent) was lent out. The remaining part to be placed (HUF 79 billion) is of significant magnitude, bearing in mind the deadline of December 2015 specified for placement. The tight deadline represents a challenge and obstacle to the efficient capital allocation and to the efficient investment in eligible enterprises and may encourage the venture capital fund manager to take higher risks (Chart 102).

13. BOX: SERIOUS CASES OF FRAUD RELATED TO INVESTMENT FIRMS

In February-March 2015, during inspections the MNB found serious cases of fraud at three investment firms. These firms are: Buda-Cash Brókerház Zrt., Hungária Értékpapír Zrt. and Quaestor Értékpapír Zrt. Based on the audit findings the MNB suspended the activity of the firms and appointed a supervisory commissioner, and at the same time restricted, for customer protection reasons, the customers' right to access their accounts. The licence of Buda-Cash was withdrawn on 4 March 2015; the MNB initiated the liquidation of the company as well as of the DRB Banking Group, belonging to the Buda-Cash owners. Due to the suspected fraud revealed during the targeted audit at Hungária Értékpapír Zrt and Quaestor Értékpapír Zrt., the activity of the companies was suspended and supervisory commissioners were appointed. The Quaestor-case is characterised by the fact that the company sold fictitious (non-issued) Quaestor bonds to its customers. During the audits, the MNB established that the respective companies reported unreal data in their supervisory data reports, and issued fake customer confirmations to a part of their clients about their transactions and portfolios. The MNB immediately filed criminal charges with the police with regard to the respective companies. The assessment of customer's losses by the supervisory commissioners is in progress.

The customer portfolio of the three investment firms affected by the MNB's measure is less than 1 per cent (0.9 per cent) of the Hungarian capital market sector's securities portfolio in total; together with the assets of roughly HUF 250 billion impacted by the frauds it accounts for about 2 per cent thereof. The clientele of the three companies amounts to about 4 per cent of the capital market clientele. Regarding to the fact that these events have no contagion or spill over effect, they pose no financial stability risk.

Distribution of client securities at the end of 2014



Source: MNB

The MNB identified the frauds relying on its new audit methods, and it launched a series of comprehensive audits covering all investment firms, the key objective of which is to verify the coverage of client receivables and indirectly to strengthen investor confidence. A package of legal amendments was elaborated with the aim to increase the general security level of the capital market, and to strengthen the MNB's rights to audit and take measures.

These serious cases of fraud did not shake the general confidence in the capital market and for the time being no extreme fluctuations or decreases have been observed in the value of the customer receivables managed by the sector. At the same time, there is some realignment towards safer, low risk profile products and towards service providers, credit institutions deemed safer. The MNB is monitoring the changes by operating a continuous monitoring system. An upcoming report on non-banks will provide a deeper insight on these topics.

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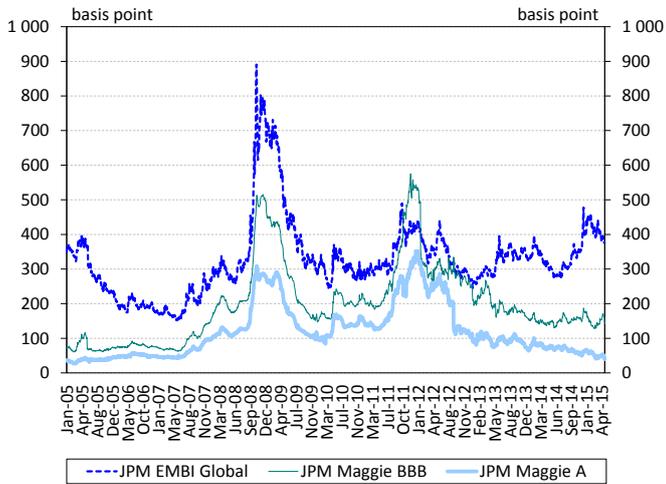
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APPENDIX: MACROPRUDENTIAL INDICATORS

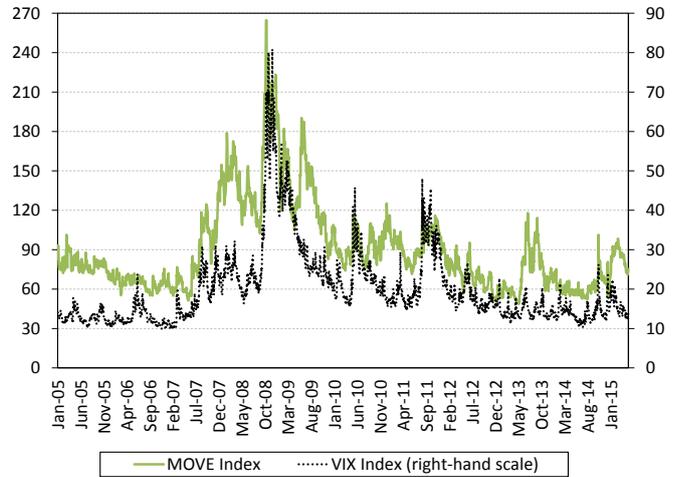
1. Risk appetite

Chart 1: Primary risk indicators



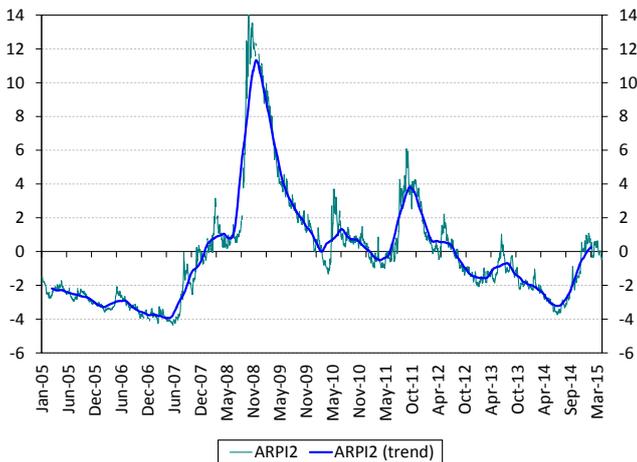
Source: Datastream.

Chart 2: Implied volatility of the primary markets



Source: Bloomberg.

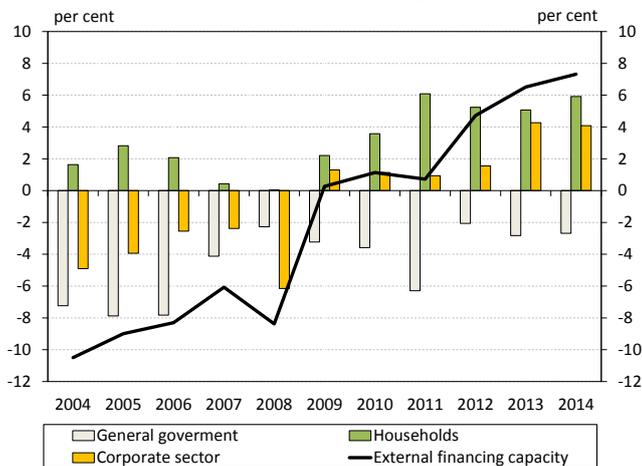
Chart 3: Dresdner Kleinwort indicator



Source: DrKW.

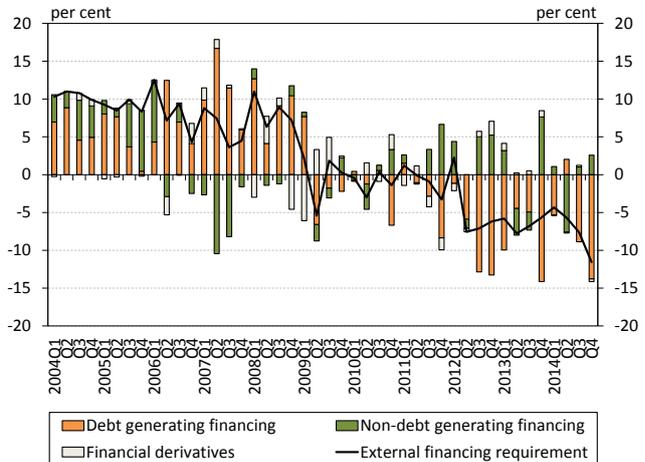
2. External balance and vulnerability

Chart 4: Net financing capacity of the main sectors and external equilibrium as percentage of GDP



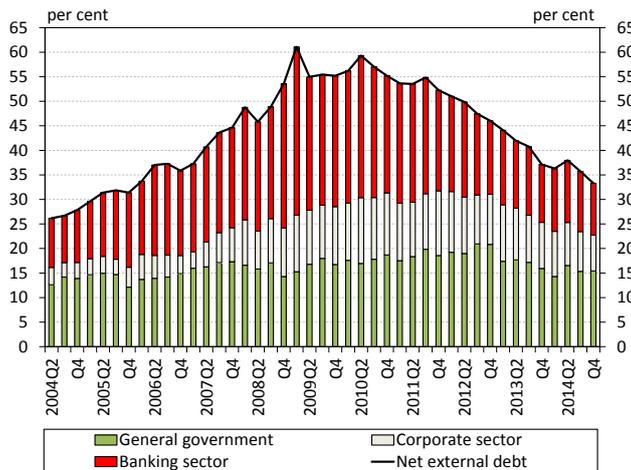
Source: MNB.

Chart 5: External financing requirement and its financing as percentage of GDP



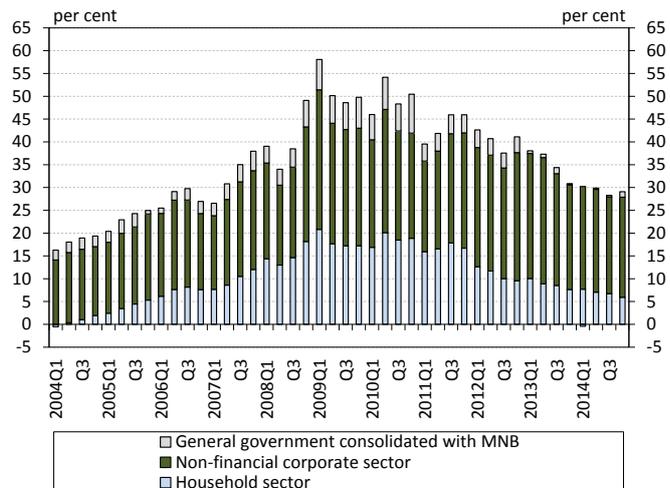
Source: MNB.

Chart 6: Net external debt as percentage of GDP



Source: MNB.

