



Report on Financial Stability

November 2013





Report on Financial Stability

November 2013



Published by the Magyar Nemzeti Bank

Publisher in charge: Eszter Hergár

Szabadság tér 8–9. H-1850 Budapest

www.mnb.hu

ISSN 1586-8338 (online)

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.

The Magyar Nemzeti Bank facilitates and strengthens financial stability using all the tools at its disposal and, should the need arise, manages the impact of shocks. As part of this activity, the Magyar Nemzeti Bank undertakes a regular and comprehensive analysis of the macroeconomic environment, the operation of the financial markets, domestic financial intermediaries and the financial infrastructure, reviewing risks which pose a threat to financial stability and identifying the components and trends which increase the vulnerability of the financial system.

The primary objective of the Report on Financial Stability 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 analyses in this Report were prepared by the Financial System Analysis and the Macroprudential Regulation directorates, 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 14 October and 4 November 2013. However, the Report reflects the views of the contributing organisational units and does not necessarily reflect those of the Financial Stability Council or the MNB.

This Report is based on information in the period to 15 October 2013.

Contents

Overall assessment	7
Key messages	8
1 Macroeconomic and financial market environment – Changes in global investor sentiment may amplify downside risks to growth prospects	15
1.1 Investor sentiment deteriorated due to expectations of tapering by the Fed	16
1.2 Improvement in the domestic economic outlook	19
2 Domestic lending developments – Lasting change requires continued easing in credit supply constraints	22
2.1 Over the short run, corporate lending is determined by large banks’ willingness to lend	23
2.2 Households’ deleveraging continued, but determinants of lending indicate an improving trend	31
2.3 Funding for Growth Scheme triggers a turnaround in lending to the SME sector	39
3 Portfolio quality – Solving households’ foreign currency indebtedness problem may result in major improvement	41
3.1 Corporate loan quality deteriorated slightly in 2013 H1	42
3.2 Household portfolio quality continued to deteriorate, partly due to one-off factors	44
3.3 Declining exposure and loan loss provisioning in the local government segment	50
3.4 The portfolio of financial enterprises and cooperative credit institutions stopped deteriorating	52
3.5 Improving portfolio quality is expected in the case of household loans	54
4 Bank liquidity – Banking sector liquidity is adequate despite withdrawal of foreign and household funds	56
5 Banking sector profitability – Persistently low profitability may lead to market consolidation	60
6 Liquidity and solvency stress tests – capital need is increasing, but its magnitude is manageable in a stress scenario	67
6.1 Based on the stress tests, the banking sector’s liquidity is satisfactory	68
6.2 Due to the weaker initial capital position of some banks, increasing capital needs are seen in the stress scenario	70

Appendix: Macprudential indicators	73
---	----

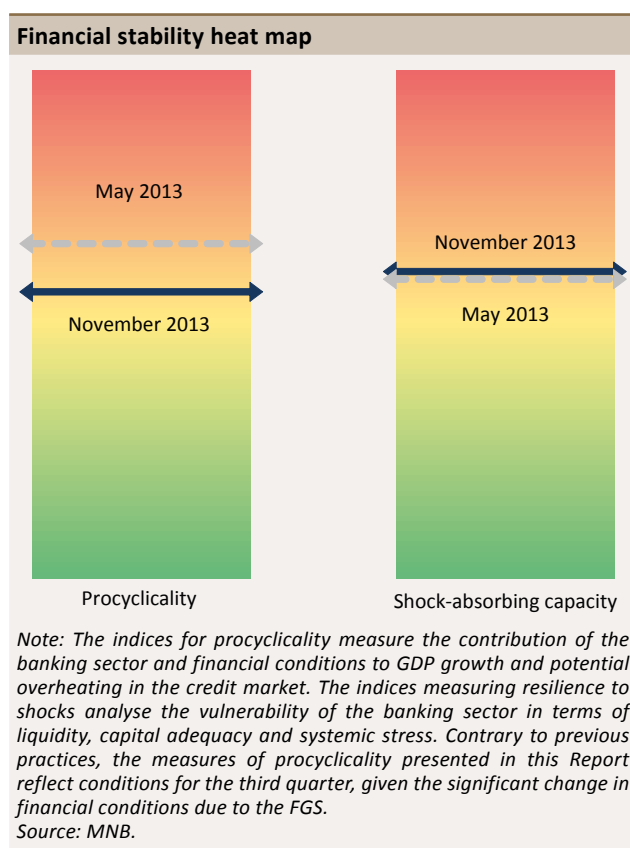
Notes to the appendix	84
------------------------------	----

List of boxes

Box 1: Restructuring the sector of cooperative credit institutions	24
Box 2: Investment financing in the SME sector	27
Box 3: Housing Affordability Index	32
Box 4: Interest rate transmission in the household and corporate loan markets	34
Box 5: Indebtedness of households – findings of a representative questionnaire-based survey	36
Box 6: Reinforcing financial supervision in Hungary	45
Box 7: Declining local government exposures as a result of debt settlement by the government	50
Box 8: Results of pillar III of the FGS to date	57
Box 9: Groups within the sector of domestic credit institutions identified with cluster analysis	62

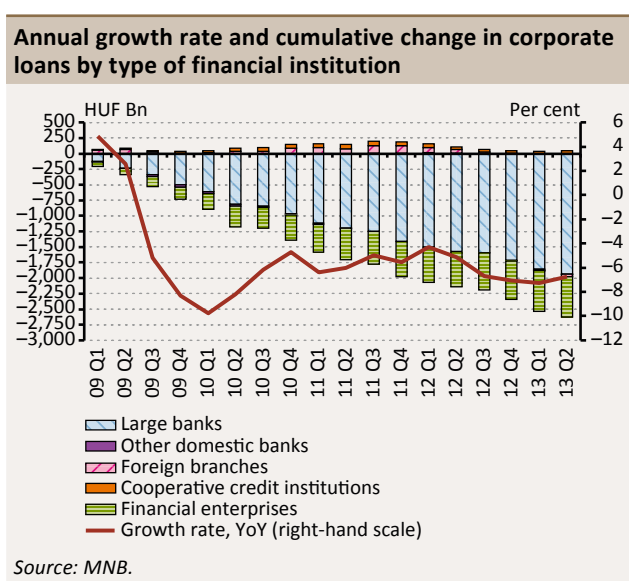
Overall assessment

The domestic financial intermediary system remains highly stable. The procyclicality of the financial system has declined further since the April Report, mainly reflecting cuts in policy interest rates and the Magyar Nemzeti Bank's Funding for Growth Scheme (FGS). The results of liquidity stress tests suggest that the banking sector's liquidity is adequate, while the decline in the loan-to-deposit ratio to around 110 per cent indicates lower reliance on foreign funds. The banking sector's capital adequacy ratio of 16.6 per cent is excellent, but the stress tests indicate increasing capital shortages at the individual level. However, this remains manageable, due to parent banks' continued commitment.

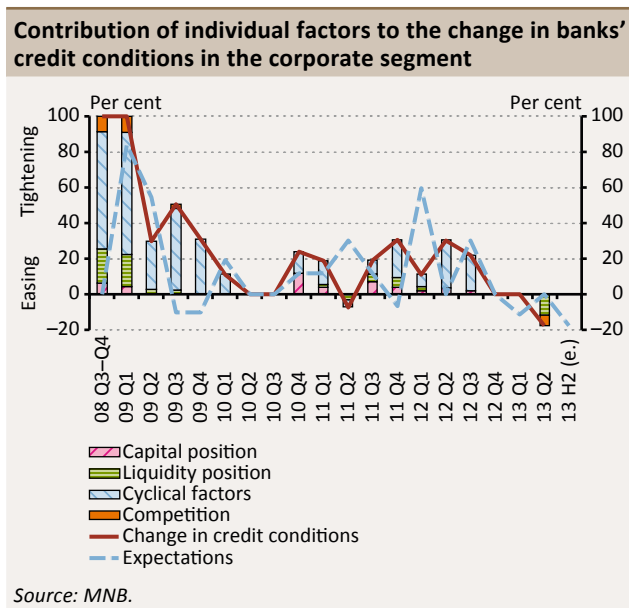


Key messages

1. Outstanding corporate loans are likely to stop declining in the coming years, with the Funding for Growth Scheme playing a dominant role. However, a sustained recovery in lending will require further easing of credit conditions on the supply side. As large banks continue to deleverage some of their business may be taken over by smaller banking market participants. This, however, will require improving the capital position and funding capacity of those institutions.



Large banks with a high share of the domestic market continue to be dominant in new lending. Large banks currently account for more than 80 per cent of lending to the corporate sector. Following escalation of the financial crisis, the outstanding loans contracted sharply in this segment, reflecting mounting risks and loan losses. Banks adjusted both in terms of quantity and maturity. As a result, the volume of new lending declined and average maturity shortened. At the same time, large banks account for a higher ratio of gross new lending compared to their market share, and other credit institutions have not been able to compensate for the decline in lending to the corporate sector by the large banks.