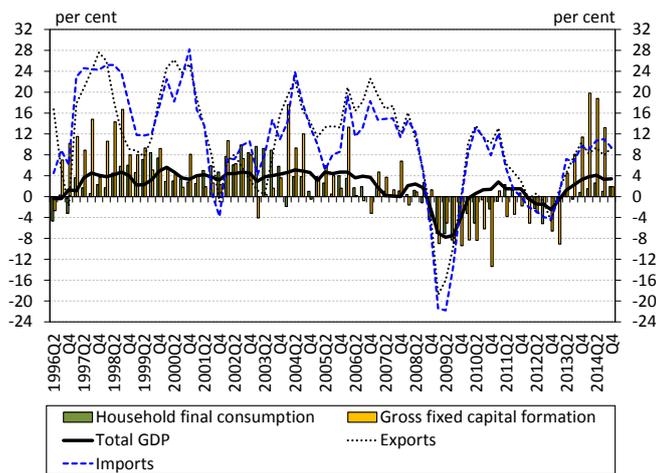
Chart 7: Open FX position of the main sectors in the balance sheet as percentage of GDP



Source: MNB.

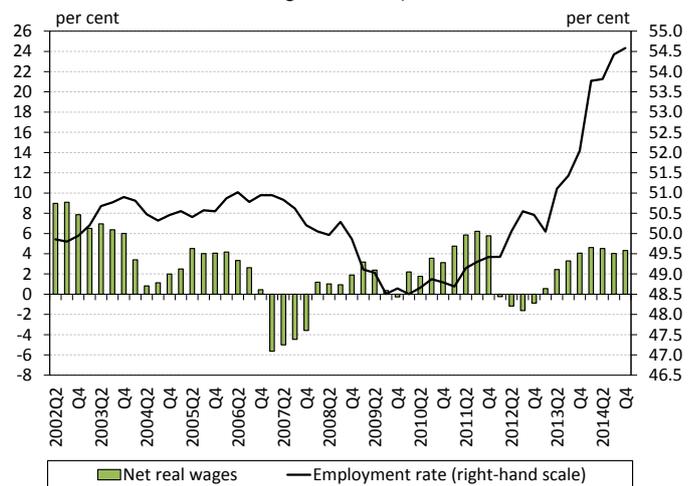
3. Macroeconomic performance

Chart 8: GDP growth and its main components (annual growth rate)



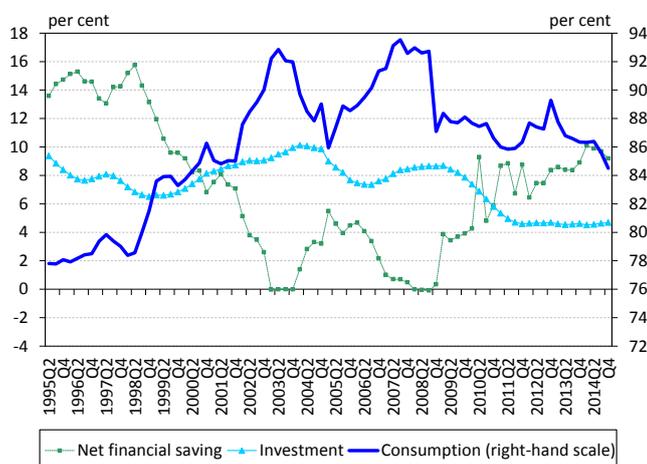
Source: KSH.

Chart 9: Employment rate and net real wage developments (annual growth rate)



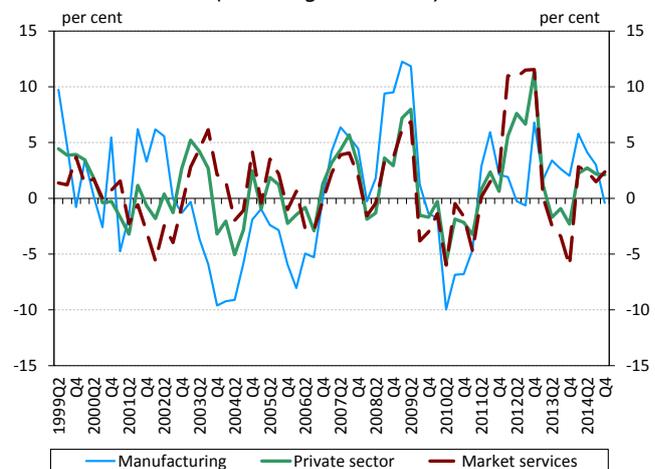
Source: KSH.

Chart 10: Use of household income as a ratio of disposable income



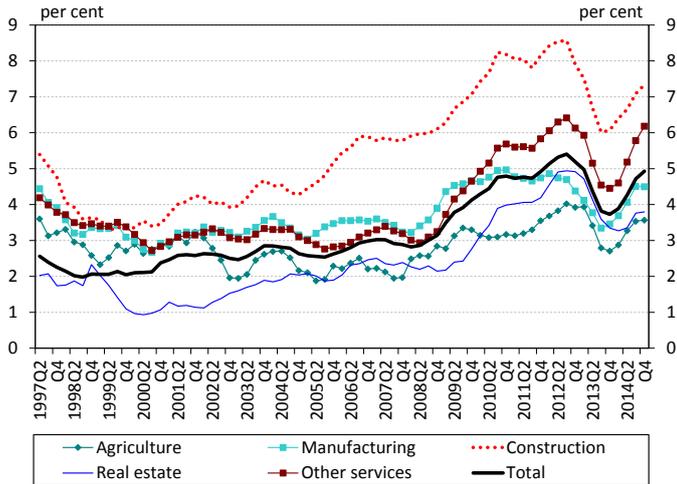
Source: KSH, MNB.

Chart 11: Corporate real unit labour cost in the private sector (annual growth rate)



Source: KSH, MNB.

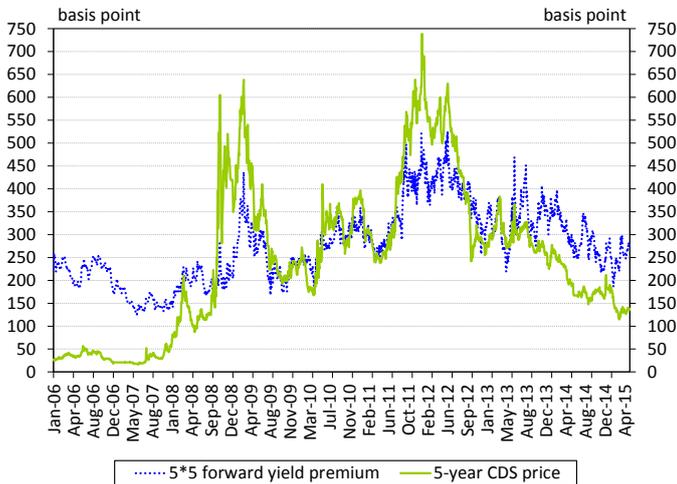
Chart 12: Sectoral bankruptcy rates



Source: Opten, KSH, MNB.

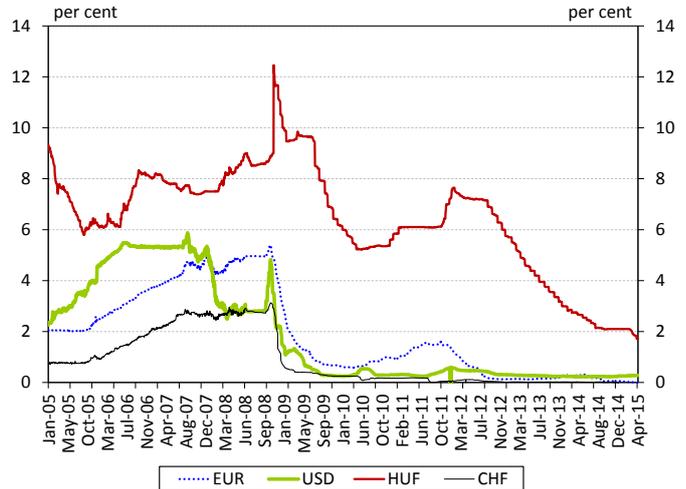
4. Monetary and financial conditions

Chart 13: Long-term default risk and forward premium of Hungary



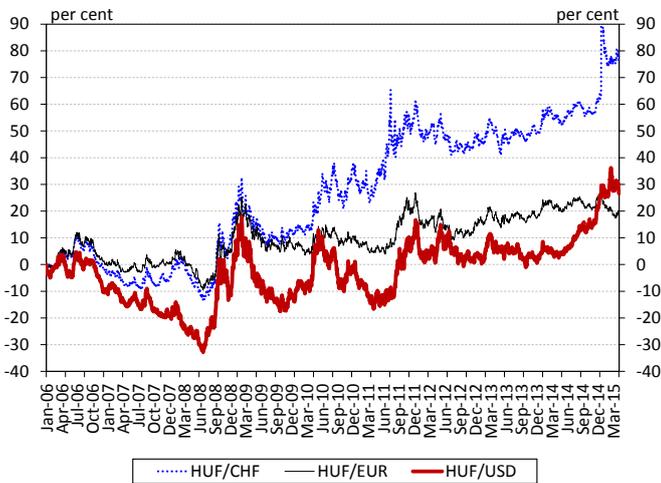
Source: Datastream, Reuters.

Chart 14: Three-month EUR, USD, CHF and HUF money market interest rates (LIBOR and BUBOR fixing)



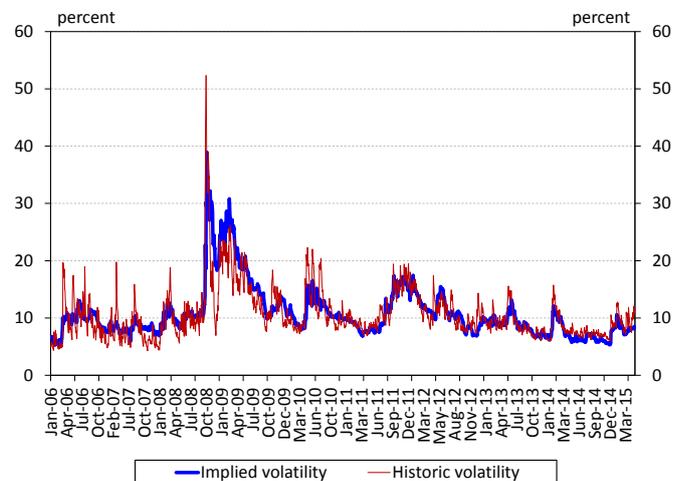
Source: Reuters.

Chart 15: HUF/EUR, HUF/USD and HUF/CHF exchange rates compared to January 2, 2006



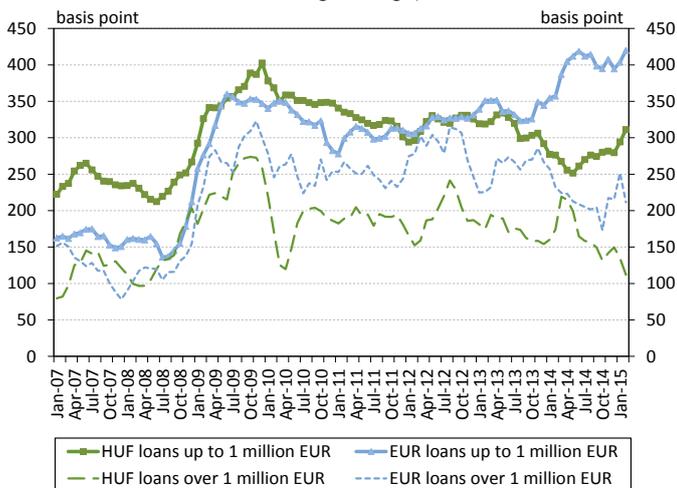
Source: Reuters.

Chart 16: Volatility of the HUF/EUR exchange rate



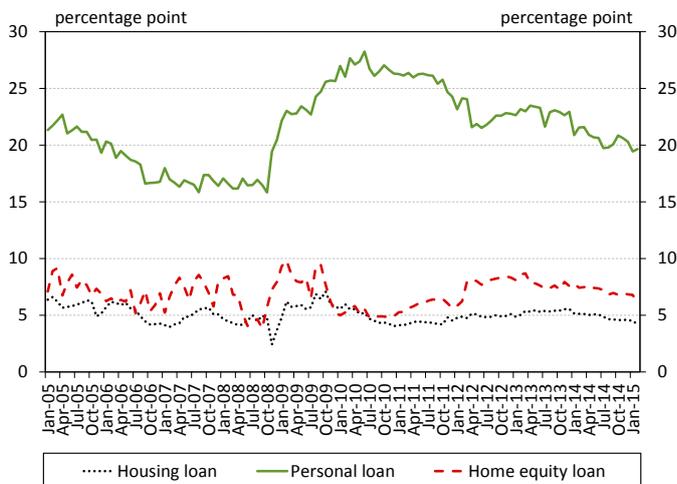
Source: Reuters, MNB.

Chart 17: Interest rate premium of new loans to non-financial enterprises (over 3-month BUBOR and EURIBOR, respectively, 3-month moving average)



Source: Euribor, MNB.

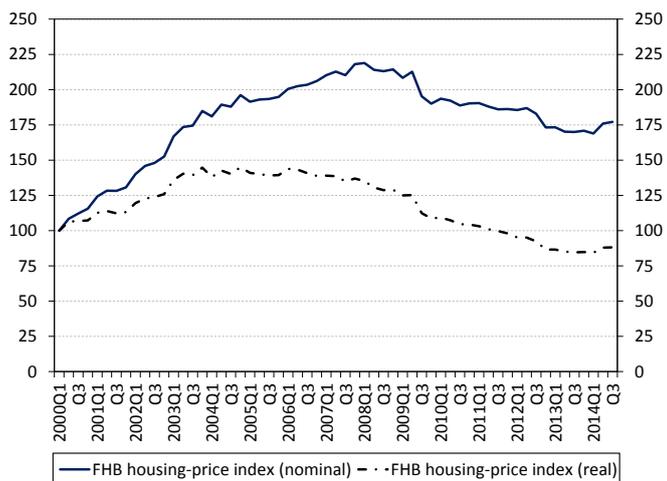
Chart 18: Interest rate premium of new HUF loans to households (over 3-month BUBOR)



Source: MNB.

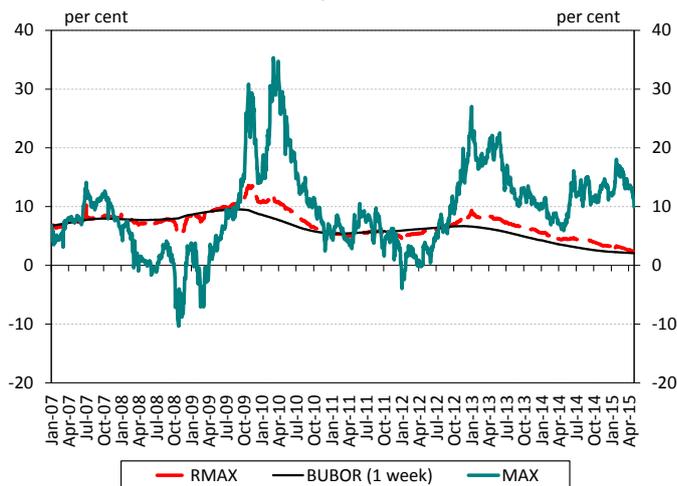
5. Prices of instruments

Chart 19: FHB housing-price index (2000=100)



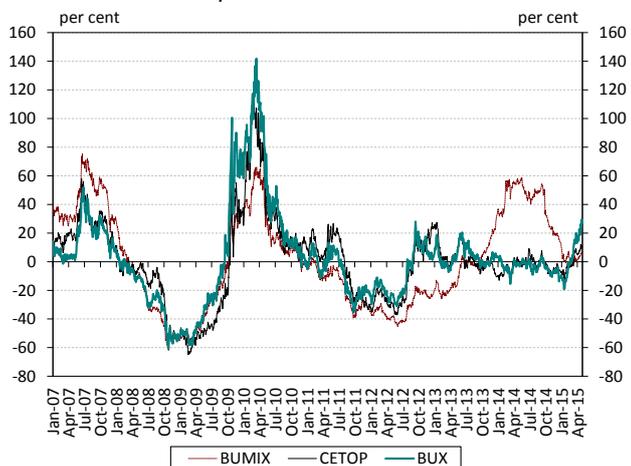
Source: FHB.

Chart 20: Annualised yields on government securities' indices and money markets



Source: ÁKK, MNB, portfolio.hu.

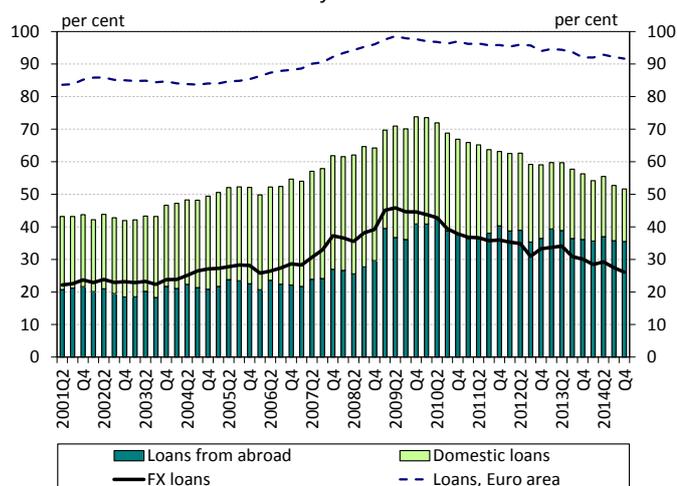
Chart 21: Annual yield of key Hungarian and Central and Eastern European stock market indices



Source: BÉT/BSE, portfolio.hu.

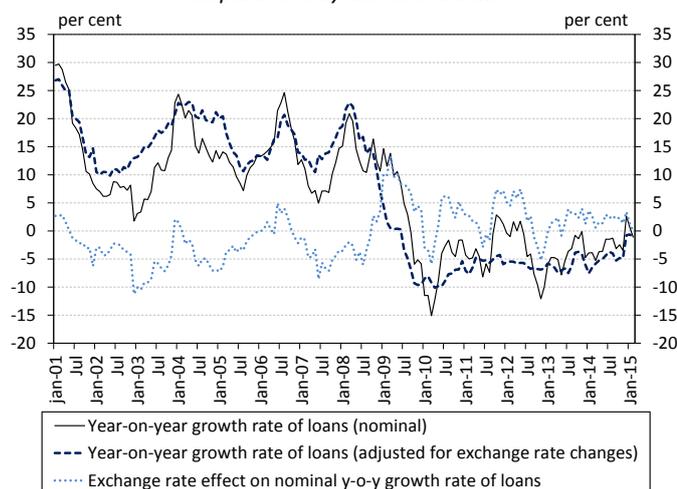
6. Risks of the financial intermediary system

Chart 22: Indebtedness of non-financial enterprises as a percentage of GDP



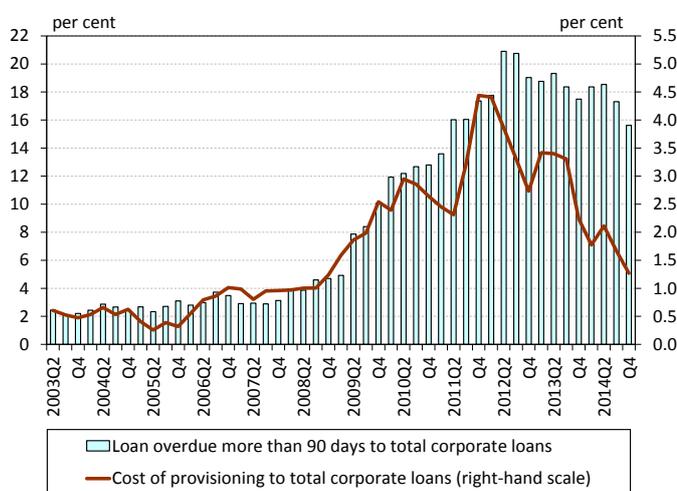
Source: Eurostat, ECB, MNB.

Chart 24: Annual growth rate of loans provided to non-financial corporations by domestic banks



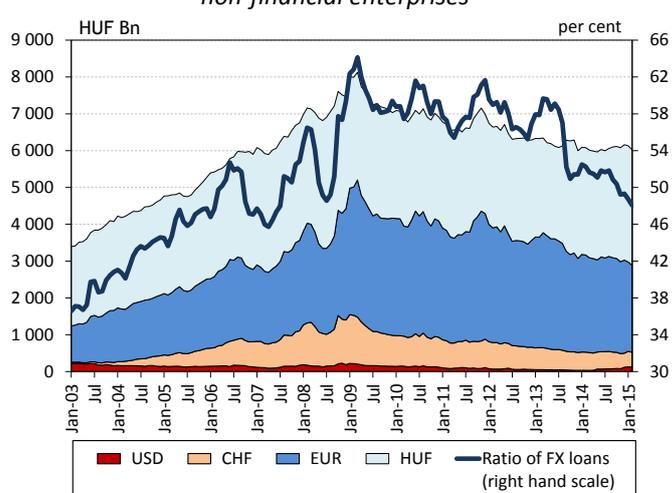
Source: MNB.

Chart 26: Quality of the corporate loan portfolio



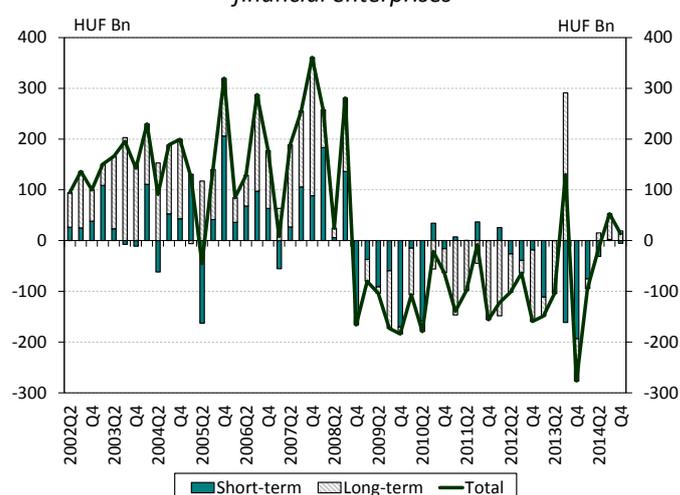
Source: MNB.