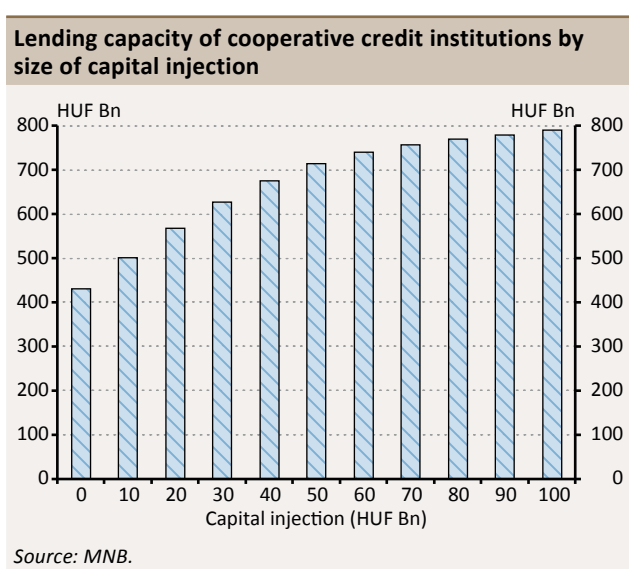


A further easing in the current tight credit conditions is needed in order for lending to be able to support economic growth. The banks reported in the second quarter lending survey that in net terms they have already eased their credit conditions, which may point to the beginning of an improvement on credit markets. Despite this, the majority of responding banks continued to pursue cautious lending policies, resulting in narrow range of creditworthy customers, and therefore many companies find it difficult to access credit. This is particularly true for the domestic SME segment, where bank loans represent almost the only source of financing. Although the FGS and its extension will be able to prevent a further decline in corporate lending on the forecast horizon, a lasting turnaround in lending can only be achieved by increasing lending activity. This, however, requires a further easing in credit conditions, in which large banks may play a dominant role in the short term.

The Funding for Growth Scheme has led to a significant improvement in borrowers' access to credit. Lending under the FGS amounted to a total of HUF 701 billion, corresponding to a 93 per cent utilisation rate. Consequently, the FGS has had a significant impact on the activity of participants on the supply and demand sides. Under Pillar 1, the ratio of new loans was 63 per cent. It is particularly favourable that 60 per

Loans disbursed under the FGS by size of business								
	Micro enterprises		Small enterprises		Medium enterprises		Total sum	
	Contracts	HUF Bn	Contracts	HUF Bn	Contracts	HUF Bn	Contracts	HUF Bn
Sum	4,554	214	3,596	226	1,694	261	9,844	701
New loans	3,159	84	2,053	99	752	107	5,964	290
Investment*	2,145	66	1,133	54	401	56	3,679	176
Working capital	1,014	18	920	45	351	51	2,285	114
Redemption	1,395	130	1,543	127	942	154	3,880	411
Pillar I	536	26	976	66	655	90	2,167	182
Pillar II	859	104	567	61	287	64	1,713	229

* Together with loans extended for EU funding.
Source: MNB.



cent of those new loans were investment loans. Due to the maximum 2.5 per cent interest margin allowed on loans, the interest burden on companies has eased significantly in the case of both new loans and refinanced loans.

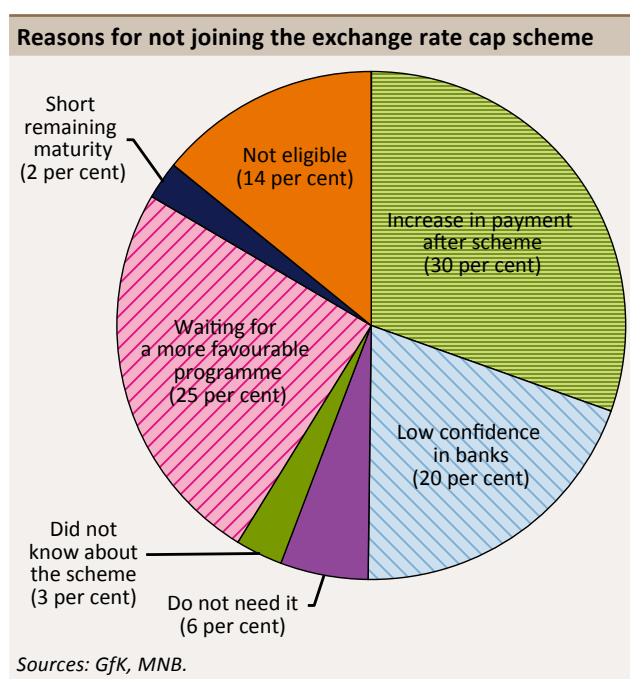
Lending by small and medium-sized banks as well as cooperative credit institutions may improve corporate financing conditions over the medium term. The restrained credit availability by large banks' tight credit conditions may be eased by the increased lending activity of small and medium-sized banks as well as cooperative credit institutions. One condition for this, however, is that capital of adequate quantity and quality as well as liquidity are available in this segment. According to the Bank's calculations, the lending potential of banks is estimated to be around HUF 800 billion, but this can only partially offset the decline in the outstanding amount of loans at large banks. Another help may be the integration of the cooperative credit institutions and the planned capital injection by the Government, which may make it possible to boost lending by another HUF 400 billion. In terms of liquidity, the FGS is expected to contribute strongly to the increase in lending, mainly at small and medium-sized banks.

II. Households' foreign currency debt poses significant financial stability risks, and therefore it is in all market participants' interest to manage this issue. Eliminating exchange rate risk represents the most important task. In addition, however, a certain limit should be imposed on the interest rate risk borne by customers, in part by extending the transparent pricing on outstanding mortgage loans, and in part by limiting the interest margin.

Households' foreign currency debt is one of the most important financial stability risks. Foreign currency loans, mostly denominated in Swiss francs, account for most of the deterioration in portfolio quality in the household segment. Despite the Government measures aimed at reducing households' foreign currency debt, the total amount of such loans remains extremely high, and a large majority of these are long-term mortgage loans. Indebted households face mounting debt burdens and instalments on loans due to the appreciation of the Swiss franc and rising bank lending rates,

Outstanding loans by the banking sector and branches in a breakdown by currency and product								
June 2013		Total	Mortgage loans	Housing loans			Home equity loans	Other loans
				Total	Subsidized	Market		
Total	Amount (HUF Bn)	6,633	5,377	3,298	882	2,416	2,079	1,256
	Contracts (thousand)	5,687	1,030	673	243	431	357	4,605
HUF	Amount (HUF Bn)	2,789	1,878	1,485	882	604	393	911
	Contracts (thousand)	4,822	584	450	243	208	134	4,237
FX	Amount (HUF Bn)	3,844	3,498	1812	0	1,812	1,686	345
	Contracts (thousand)	865	446	223	0	223	222	368

Source: MNB.

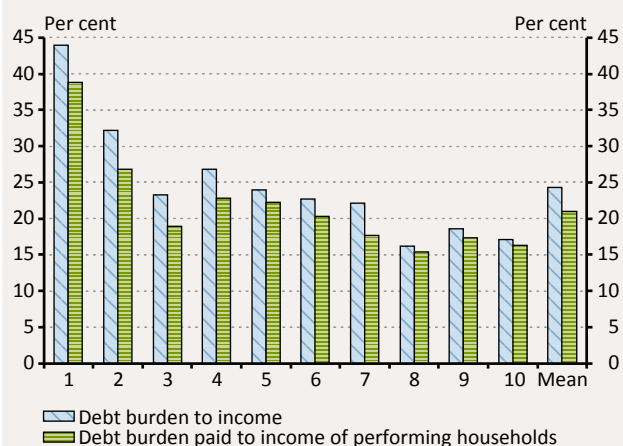


which has led to a decline in their consumption and, in the worst case, insolvency. At banks, the increase in loan-loss provisions set aside for the rising non-performing loans outstanding poses a serious challenge. For the Government, the weakening impact of foreign currency debt on economic growth represents a risk. Last but not least, the tremendous amount of foreign currency loans is restraining the conduct of monetary policy, while at the same time posing a significant risk to financial stability.

Managing exchange rate risk and reducing the burden on debtors is in the interests of all stakeholders. Based on the above, it is clearly in the interests of both economic policy and foreign currency debtors to eliminate exchange rate risk while at the same time also reducing customers' debt-service burdens. Moreover, banking sector may also be interested due to lower loan losses, and improving reputation. Such a programme, however, may involve significant costs, and therefore the potential adverse effects on the financial intermediary system must also be taken into account.

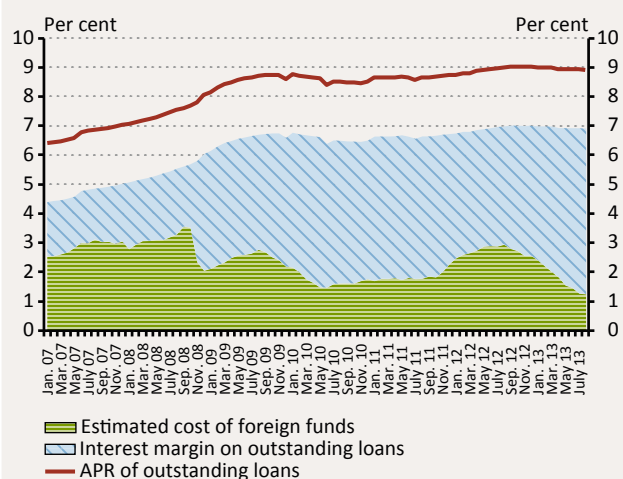
The current exchange rate cap scheme can only partially address the problem of foreign currency indebtedness, and therefore further measures may be necessary. The utilisation rate of the exchange rate cap scheme now exceeds 50 per cent, following the extension of the deadline for entry. The considerably lower utilisation compared with the Bank's previous forecast is notable as, according to the results of a representative questionnaire survey, only 6 per cent of households would not be in need of external assistance in servicing their foreign currency debt. Half of those who did not opt for the exchange rate cap scheme explained their decision not to join either by low confidence in banks or the increase in debt servicing burdens after expiry of the preferential period. One-quarter of those not

Payment-to-income ratio of households with outstanding debt by income deciles



Sources: GfK, MNB.

Average estimated cost of foreign funds and the average interest margin on outstanding of Swiss franc mortgage loans



Source: MNB.

participating in the scheme hope that the Government will introduce an even more advantageous programme. As a result, the current exchange rate cap scheme can only partially address the risks arising from foreign currency debt. This is particularly true for low-income households, where debt-servicing burdens already considerably exceed 30 per cent, while the degree of participation is the lowest among these households. As the survey responses show, a large part of households could only be “attracted” into the scheme by eliminating exchange rate risk permanently. This, however, would require a major overhaul of the exchange rate cap scheme, which would involve extending the grace period of the scheme and addressing the question of loans accumulated on the technical accounts.

A possible programme would be complemented with a regulation on lending rates. The possibility of banks under the terms of lending contracts to change interest rates unilaterally on outstanding loans has imposed heavy burdens on borrowers: lending rates have risen by 2 percentage points on average during the crisis, which has, by itself, added around 20 per cent to debt-servicing burdens. In the future, unilateral changes in interest rates could be addressed by a binding extension of transparent pricing (fixed margin linked to a benchmark interest rate) regulated in the current government decree to outstanding loan contracts, when the margin chargeable above the benchmark should also be maximised.

Speeding up the procedure for managing non-performing loans is also indispensable. A possible package of measures would be aimed at preventing default. The outstanding of problem mortgage loans in the banking sector amounts to HUF 900 billion, affecting approximately 120,000 families, and non-bank intermediaries also have significant outstanding amount of non-performing loans in their books.

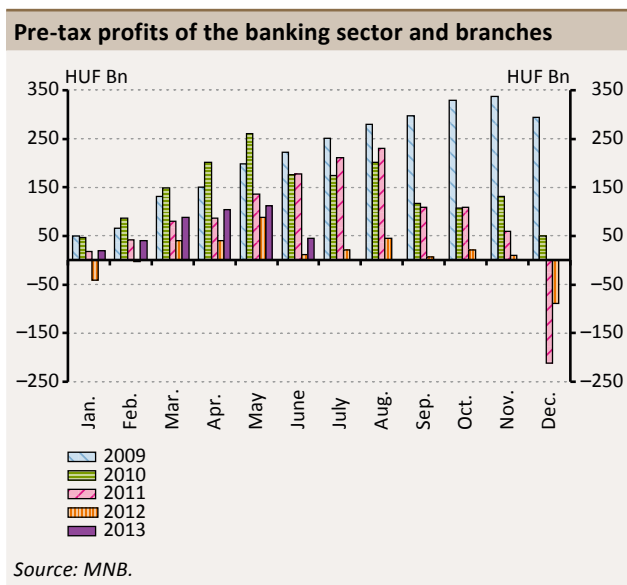
Banks' non-performing household loans in a breakdown by currency and product

June 2013		Total outstanding	Mortgage loans	Housing loans	Home equity loans	Other loans
Total	NPL (HUF Bn)	1,092	900	407	493	192
	NPL (Thousand contracts)	747	120			627
	NPL ratio (per cent)	17.7	18.0	12.9	26.7	16.6
HUF	NPL (HUF Bn)	328	191	113	77	138
	NPL (Thousand contracts)	593	42			552
	NPL ratio (per cent)	12.8	10.9	7.9	24.0	16.9
FX	NPL (HUF Bn)	764	709	293	416	54
	NPL (Thousand contracts)	154	79			75
	NPL ratio (per cent)	21.2	21.8	17.0	27.2	15.9

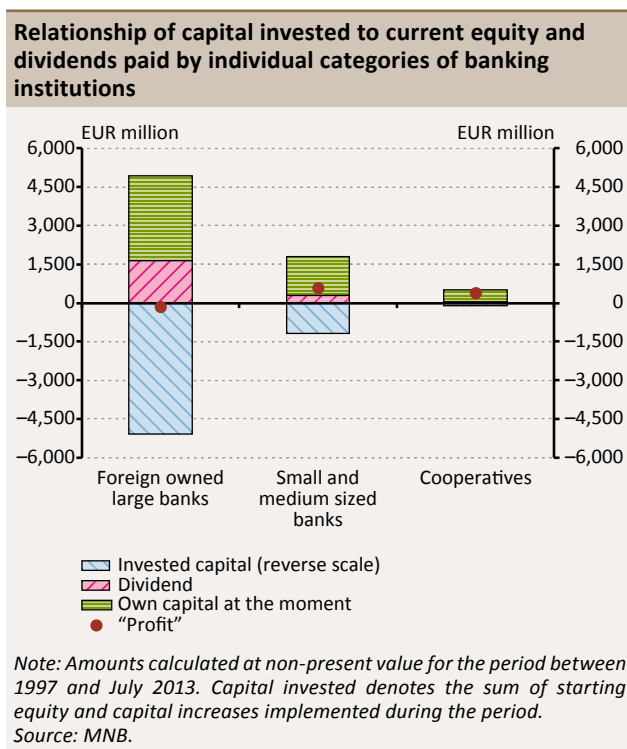
Source: MNB.

However, the National Asset Management Agency has not been capitalized enough to handle a problem of this magnitude, and progress with the transfer of loans has been slow. It is necessary to introduce the legal instrument of private/family bankruptcy as soon as possible, in addition to increasing the activity of the Agency.

III. The outlook for the domestic banking sector is marked by persistently weak profitability, which may prompt some banks to revise their market strategies. This may lead to the consolidation of the market, whereby smaller banks and cooperative credit institutions may boost significantly their market share; while the entry of new participants cannot be ruled out either.



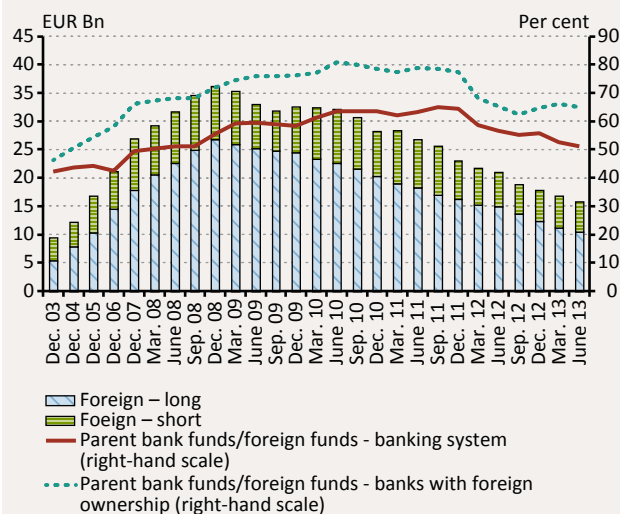
The profitability of the domestic banking sector may remain subdued over the longer term. Following two years of heavy losses, the banking sector’s pre-tax profits amounted to only HUF 45 billion at the end of June 2013. This was accompanied by a large degree of asymmetry across market participants. Current weak profitability reflects in large part the banking sector’s need for substantial loan-loss provisions and the effects of the bank levy. At the same time, the sector’s future earnings potential is influenced negatively by a number of factors. Due to the recent policy interest rate cuts interest sensitive funds may be withdrawn from the banking sector, which in turn may lead to an increase in funding costs. Competition by the Government for financing may also lead to higher interest rates. The postponement of the phasing-out of the bank levy also weighs on profitability. Ultimately, the fall in lending activity projected by the Bank will also lead to deterioration in profitability. All this suggests that Hungarian subsidiaries will be ranked lower in the allocation of capital and funding, which may result in further deleveraging.



Low profitability may lead to consolidation in the banking sector. In the past 15 years, four of the six largest foreign-owned banks made losses on the whole for their owners. Lower predictability and the persistently low level of profitability may prompt some members of the banking market to revise their strategies. This may imply the beginning of a consolidation process in the domestic banking market. This is also underpinned by the fact that weak prospects for growth make it practically impossible for participants to achieve a material increase in market share organically. For this reason, market participants which view the domestic market as strategically important are only able to expand their market share through acquisitions. Smaller-sized credit institutions may be the beneficiaries of this process, although the entry of new, larger participants cannot be ruled out.

The high share of parent bank funding may slow the consolidation process. Despite the decline in the past years, funding by foreign parents remains considerable at domestic

Role of foreign and parent bank funds in the banking sector



Source: MNB.

foreign-owned financial institutions. Therefore, in the case of acquisition, the new owner not only has to pay the selling price, but also must continue funding the purchased institution. Consequently, one possible scenario for orderly withdrawal is preceded as a first step by a partial reduction in foreign funding, and the bank is then sold only after reliance on domestic funding has increased.

Key risks:

1. Deteriorating investor sentiment undermines the growth outlook

2. Domestic banking sector does not support economic growth through lending

2.1. Credit market problems in lending to the corporate sector, particularly in SME lending

2.2. High interest margins on loans to households

3. Households' unhedged foreign currency exposure may speed up the deterioration in portfolio quality

Risk mitigation measures:

1. Maintaining prudent domestic fiscal policy and supporting sustainable economic growth in Hungary remain a priority in order to mitigate the impact of potential adverse shocks from the external environment.

2.1. The second phase of the Funding for Growth Scheme is expected to lead to a further improvement in SMEs' access to credit at favourable interest conditions.