Chart 23: Denomination structure of domestic bank loans of non-financial enterprises



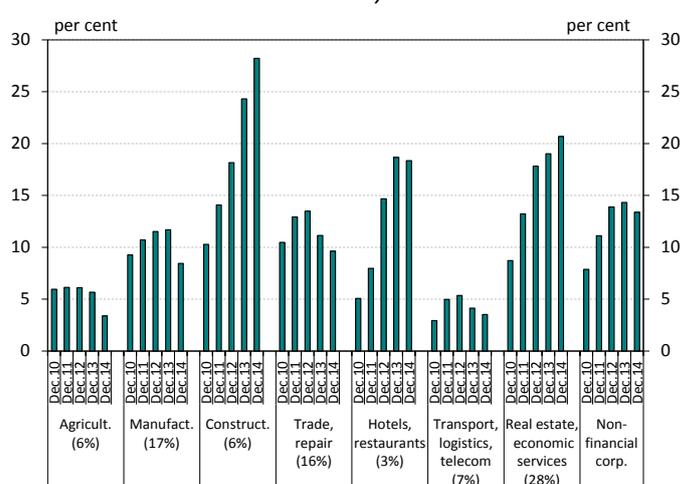
Source: MNB.

Chart 25: Net quarterly change of bank loan volumes of non-financial enterprises



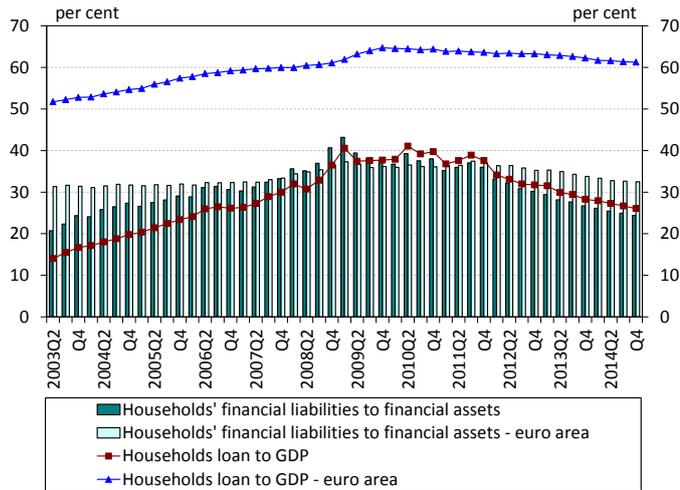
Source: MNB.

Chart 27: Provisioning on loans of non-financial corporations by industry



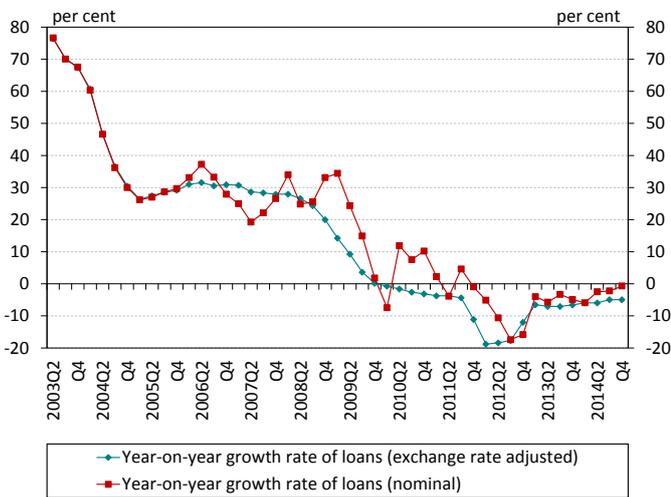
Source: MNB.

Chart 28: Indebtedness of households in international comparison



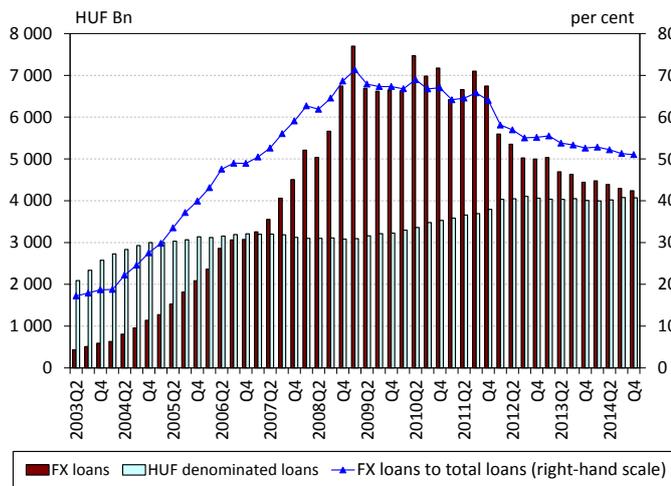
Source: MNB, ECB.

Chart 30: Annual growth rate of total household loans



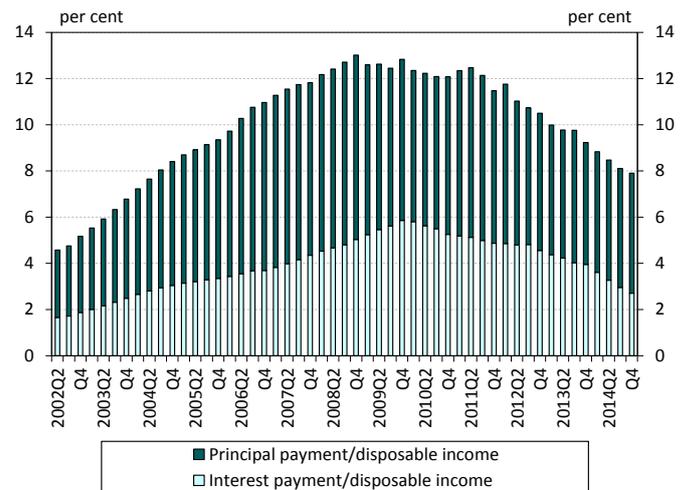
Source: MNB.

Chart 32: Household loans distribution by denomination



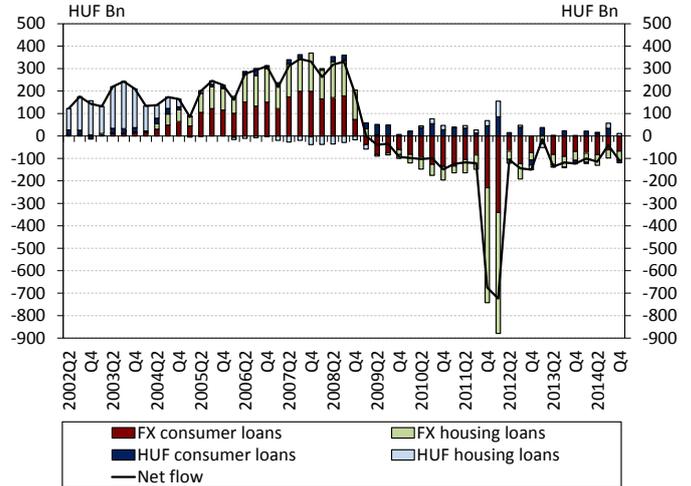
Source: MNB.

Chart 29: Debt service burden of the household sector



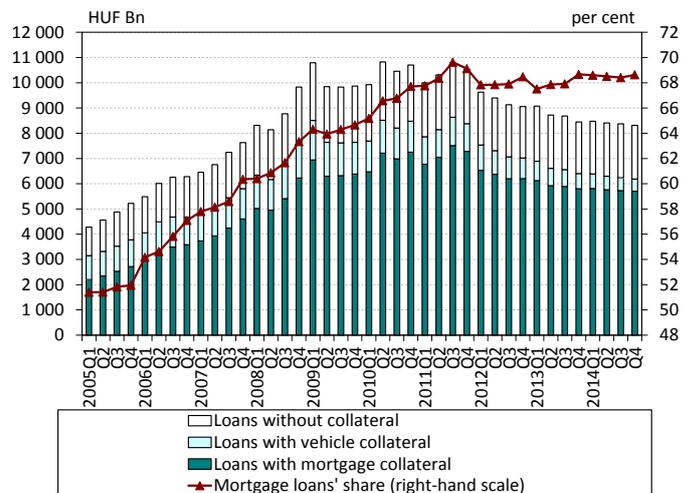
Source: MNB.

Chart 31: Net quarterly change of bank loan volumes of households by main products and currencies, adjusted for exchange rate changes



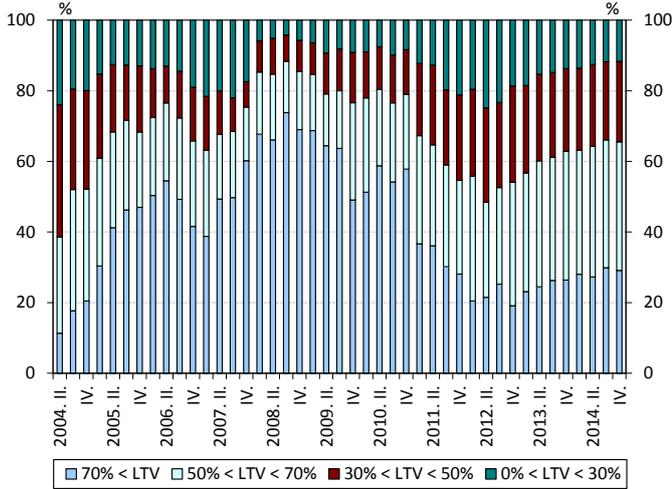
Source: MNB.

Chart 33: Household loans distribution by collateral



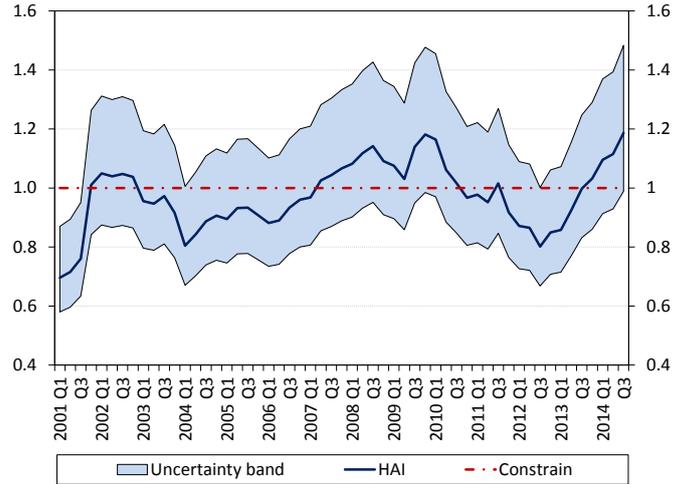
Source: MNB.