2.2.1. The rules of transparent pricing should be extended bindingly to cover outstanding mortgage loans.

2.2.2. Maximising the interest margin on mortgage loans, even on outstanding ones.

3. Adjusting the exchange rate cap scheme so that the exchange rate risk is mitigated more than previously or completely for households without a natural hedge.

4. The high share of non-performing loans is leading to profitability problems and impedes bank lending

- | | |
|--|---|
| 4.1. Ratio of non-performing corporate loans continues to rise | <i>4.1. Speeding up the process of portfolio cleaning, which could be facilitated by regulatory measures and/or incentives as well.</i> |
| 4.2. In the household sector, the high share of non-performing household mortgage loans poses a risk | <i>4.2. Introducing the institution of family bankruptcy as soon as possible would help manage non-performing portfolios,, while ensuring a 'clean-sheet' for overindebted customers.</i> |

5. Banks' profitability remains persistently low

- | | |
|--|---|
| 5.1. Competitive disadvantage in access to external funding | <p><i>5.1.1. The FGS has helped ease financing constraints by providing access to cheap central bank funding.</i></p> <p><i>5.1.2. Foreign currency funding is ensured in large part under Pillar 3 of the FGS without an increase in swap market exposure.</i></p> |
| 5.2. Market consolidation accompanied by stronger deleveraging | <p><i>5.2.1. Paying increased attention to banks' resilience in issues affecting the banking sector.</i></p> <p><i>5.2.2. Strengthening participants (smaller-sized banks, cooperative credit institutions) which could partially replace larger-sized credit institutions even over short run.</i></p> |

1 Macroeconomic and financial market environment

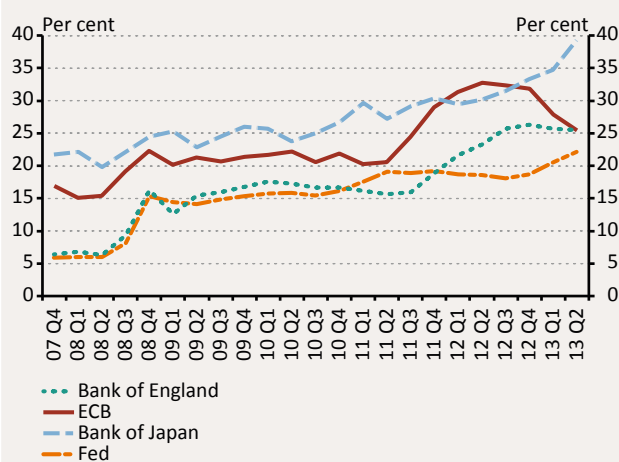
– Changes in global investor sentiment may amplify downside risks to growth prospects

Favourable economic developments in the United States increased expectations the Fed's quantitative easing programme would be phased out, leading to a revaluation of risks even though the key rate is expected to remain near zero. Through intensive capital outflows, this had a negative effect particularly on emerging countries, while in the peripheral countries of the euro area it mainly added to the risks of the banking sector. The euro-area banking sector continues to be characterised by deteriorating portfolio quality and subdued profitability, particularly in the southern countries.

The unfavourable global investor sentiment affected Hungary as well and was mainly reflected in rising yields on long-term government securities. Nonetheless, the stress level of domestic financial markets increased only slightly. The decline in FX swap market spreads and the more active operation of the forint interbank market can be considered positive developments in terms of market liquidity. As for the real economy, developments point to accelerating growth, while further improvement in the external balance may reduce the external vulnerability of the country.

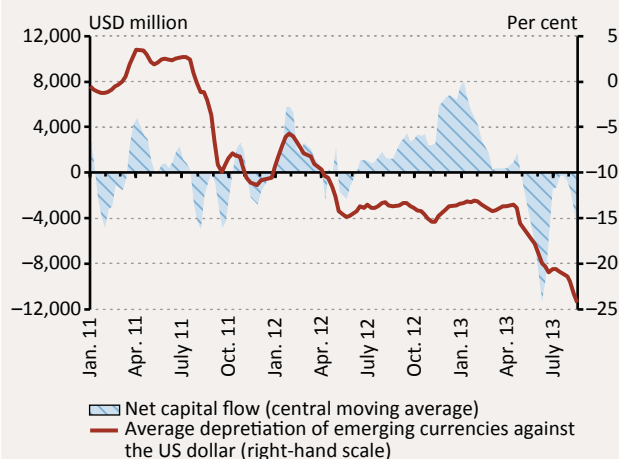
1.1 Investor sentiment deteriorated due to expectations of tapering by the Fed

Chart 1
Central banks' balance sheet in developed countries
(as a percentage of GDP)



Sources: National central banks, ECB.

Chart 2
Net capital outflows and changes in foreign-exchange rates of emerging countries

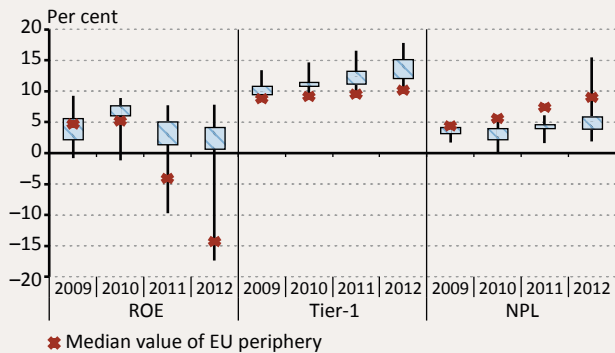


Source: Bloomberg.

Expectations about the phasing out of the Fed's third quantitative easing programme (QE3) led to a revaluation of risks. Developed countries continue to be characterised by loose monetary conditions. With policy rates at levels close to zero, the Fed's QE3 and the 'quantitative and qualitative' easing of the Bank of Japan continued. As a result, the respective balance sheets of these two institutions expanded at a faster pace (Chart 1). By contrast, the ECB did not apply its government securities purchase programme, and its balance sheet total decreased considerably, due to repayment of the 3-year ECB loans (LTRO) borrowed earlier. Although the low-interest environment may remain in the medium term as well, according to market expectations, the Fed's QE3 programme may be decreased next summer as US economic indicators improve. Therefore the additional liquidity may decrease on the market. This resulted in a revaluation of risks and a perceptible deterioration in investor sentiment. Although the Fed announced the continuation of quantitative easing in September, risks relating to the phase-out of the programme partly remained. In the emerging markets, the uncertainty surrounding the tapering of QE3 resulted in depreciation in foreign-exchange rates and marked capital outflows (Chart 2). Another consequence of the increasingly unfavourable investor sentiment was the pronounced yield increases in the government securities market both in developed and emerging countries.

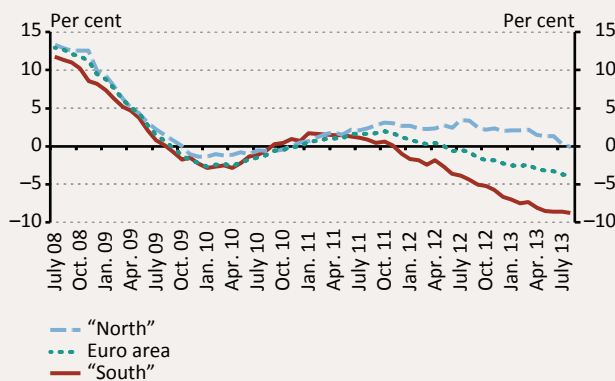
Profitability of the euro-area banking sector is persistently low. With the protracted crisis, the earning capacity of the euro-area banking sector also deteriorated considerably (Chart 3). This resulted in a perceptible increase in the risk that the currently strong capital position may weaken over the medium term, which may create an obstacle to an upturn in lending. However, due to the differences across member countries, the distribution of the problem is strongly asymmetrical. The greatest risk is faced by the periphery countries, where the weaker-than-average capital position is already coupled with a high NPL ratio and significant losses. At the same time, there is considerable uncertainty in the euro area about bank asset quality, due to restructuring and forbearance by banks.

Chart 3
Key indicators for the euro-area banking sector



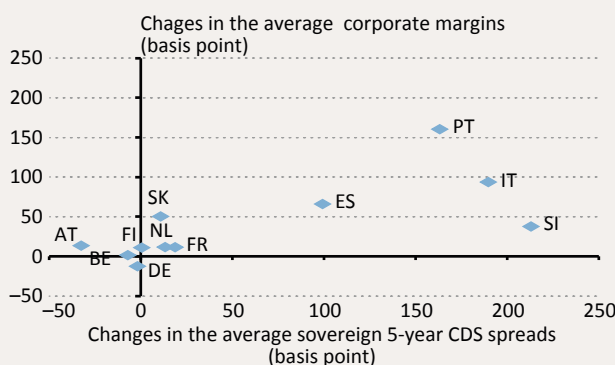
Note: In addition to the 40-60 and 20-80 percentile values of the banking sectors of the Member States, the chart shows the median value for the periphery countries.
Sources: ECB CDB.

Chart 4
Annual growth rate of corporate loans in euro-area countries



Note: North (Austria, Germany, Netherland and Finland), South (Spain, Italy, Portugal and Greece).
Source: ECB.

Chart 5
Changes in sovereign risk premiums and corporate loan spreads between 2010 H1 and 2013 H1



Sources: Bloomberg, ECB.

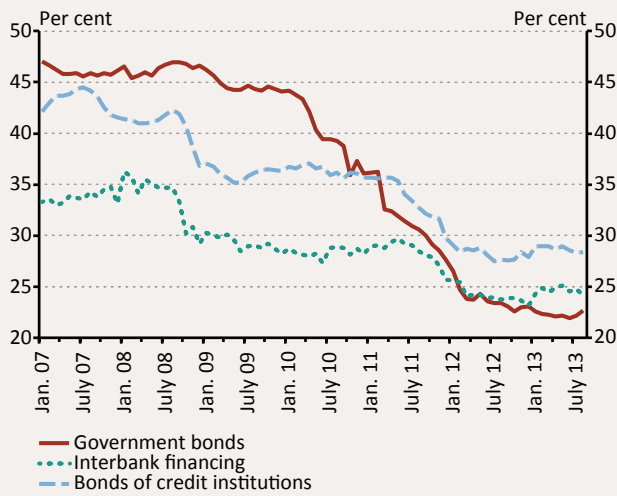
Significant asymmetry can be observed in the decline in corporate lending in the euro area. In the ECB's July lending survey, banks of member countries reported further tightening in credit conditions. Tightening affected both interest rates and non-price conditions. In line with this, outstanding corporate loans continue to shrink at an accelerating pace. However, there are significant differences in dynamics between the different member countries. Namely, simultaneously with the 8.5 per cent decline in the loans outstanding of southern countries, there was 0.3 per cent growth in the northern countries (Chart 4). Moreover, within the euro area, the reliance on bank financing of the companies (small and medium-sized enterprises in particular) in the debt-ridden southern countries is higher.

Unfavourable investor sentiment may also amplify negative feedback between sovereign and bank risks. The segmented nature of the euro-area financial markets is mostly reflected in sovereign debt yields and bank funding costs, and a close relationship can be observed between these two variables (Chart 5). Interest rate spreads on corporate loans increased to a greater extent in countries where there was a higher rise in the cost of financing sovereign debt. Consequently, companies in periphery countries may borrow at rates higher than their northern counterparts (by as much as 3–4 percentage points). In addition, since the outbreak of the crisis the share of cross-border activities in the euro area has fallen to three quarters in interbank financing and to two thirds in the case of bank bonds (Chart 6). The funds missing due to the above are covered partly by financing provided by the ECB and partly by banks' deleveraging. Moreover, the share of domestic securities increased considerably within banks' government securities portfolios, which strengthens the unfavourable relationship between sovereign and bank risks described above. All of these developments increase the segmentation of money and capital markets, impairing the efficiency of financial intermediation.¹

Downside risks to global economic growth. According to the IMF forecast, euro-area GDP as a whole may begin growing in 2014 (Chart 7). At the same time, due to the financial system fragmentation and the lack of support to lending, putting government debt and growth onto a sustainable path is questionable. Moreover, growth risks also surfaced in the developing regions, which had previously been considered the main drivers of global economic activity and had been propping up the euro-area economy as well. As a result, global economic outlook has deteriorated in the past half year due to weaker domestic demand in several developing countries. China is heading towards more sustainable but lower growth, while tighter financial

¹ The institutional system of the banking union intended for the management of these risks will only start operation in part as of mid-2014, by launching the Single Supervisory Mechanism.

Chart 6
Proportion of cross-border financing within the euro area

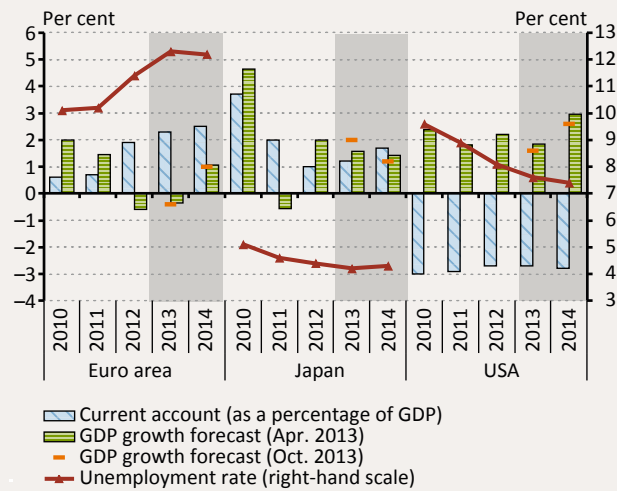


Source: ECB.

conditions and falling commodity prices are impairing the growth prospects in other emerging countries. In addition, due to lack of structural reforms, over the longer term as well it is rather unlikely that the economies of these regions will be able to return to the earlier rates of expansion.

Chart 7
Forecast of the IMF

(year-on-year)

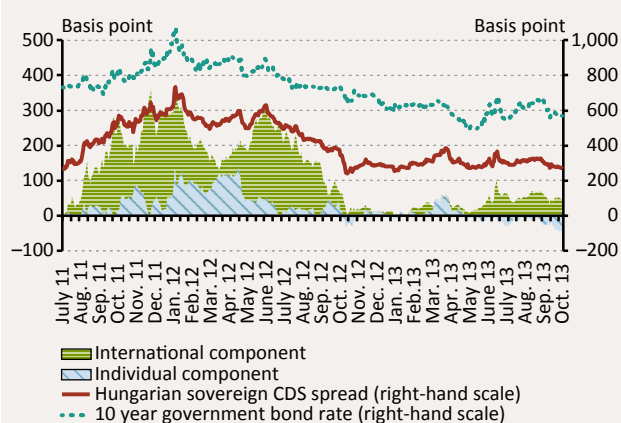


Note: Estimated values from 2012.

Sources: IMF WEO.

1.2 Improvement in the domestic economic outlook

Chart 8
Hungarian sovereign 5-year CDS spread and decomposition of its change as well as developments in the 10-year government securities yield



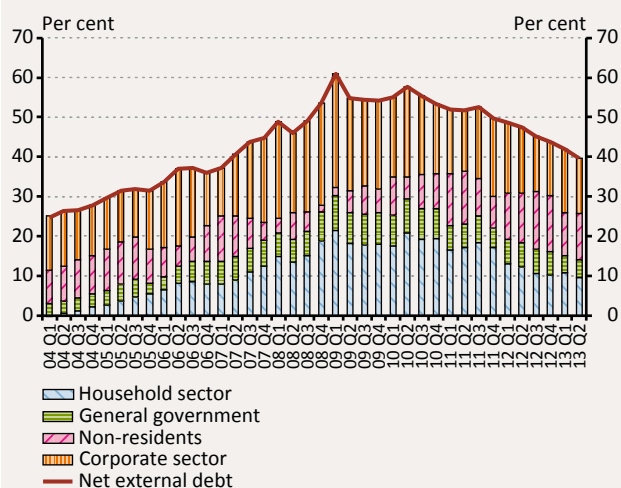
Source: MNB.

The deterioration in investor sentiment had a strong impact on the domestic government securities market.

Although in June the concerns related to Fed tapering also had a negative effect on Hungary's risk assessment, in September CDS spreads were once again fluctuating around the favourable levels observed at the end of May (Chart 8). By contrast, the impact of the yield increases seen at the international level was strongly visible in the government securities market. The yield of 10-year bonds increased from around 5.5 per cent at the end of May to 6.5 per cent by the end of August.

Favourable external balance may prove lasting. The external surplus of the Hungarian economy may increase further in 2013, before stabilising at a high level in 2014. This improvement is attributable to a further gradual rise in net exports, as well as increased use of EU transfers. Net external debt may continue to decline in parallel with a further improvement in the external balance (Chart 9), which may reduce the external vulnerability of the country.

Chart 9
Open FX position of the main sectors as a percentage of GDP



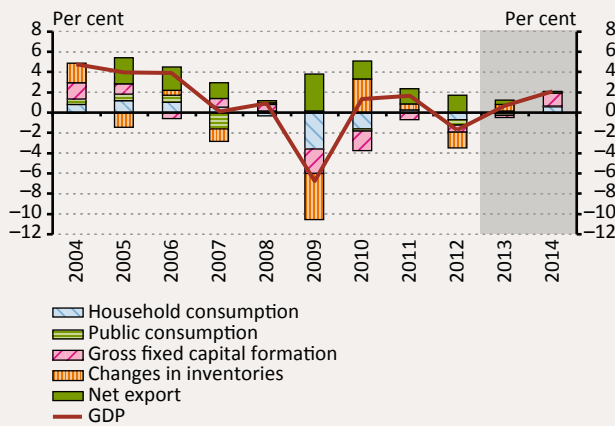
Source: MNB.

Improving domestic growth prospects. In 2013 Q1, the Hungarian economy recovered from recession, and more growth in real GDP is expected in the upcoming quarters (Chart 10). Exports may continue to be the primary source of growth. As a result of an increase in employment and real wages, a slight pick-up in domestic demand and growth in investment are expected from 2014. This latter factor may be supported by the implementation of investment by small and medium-sized enterprises financed from the Funding for Growth Scheme. Extension of this programme until end-2014 may strengthen this positive effect.

The stress level of domestic financial markets rose slightly.