Chart 34: Distribution of new housing loans by LTV



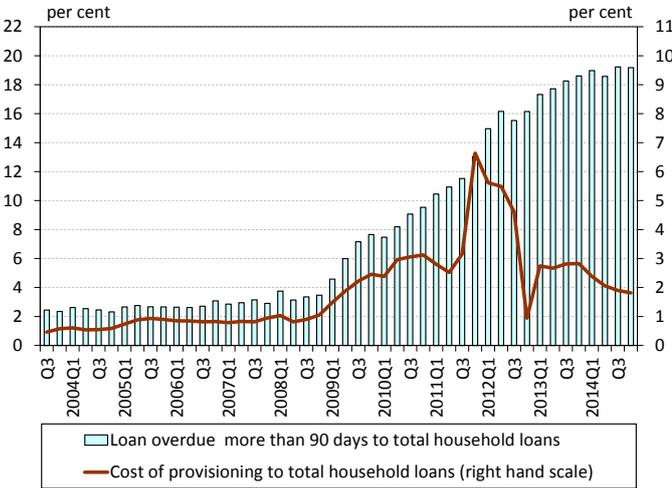
Source: MNB.

Chart 35: Housing Affordability Index



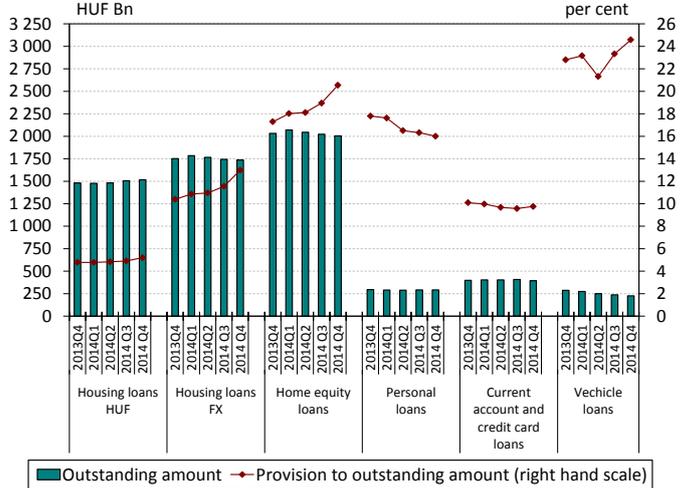
Source: MNB.

Chart 36: Quality of the household loan portfolio



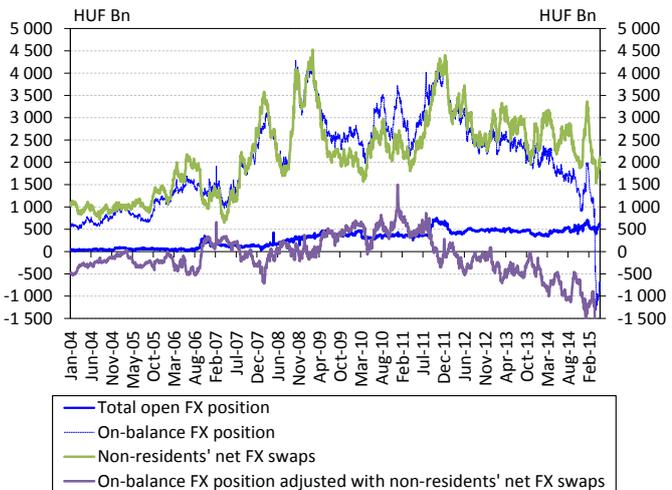
Source: MNB.

Chart 37: Provisioning on household loans



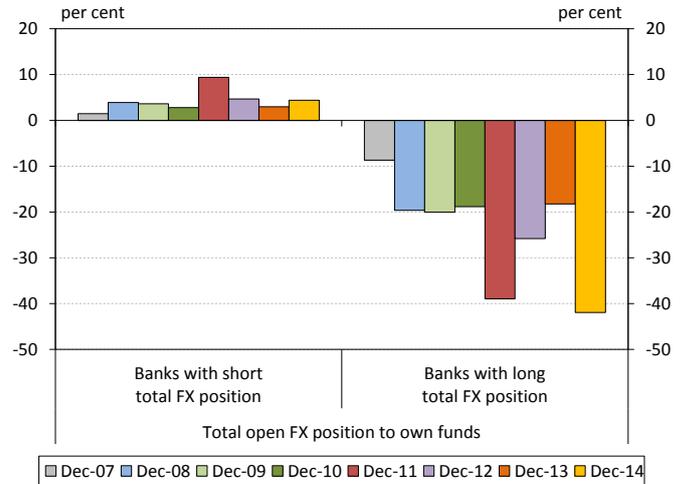
Source: MNB.

Chart 38: Open FX position of the domestic banking system



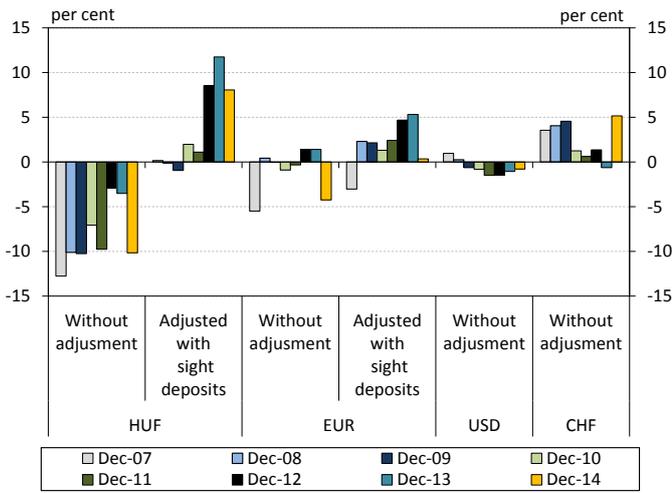
Source: MNB.

Chart 39: The exchange rate exposure of the Banking sector



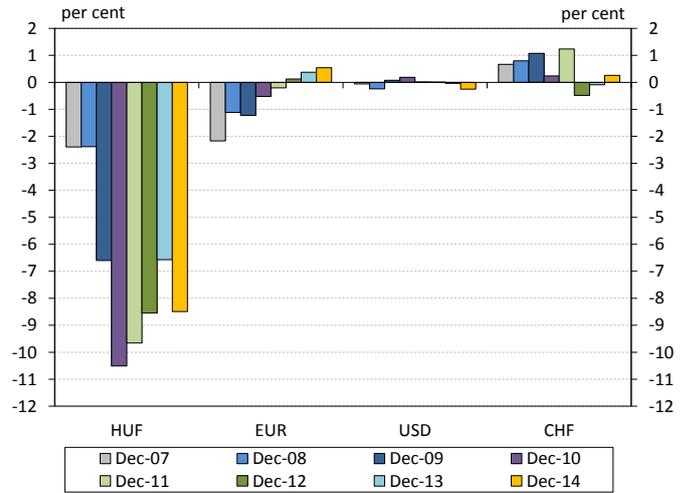
Source: MNB.

Chart 40: 90-day re-pricing gap of the banking sector



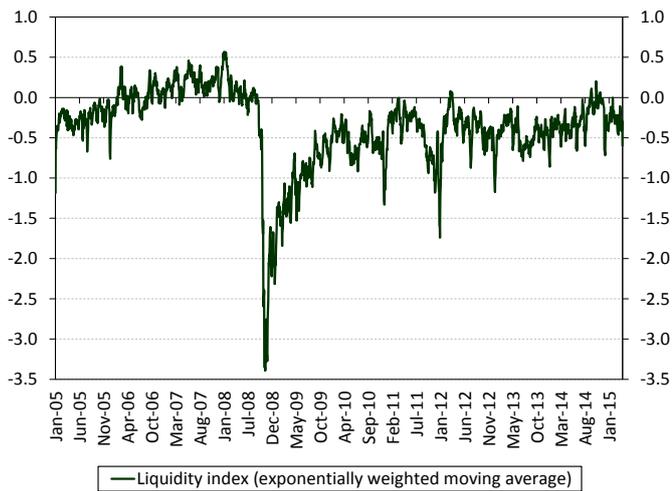
Source: MNB.

Chart 41: Estimated maximum loss based on interest rate risk stress tests relative to equity



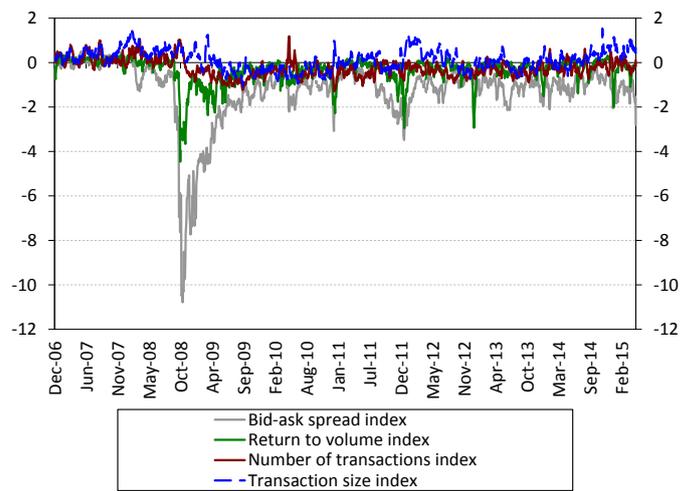
Source: MNB.

Chart 42: Liquidity index (exponentially weighted moving average)



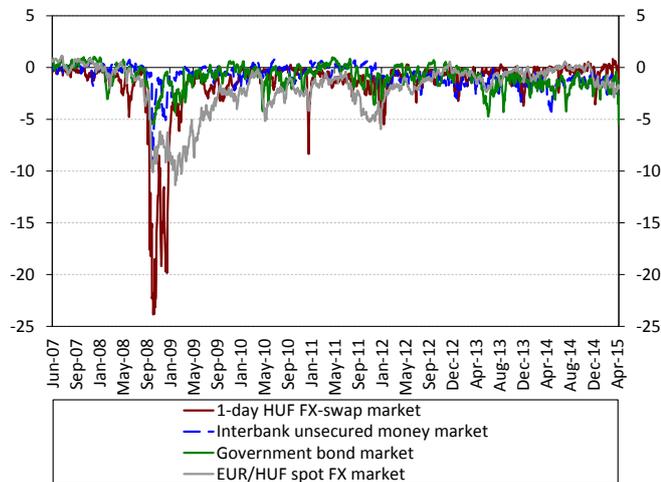
Source: MNB, KELER, Reuters, DrKW.

Chart 43: Liquidity sub-indices (exponentially weighted moving average)



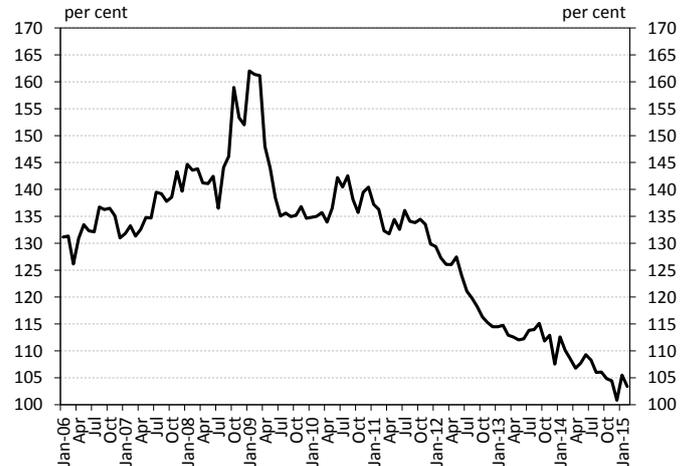
Source: MNB, KELER, Reuters, DrKW.

Chart 44: Bid-ask spread indices of the major domestic financial markets (exponentially weighted moving average)



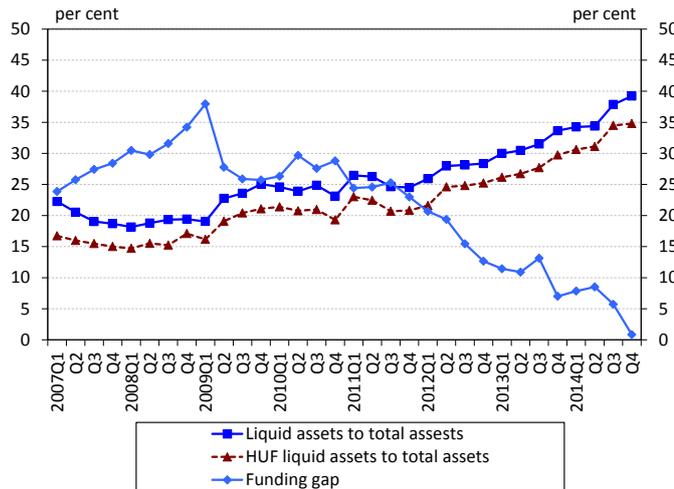
Source: MNB, KELER, Reuters, DrKW.

Chart 45: Credit to deposit ratio of the banking sector



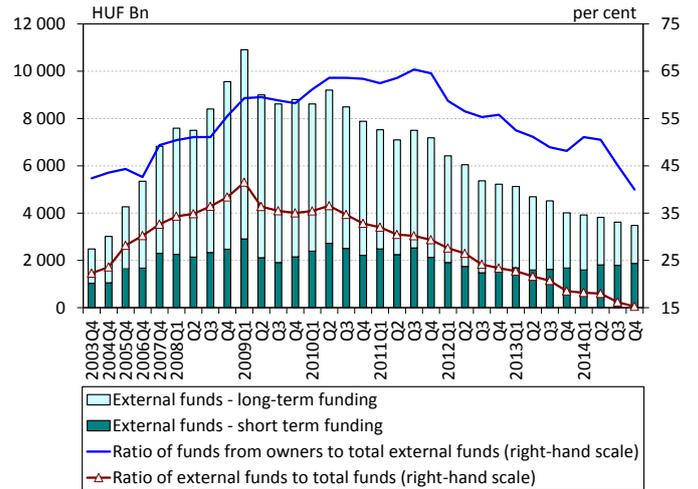
Source: MNB.

Chart 46: Liquidity ratios of the banking sector



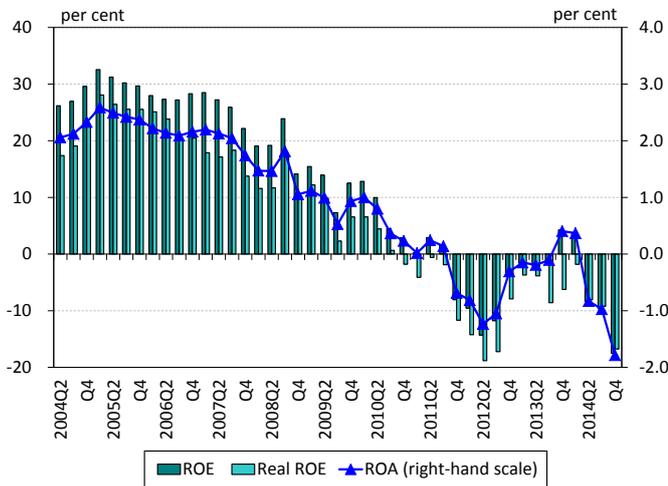
Source: MNB.

Chart 47: External funds of the banking sector



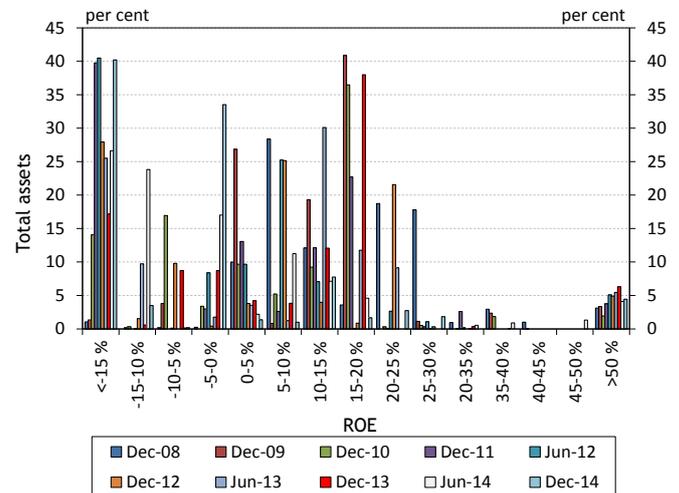
Source: MNB.

Chart 48: ROA, ROE and real ROE of the banking sector



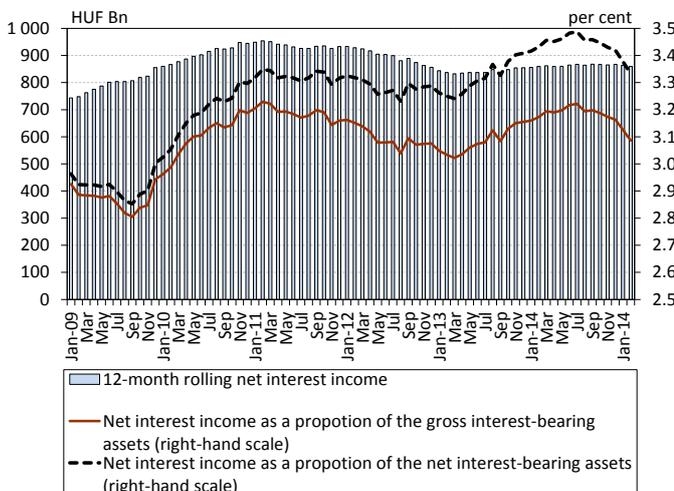
Source: MNB.

Chart 49: Dispersion of banks' total assets by ROE



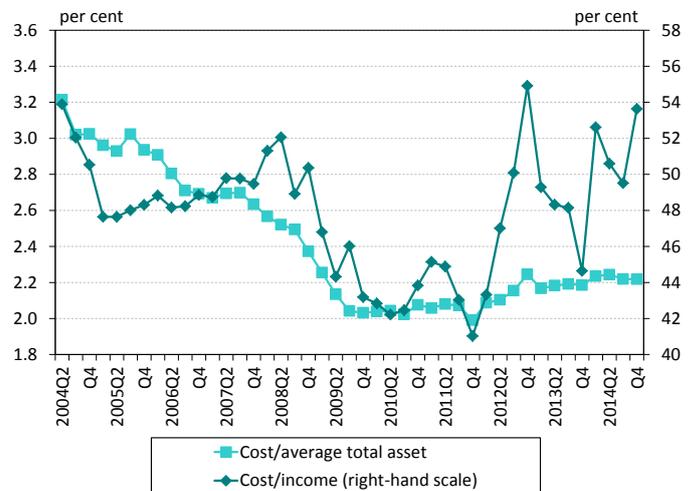
Source: MNB.

Chart 50: Net interest income as a proportion of the gross and net interest bearing assets in the banking sector



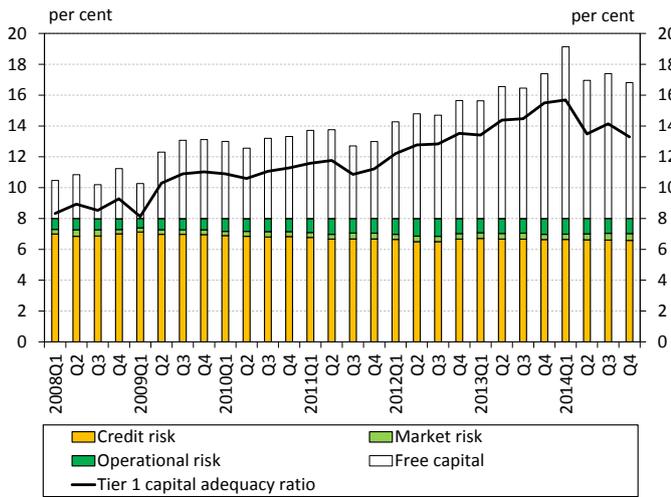
Source: MNB.

Chart 51: Operating efficiency indicators of the banking sector



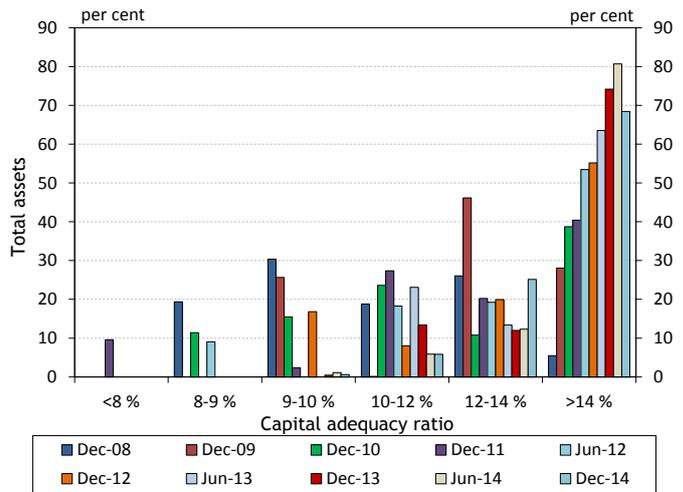
Source: MNB.

Chart 52: Banks' capital adequacy ratios



Source: MNB.