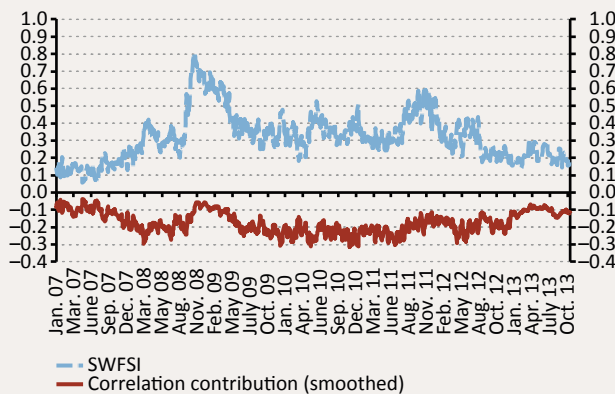
Compared to the January–May period, a slight rise was experienced in the average level of the System-Wide Financial Stress Index (SWFSI). However, this level is still 25 per cent below the average value measured in 2012 (Chart 11). This rise is mainly attributable to the increase in the bank component. In 2013, the indices for the individual financial markets showed stronger systematic and lasting

Chart 10
Domestic GDP growth
 (year-on-year)



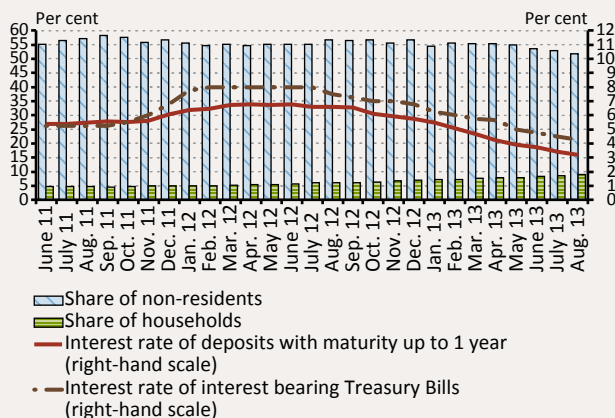
Source: Quarterly Report on Inflation, September 2013, MNB.

Chart 11
System-Wide Financial Stress Index (SWFSI)



Note: A higher value of the SWFSI denotes higher stress. The correlation indicator of the SWFSI measures co-movement among markets.
 Source: MNB.

Chart 12
Share of households and non-residents in the domestic government securities market and interest rate on retail deposits and government securities



Sources: Government Debt Management Agency and MNB.

co-movement than in previous years, which is advantageous because of the low stress level. On the whole, the current developments in financial markets still cannot be considered significant in terms of systemic risk.

Liquidity risks remain moderate in the government bond market. During the past half year, there was only a slight increase in the stress level of the secondary market of government bonds in terms of credit and liquidity risks; therefore, liquidity risks can be considered as low.

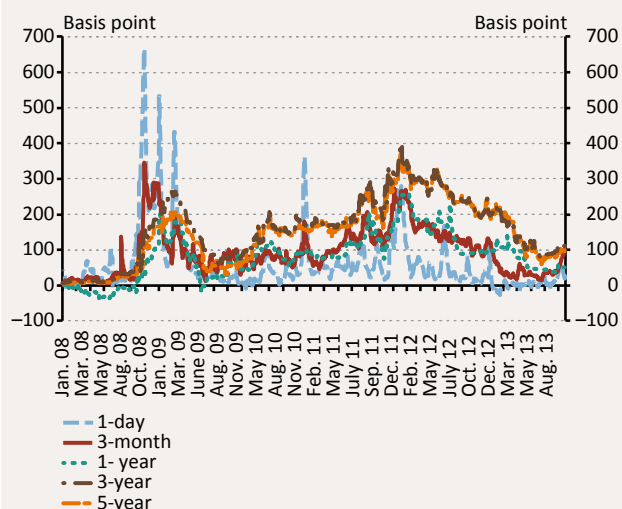
Households' share of the government securities market increased further. The average interest rate on retail government securities continues to be higher than deposit rates, encouraging households to hold more government securities. As a result, their share within the total issued amount increased to nearly 9 per cent by end-July (Chart 12). In parallel with this, a decline in non-residents' share was observed. However, the liquidity risks of the government securities market continue to be significant, due to the high share of foreign investors as well as the considerable holdings of some market participants, which are suitable for influencing the market.

Non-residents' long forint position increased in the highly liquid spot foreign currency market. In early 2013, non-residents built up significant synthetic forward short forint positions using spot and FX swap transactions, before taking long forint positions of similar size until July 2013. Starting from end-2012, domestic agents built up significant long forint forward positions.

In spite of the fragility of the FX swap market, spreads declined considerably. The stress level in the FX swap market showed significant volatility in 2013, reflecting the fragility of this market. The decline in FX swap spreads seen since April 2013 continued, with this fall more explicit at longer maturities (Chart 13). Domestic swap spreads declined in regional comparison as well. In the 3-month segment, the levels of Hungarian and Polish spreads have been practically identical since August 2013, although at end-2012 the difference was still 130 basis points. For 5-year maturities, the spread calculated from forint quotations is currently only 40 basis points higher than the Polish spreads, whereas the difference at the beginning of the year was 140 basis points. On the whole, the effect of the exchange rate appreciation between March and June 2013 on the swap market was positive. Accordingly, liquidity risks declined slightly as a result of the stagnation in swaps outstanding and the appreciation in the forint exchange rate since March 2013.

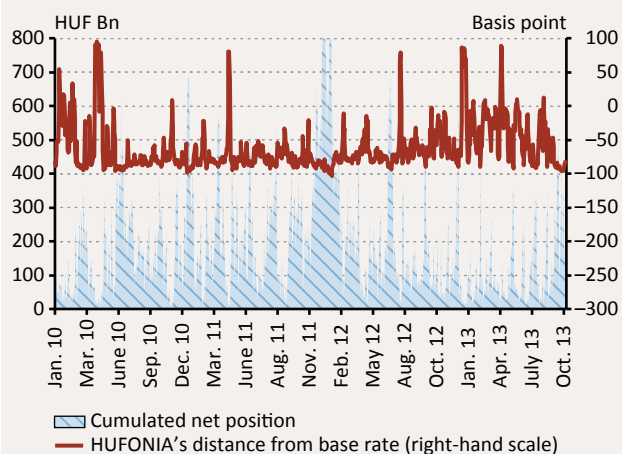
The forint interbank market shows signs of more active liquidity management. Compared to what was typical since

Chart 13
FX swap spreads



Sources: MNB and Bloomberg.

Chart 14
Central bank overnight deposits outstanding (one-month moving average) and the distance of the HUFONIA from the base rate



Source: MNB.

the outbreak of the crisis, the volatility of the average interest rate of the overnight unsecured interbank forint market (HUFONIA) increased starting from 2012 Q4. This meant that compared to the earlier situation the HUFONIA departed from the bottom of the interest rate corridor and approached the value of the central bank policy rate (Chart 14), i.e. the level considered to be optimal in terms of the efficiency of interest rate transmission, to a greater extent and more often. Nevertheless, the HUFONIA continued to stay mostly in the lower part of the interest rate corridor, below the base rate, indicating ample available forint liquidity at the system level, while the increased volatility was a sign of more active bank liquidity management than previously. All this is corroborated by the fact that in the past one year the banking sector's overnight deposits with the MNB dropped, while the turnover of the interbank forint depo market increased slightly. This shows that in their liquidity management some banks are relying on interbank markets to a greater extent than before.

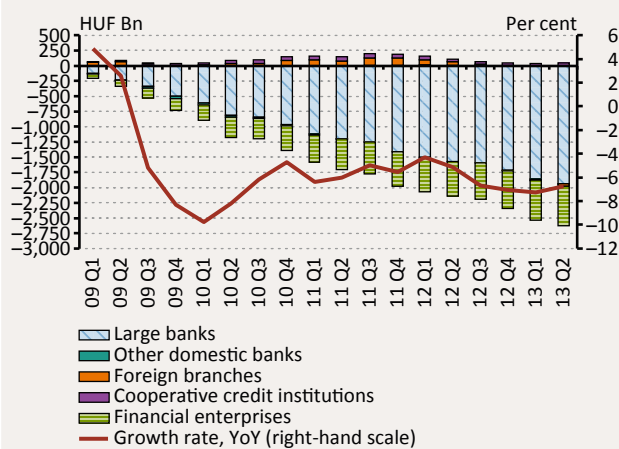
2 Domestic lending developments – Lasting change requires continued easing in credit supply constraints

Outstanding corporate loans of financial intermediaries continued to contract in 2013 H1. Credit conditions remain tight, which banks mainly justified with macroeconomic uncertainties. At the same time, signs of a pick-up are being observed on the demand side, including long-term loans as well, a development which has been unprecedented since 2010. As a result of the FGS being extended in September, the downtrend in corporate lending may come to a halt, and a turnaround in lending may take place in the SME segment as early as 2014, although further easing in large banks' credit conditions will be needed to sustain an uptrend. The greater willingness to lend of cooperative credit institutions and smaller banks may improve access to credit, but – due to the current liquidity and capital constraints – these institutions can only partly substitute for large banks over the short run. At cooperative credit institutions, the planned capital increases by the state may contribute to the easing of capital constraints, while the provision of liquidity may be facilitated by the extended FGS. More efficient utilisation of the FGS would be supported by a marked increase in the activity of guarantee institutions, which would also facilitate access to credit for smaller enterprises.

Outstanding household loans also continued to contract in 2013 H1, mainly due to households' protracted deleveraging and cautious approach to borrowing. This year, however, stronger demand has been observed. As a result, new lending increased for the first time in several years. The easing of price and non-price credit conditions may also have contributed to larger new lending, although spreads can still be considered high in international comparison, despite a decline in nominal interest rates.