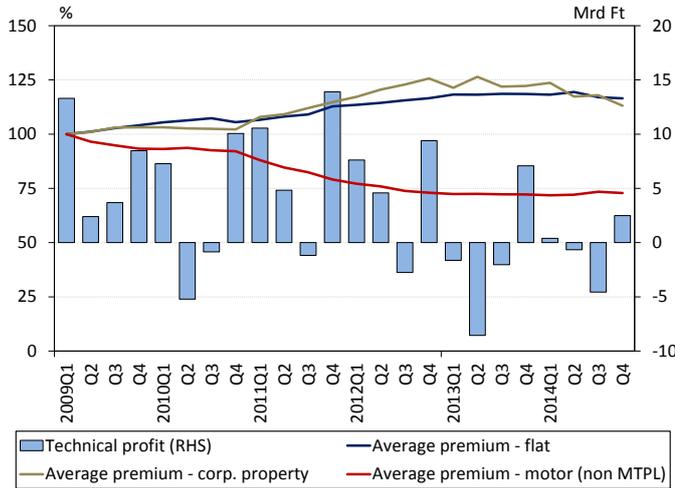
Chart 53: Dispersion of banking sector's total assets by capital adequacy ratio



Source: MNB.

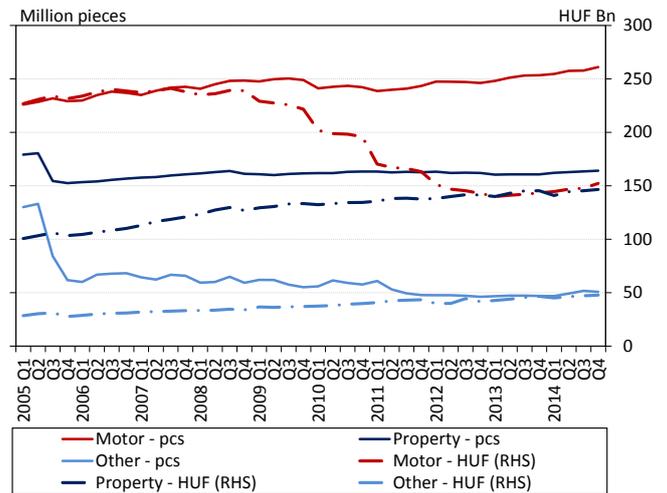
7. Institutional investors

Chart 54: Underline data of insurance tax



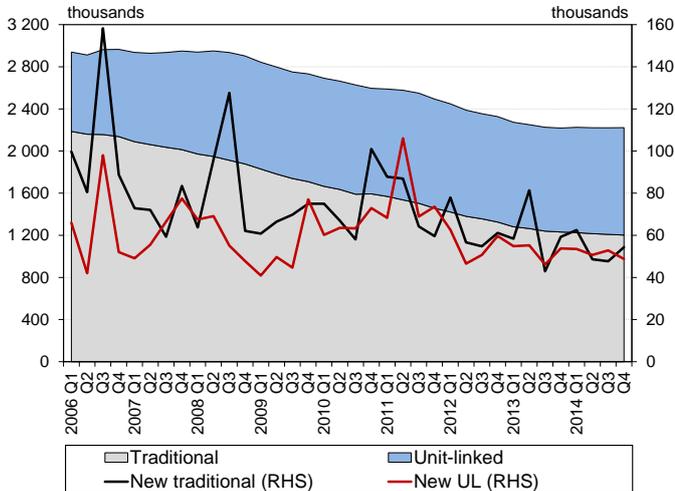
Source: MNB.

Chart 55: Development of non-life insurance



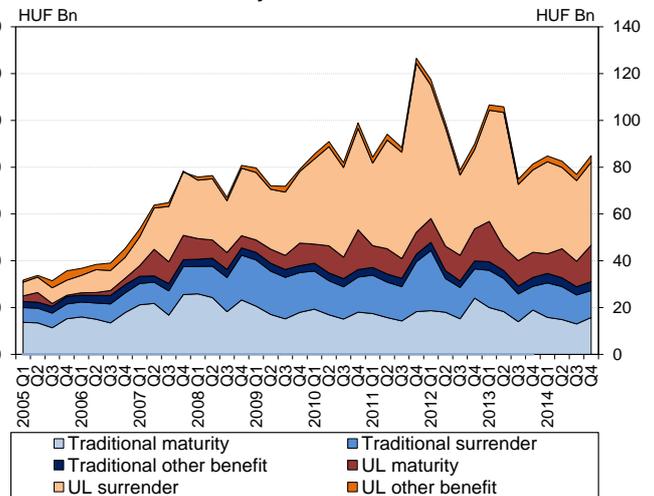
Source: MNB.

Chart 56: Development of life insurance



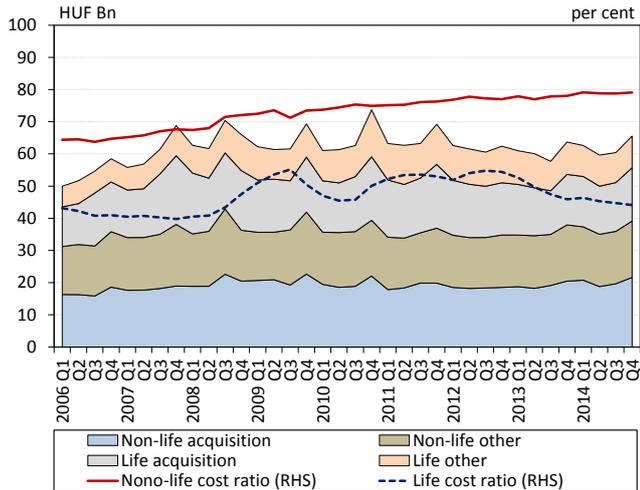
Source: MNB.

Chart 57: Life insurance services



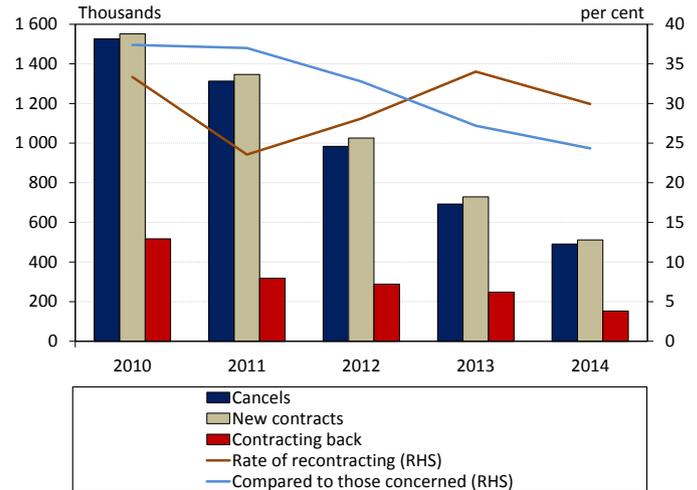
Source: MNB.

Chart 58: Costs in the insurance sector



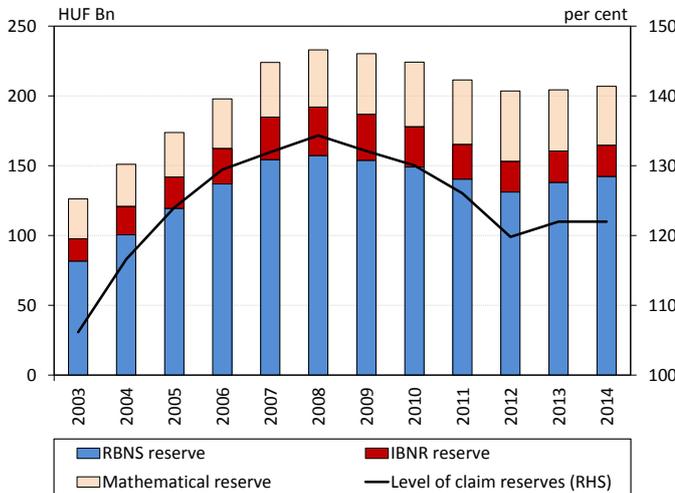
Source: MNB.

Chart 59: Development of mtpl insurance



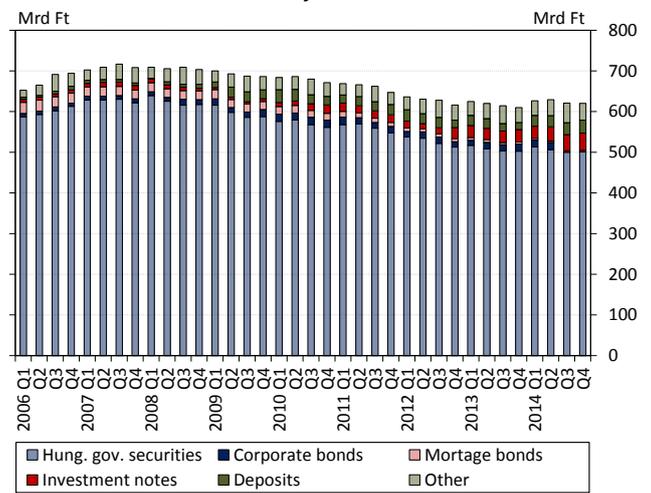
Source: MNB.

Chart 60: Development of gross mtpl reserves



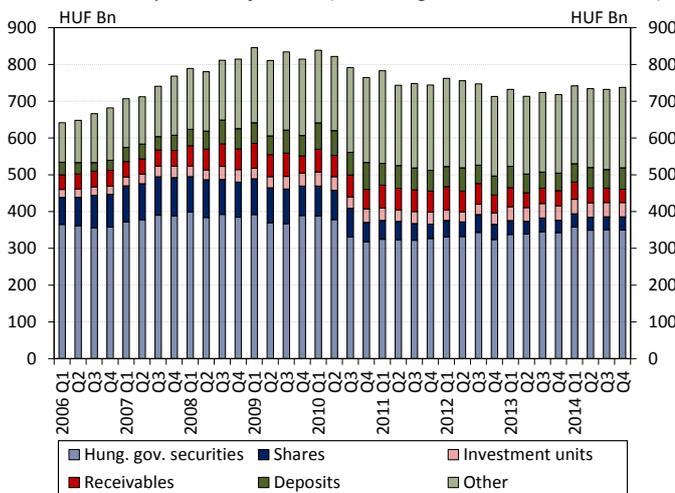
Source: MNB.

Chart 61: Assets behind life mathematical reserve



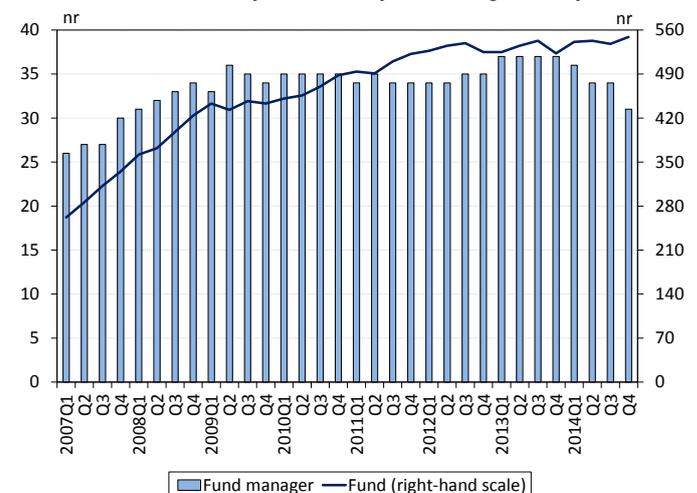
Source: MNB.