2.1 Over the short run, corporate lending is determined by large banks' willingness to lend

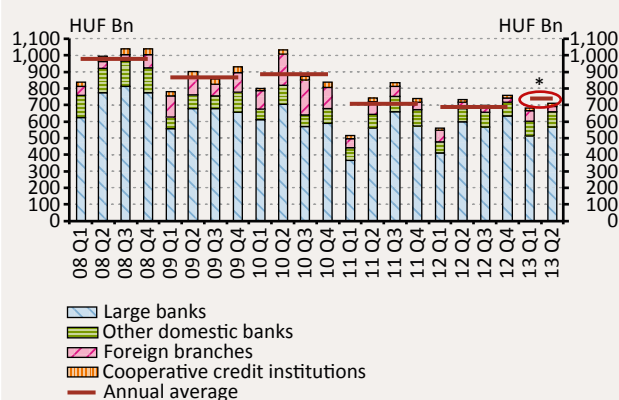
Chart 15
Annual growth rate of and cumulative changes in corporate loans by types of institutions



Source: MNB.

Large banks with high market shares continue to be characterised by deleveraging in corporate lending. In the Hungarian banking sector, the seven large banks hold a market share in excess of 80 per cent in corporate lending. During the pre-crisis period, these banks were characterised by dynamic lending. However, following escalation of the crisis in 2008, a massive decline was seen in loans outstanding, due to rising risks and losses (Chart 15). This simultaneously determines the lending activity of the whole banking sector as well, as other credit institutions are unable to offset the contraction in large banks' lending. While foreign branches typically have their special clientele and product range, small and medium-sized banks and mutual savings banks only replaced the declining stock with temporary and lower-volume new loans. In addition to credit institutions, financial enterprises have also been characterised by a significant cumulative contraction in loans outstanding in recent years. These trends continued in the past half year as well: it was mainly forint loans outstanding that decreased in the period under review, but foreign currency loans also declined slightly.

Chart 16
Quarterly volumes and annual average of new loans to corporations by types of institutions



* Pro-rata annual average.

Source: MNB.

Developments in new lending as a whole are more favourable, but are unable to offset the significant volume of repayments. For the first two quarters of 2013, the pro-rata annual average amount of new loans was approximately HUF 740 billion, exceeding both the 2011 and 2012 values. New loans exceed the value of the previous two years primarily as a result of forint lending. Examination of the amount of new loans by individual groups of institutions reveals that, although the contraction in large banks' loans outstanding is significant, these banks are also responsible for the highest amounts of loan originations (Chart 16).² All this means that the major decline in large banks' loans outstanding since the crisis is primarily the result of loans extended prior to the crisis maturing, and that new lending does not offset this contraction. Compared to large banks, the share of other institutions in total lending is less significant: the share of small and medium-sized banks

² It should be added that the higher gross lending may also indicate shorter maturities; therefore, it does not necessarily mean additional financing for companies.

amounted to 13 per cent, foreign branches accounted for 5 per cent, and the share of cooperative credit institutions reached merely 2 per cent in the past one-year period. At the same time, there may be a major increase in corporate lending by cooperative credit institutions in the coming years as a result of the adoption of the law aiming at the restructuring of the sector and the expected capital injection by the state (Box 1).

Box 1

Restructuring the sector of cooperative credit institutions

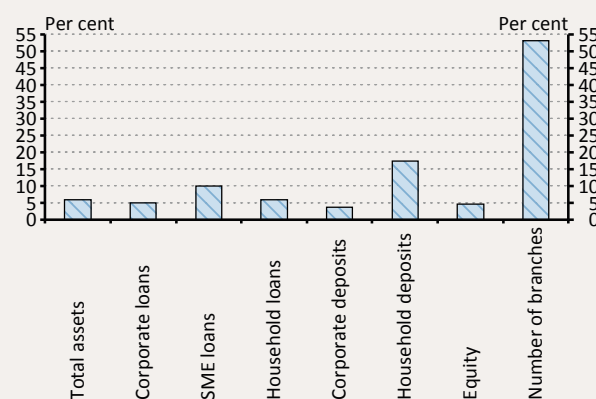
The sector of cooperative credit institutions provides financial infrastructure for a significant part of the country that commercial banks – on the basis of the cost/benefit principle or for other strategic reasons – cannot or do not want to cover with products of financial intermediation. The more rural focus of cooperative credit institutions contributes to the deepening of financial intermediation and provides better access to funds for the SME segment. At the same time, the cooperative sector involves considerable risks. Economies of scale and risk diversification cannot apply because of the small size of individual institutions, and – based on earlier experiences – there may also be serious problems with capital adequacy. One solution to the management of these risks may be stronger integration of cooperative credit institutions, which has already been implemented in many countries.

The need for deeper integration already arose several times before the promulgation of the new act on the integration of cooperative credit institutions. The most significant integration was also enforced by the state, by making it mandatory for cooperative credit institutions to participate in the bank consolidation. Later, the cooperative credit institutions that were not involved in consolidation decided to implement various forms of integration on a voluntary basis as well, but one common feature of these efforts was that they did not have adequate financial strength to solve the liquidity and capital problems of the members, and so they ran into problems in crisis management.

In the act on the integration of cooperatives,³ the Parliament adopted a regulation pointing to a strongly centralised integration that prescribes mandatory membership, contains cross guarantees vis-à-vis one another, is harmonised from a business point of view and allows for the exploitation of synergies. Although the Hungarian State acquires an important ownership position in the sector, pursuant to the Act it will be used for the restructuring, reorganisation and professionalization of the sector. Following that, the state intends to sell its position in this upgraded, strengthened sector.

The role of the state is growing as the law gives strong rights to Takarékbank and the Integration Organisation of Cooperative Credit Institutions (Integration Organisation), the members of which include not only the cooperative credit institutions,⁴ but also Takarékbank and the Hungarian Development Bank (MFB). The Board of Directors of Takarékbank may limit the operation of cooperative credit institutions that disobey instructions or provisions of law, and may even dismiss the heads of these organisations. The Board of Directors of the Integration Organisation may exclude a member from the integration, which means the immediate loss of the operating licence. Another important management right is that the integration's permit is required for the appointment of executive officers of the members.

The market share of cooperative credit institutions in the banking system



Source: MNB.

³ Act CXXXV of 2013 on the integration of cooperative credit institutions and amendments to economy-related legal regulations

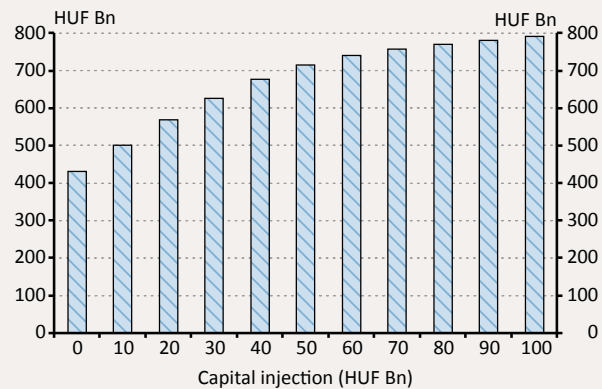
⁴ Pursuant to the law, cooperative credit institutions include cooperative credit institutions and all credit institutions (practically cooperative credit institutions turned into banks) that were members of any voluntary cooperative credit institution protection fund on 1 January 2013.

The assets of the Integration Organisation consist of the MFB's HUF 1 billion contribution and, as successor in title, of the assets of the integrations being dissolved.⁵ The assets are further increased by the annual membership fees to be paid by members on a mandatory basis.

The Integration Organisation adopts rules that are mandatory for its members other than the MFB in respect of accounting, the system of internal audit, the suitability of executive officers, the rules of providing financial assistance for cooperative credit institutions and the rules for replenishment of safety reserves. Within 120 days from the promulgation of the Act, Takarékbank, as the central bank of the Integration Organisation, must adopt new risk management rules that uniformly apply to all members of the integration, except the MFB. As of the 30th day following the above, they have joint and several liability for their newly emerging obligations. In order to implement a single business policy, Takarékbank regulates risk management (credit approval, risk monitoring, depositing, cash management, investment policy, classification and loan loss provisioning, individual capital requirements), as well as centralises marketing and develops a uniform IT system.

Strong integration may have benefits both immediately and over the longer term. One immediate advantage is that the prudential supervision acknowledges the new integration as a close risk pool, and thus the capital adequacy requirement may be lower. Over the longer term, a much more cost-effective organisation with a single IT system, product range, and risk and liquidity management may develop, which is able to compete with commercial banks. This is all the more possible for the sector because, considering the current liquidity and capital constraints, its lending buffer exceeds HUF 400 billion. As capital adequacy constitutes a bottleneck in terms of constraints, the capital increase planned by the state may result in a further improvement in lending capacity. All this points to a tangible increase in this sector's role in financial intermediation.

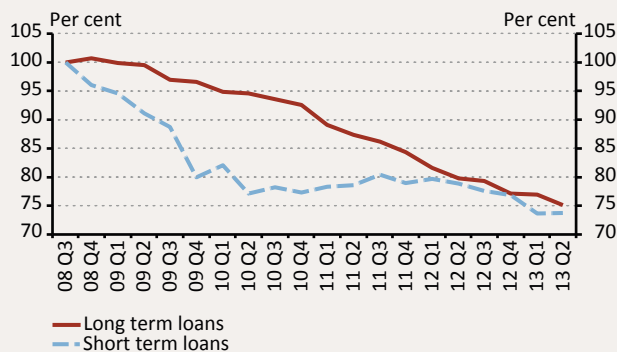
Lending capacity of cooperative credit institutions depending on the size of capital injection



Source: MNB.

Chart 17
Changes in credit institutions' corporate loans outstanding by original maturity

(September 2008 = 100 per cent)



Source: MNB.