Chart 62: Composition of assets (excluding mathematical reserves)



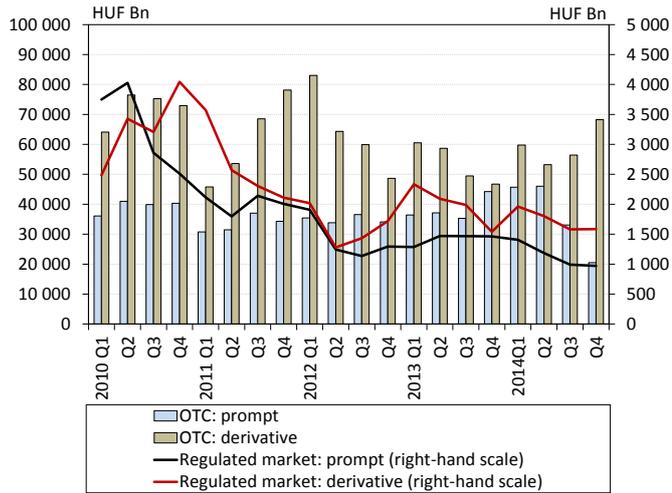
Source: MNB.

Chart 63: Number of investment fund managers and funds



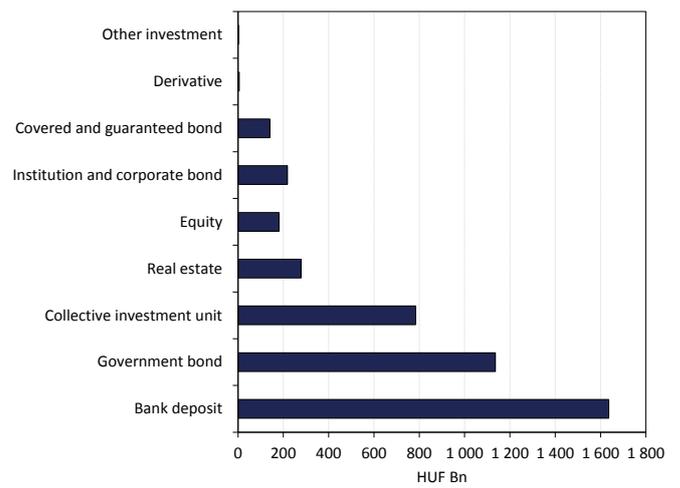
Source: MNB.

Chart 64: Capital market turnover of investment firms



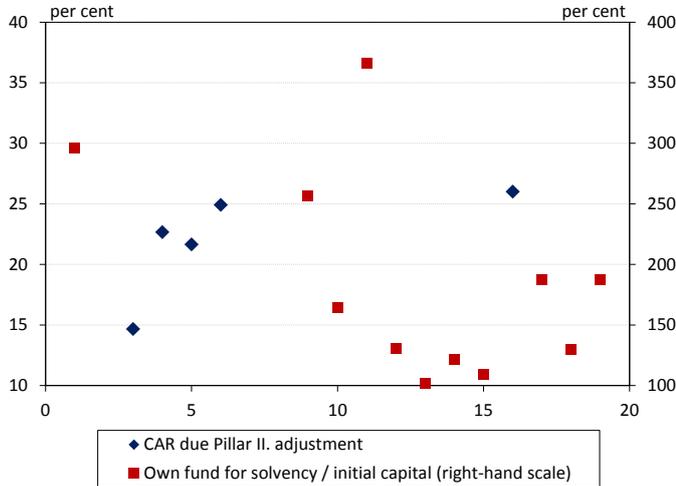
Source: MNB.

Chart 65: Asset allocation in public offered investment funds



Source: MNB.

Chart 66: Capital adequacy ratio (CAR) of investment firms



Source: MNB.

Notes to the appendix

The chart date (e.g. 2008) means the end of the year (the 31st of December) if it's not indicated otherwise.

Chart 1:

The increased value of the indicator indicates declining risk appetite or increasing risk aversion.

Chart 2:

VIX: implied volatility of S&P 500.

MOVE: implied volatility of US Treasuries (Merrill Lynch).

Chart 3:

The increased value of the indicator indicates declining risk appetite or increasing risk aversion.

Chart 4:

General government augmented SNA-deficit includes local governments, ÁPV Ltd., institutions discharging quasi-fiscal duties (MÁV, BKV), the MNB and authorities implementing capital projects initiated and controlled by the government but formally implemented under PPP schemes. The indicator includes private pension savings.

In case of the household sector, financing capacity is consistent with the SNA deficit of the general government and does not take savings in private pension funds into account. The official financing saving of households (in the financial account) is different from data on the chart.

Chart 10:

Disposable income is estimated by MNB using the consumption, investment and financial savings data of households.

Chart 12:

Number of bankruptcy proceedings of legal entities, summed according to the date of publication, cumulated for 4 quarters, divided by the number of legal entities operating a year before.

Chart 13:

The 5-year forward forint risk premium as of 5 years from now, compared to the euro forward yield (3-day moving average) and the 5-year Hungarian credit default swap spread.

Chart 16:

Historic volatility: weighted historic volatility of the exchange rate (GARCH method). Implied volatility: implied volatility of quoted 30-day ATM FX options.

Chart 24:

FX loans, exchange rate as of end-February 2015, HUF loans adjusted by state loan refinancing in December 2002.

Chart 25:

Exchange rate adjusted values.

Chart 26:

Loans overdue more than 90 days are calculated by clients.

Chart 27:

In brackets below the names of sectors the weights within corporate credit portfolio are indicated for end-of-observation period.

Chart 34:

The category 0-30 percent contains also the loans disbursed without mortgage before 2008.

Chart 35:

If the value of the HAI is 1, it shows that under a given set of credit conditions a typical household has just enough monthly income to take out the mortgage loan necessary to purchase an average flat.

If the value of the index is above 1, it indicates that a household with average income can afford to borrow for the purchase of a home.

The uncertainty band is given from the different values of the LTV.

Chart 36:

Before 2010 by costumers, since then by contracts.

Chart 38:

An increase in the swap stock stands for swaps with a long forint spot leg. Based on the daily FX reports of credit institutions. Calculated from swap transactions between credit institutions and non-resident investors. The MNB does not take responsibility for the accuracy of the data. Revisions due reporting errors and non-standard transactions can lead to significant subsequent modifications of the data series. The data series does not include swap transactions between branches, specialised credit institutions, cooperative credit institutions and non-resident investors. The swap stock is the sum of termin legs calculated at actual foreign exchange rates.

Chart 41:

The interest rate risk stress test indicates the projected result of an extreme interest rate event; in this scenario this event is a parallel upward shift of the yield curve by 300 basis points for each foreign currency. For the calculations we applied re-pricing data and the Macaulay duration derived from them.

Chart 42:

A rise in the liquidity index indicates an improvement in the liquidity of the financial markets.

Chart 43:

Similarly to the liquidity index, an increase in liquidity sub-indices suggests an improvement in the given dimension of liquidity. The source of bid-ask spreads in case of HUF government bond market is calculated from the secondary market data transactions. The earlier version of the liquidity index included the CEBI bid-ask spread.

Chart 44:

A rise in the indices represents narrowing bid-ask spread, thus an increase in the tightness and liquidity of the market. The liquidity index of HUF FX-swap market includes the data of USD/HUF and EUR/HUF segments, taking into account of tom-next, overnight and spot-next transactions. The earlier version of the liquidity index included only the tom-next USD/HUF transactions.

Chart 45:

Client loans include loans and bonds of non-financial institutions, household loans, loans and bonds of financial and investment enterprises, government loans, municipal loans and municipal bonds. Client deposits include the deposits of non-financial institutions, household deposits, deposits of money market funds, deposits of financial and investment enterprises, government deposits and municipal deposits. The loan-to-deposit ratio is exchange-rate-adjusted with respect to the last period.

Chart 46:

Funding gap is the difference between the exchange rate adjusted customer credit and deposit, divided by the exchange rate adjusted customer credit.

Chart 48:

ROE: pre-tax profit / average (equity - balance sheet profit).

ROA: pre-tax profit / average total assets.

Interim data are annualised.

Pre-tax profit: previous 12 months.

Average total assets: mean of previous 12 months.

Average (equity - balance sheet profit/ loss): 12 month moving average.

Deflator: previous year same month=100 CPI (%).

Chart 49:

Pre-tax profit.

Chart 50:

Based on aggregated individual, non-consolidated data

Net interest income: 12-month rolling numbers, the difference of interest revenue and interest expenditure

Gross interest bearing assets: 12-month average numbers, total exposure

Net interest bearing assets: 12-month average numbers, exposure minus the provision

Chart 51:

Cost: previous 12 months

Income: previous 12 months

Average total asset: mean of previous 12 months

Chart 52:

Capital adequacy ratio (CAR) = (total own funds for solvency purposes/minimum capital requirement)*8%

Tier 1 capital adequacy ratio = (tier 1 capital after deductions/minimum capital requirement)*8%

Chart 64:

Sum turnover of investment firms and credit institution.

Chart 65:

31-Dec-2014

Chart 66:31-Dec-2014

Ferenc Deák

(17 October 1803 – 28 January 1876)

Politician, lawyer, judge at a regional high court, member of parliament, minister for justice, often mentioned by his contemporaries as the 'wise man of the homeland' or the 'lawyer of the nation'. Eliminating the ever-recurring public law disputes and clarifying the relationship between the ruling dynasty and the hereditary provinces, he not only reinforced the constitution and the existence of the nation but also paved the way for the development as well as the material and intellectual enrichment of Hungary.

Deák was actively involved in preparing the laws for the parliamentary period between 1839 and 1840, and he became an honorary member of the Hungarian Academy of Sciences in 1839. After the death of his elder brother in 1842, Deák the landowner liberated his serfs and voluntarily undertook to pay taxes proving that he was an advocate of economic reforms not only in words but also in deeds. He refused to fill the position of delegate to the 1843/44 parliament because he disagreed with the idea of having to be bound by the instructions received as delegate, and as a moderate political thinker he had his concerns about the radical group led by Kossuth.

He remained level-headed also with regard to the evaluation of the events of 1848, he was afraid of violence and rejected it as a political tool. All the same, he accepted the post of minister for justice in the government of Lajos Batthyány. In December 1849 he was arrested for revolutionary activities, but later on, after being tortured for information, he was released. From then on he acted as the intellectual leader of the national passive resistance movement, and believed from the very beginning that Austrian centralisation was doomed to fail due to its inherent faults. He became the leader of the Address Party in the parliament of 1861, and even though they failed to bring the monarch to accept their ideas, he increasingly managed to take over the initiative over time.

Based on his earlier proposals, in 1865 Deák published his so-called Easter Article – which radically influenced Hungarian politics of the time – and until 1867 he virtually devoted all his time to reaching a compromise with the Hapsburg dynasty. After the compromise between Austria and Hungary ratified in 1867, Hungary was able to return to the path of social and economic development.

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