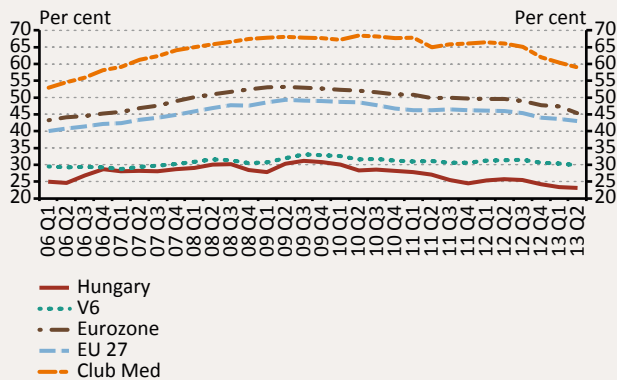
The contraction in loans outstanding since the crisis affects both long-term and short-term loans. Although the rate of decline in short-term loans was lower than that of long-term loans between 2010 and end-2011, short-term loans have also been falling considerably again since 2012 (Chart 17). This continued in 2013 H1 as well, as both short-term and long-term loans outstanding decreased in the period under review. The steady decline in long-term loans outstanding also has a negative effect on potential output, due to the lack of investment. 2013 Q2 data continue to reflect the resulting dual trend: although the volume of investment grew during the quarter under review, the pick-up is primarily related to the investment of the government and quasi-fiscal segments and not to that of the private sector.⁶

The magnitude of the decline in loans outstanding in Hungary cannot be explained with pre-crisis rise in corporate indebtedness. In several countries, deleveraging by the banking sector can be seen as a consequence of excessive pre-crisis lending. However, an international

⁵ OTIVA, TAKIVA, REPIVA, HBA.

⁶ MNB: Quarterly Report on Inflation (September 2013).

Chart 18
Corporate loans/GDP in international comparison

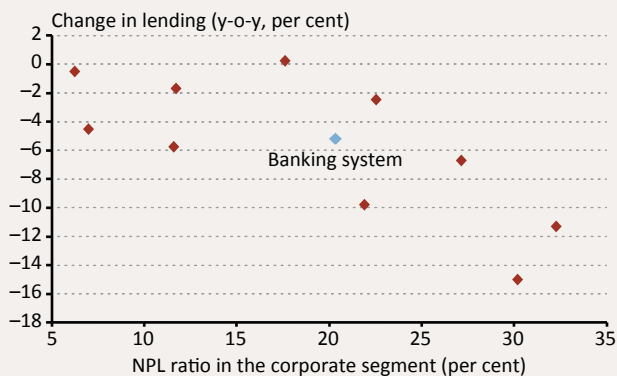


Sources: National central banks, ECB, MNB.

comparison reveals that on the whole corporate loan expansion was not outstanding in Hungary during the three-year period immediately preceding the crisis. While corporate loans as a proportion of GDP more than doubled in some countries between 2005 and 2008, this ratio increased by barely 25 per cent in Hungary (Chart 18).

Chart 19
Lending by banks active in the corporate segment and the ratio of their non-performing loans

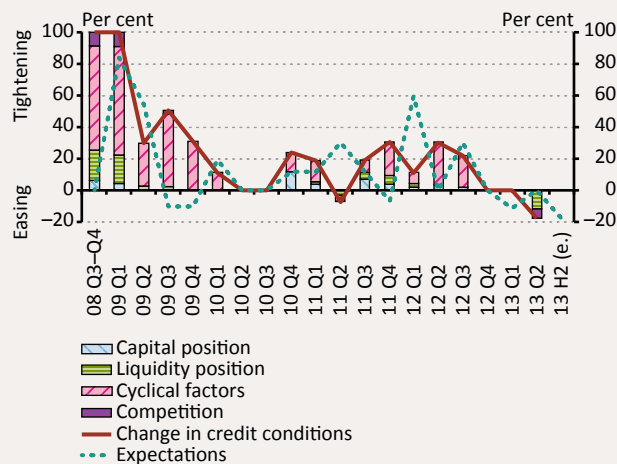
(June 2013)



Note: Banks with a market share of more than 2 per cent.
Source: MNB.

The strongest declines in corporate lending have been seen at banks with worse portfolio quality. Although the contraction in lending is fundamentally attributable to the weak macro environment and profitability outlook as well as the deteriorating predictability of the regulatory environment, the ratio of non-performing loans may also play a significant role. An examination of changes in lending activity at the level of individual banks reveals that the decline is the strongest at banks with high NPL stocks (Chart 19). At the same time, banks that have lower NPL exposure experienced smaller declines, or their corporate loans outstanding even increased between June 2012 and June 2013.

Chart 20
Contribution of individual factors to changes in banks' credit conditions in the corporate segment



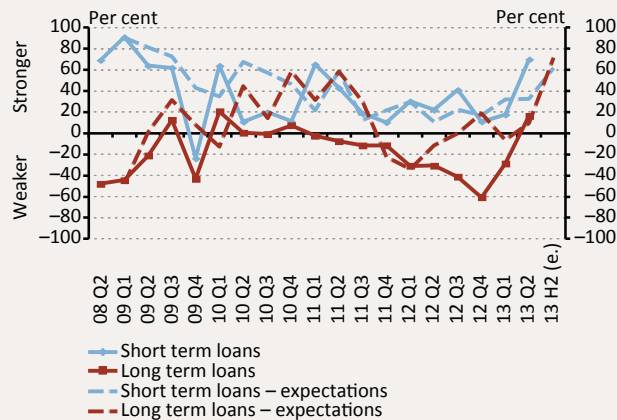
Source: MNB.

Credit conditions have started to ease. According to the Lending Survey, the domestic banking sector's corporate lending standards remained unchanged in Q1. In Q2, however, a net 18 per cent of responding banks have already eased their credit conditions, although the majority of respondents continue to pursue cautious lending policies (Chart 20). Widespread easing of credit conditions is still hindered by macroeconomic uncertainty, but the liquidity situation already points to easing in more than half of the banking sector. Tight credit conditions significantly narrow the range of clients considered creditworthy by banks, causing difficulties for many companies when it comes to accessing credit.

Signs of an upturn are also being seen on the demand side as well. According to banks' responses in the 2013 Q2 Lending Survey, they perceived an increase in demand for both investment loans and short-term loans (Chart 21). The increase in investment loan demand broke a 2-year trend of increasing demand for short-term bank loans and falling demand for long-term loans. A significant portion of banks also expect stronger demand going forward. The rebound in economic growth and the Funding for Growth Scheme may contribute to the perceived improvement in demand for investment loans. Increasing investment activity is primarily observed in the case of export-oriented companies and their suppliers, in parallel with a pick-up in European markets.

Creditworthy customers can access to loans at increasingly favourable interest rate conditions. The reductions in the central bank base rate since August 2012 have resulted in a significant decrease (totalling approximately 3 percentage

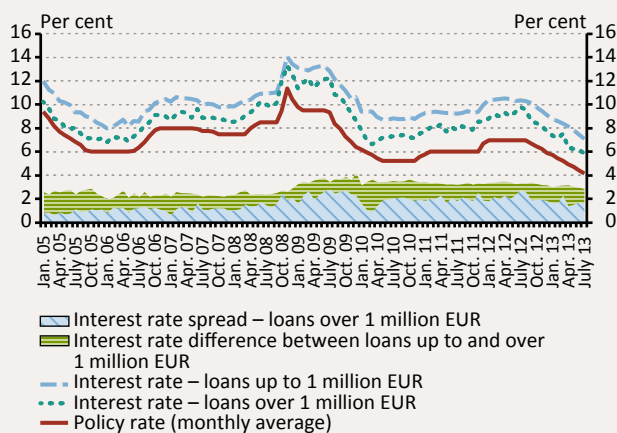
Chart 21
Changes in demand perceived by banks by maturity



Source: MNB, based on banks' responses.

points) in corporate lending rates (Chart 22). The impact of the interest rate reductions is visible both in loans exceeding EUR 1 million and loans below that amount. However, taking account of the tight non-price conditions, it is presumable that the favourable interest rate conditions are available only to a narrower range of companies, whereas a significant portion of companies may have no access to credit. Therefore, there will also have to be an increase in banks' willingness to take risks and a wide-ranging easing in non-price conditions in order for a turnaround to occur in lending in the corporate segment as a whole. The SME sector is particularly sensitive to the tight credit supply and credit rationing, as domestic bank loans are a key source of financing for these companies (Box 2).

Chart 22
Credit institutions' interest rates and spreads on corporate loans by amounts of loans and the central bank base rate



Source: MNB.

Box 2

Investment financing in the SME sector

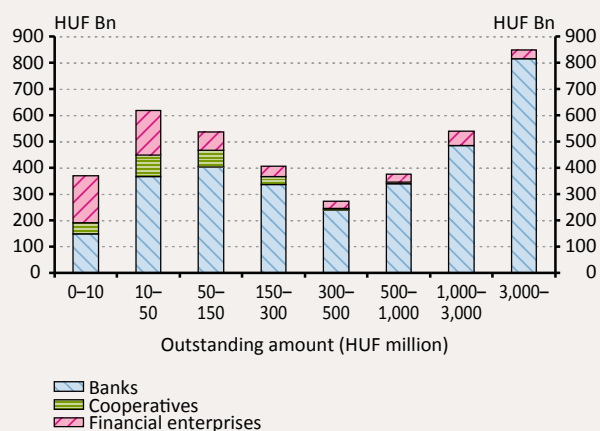
Bank loans and funds from foreign parent companies constitute the greater part of financing for non-financial corporations (NFCs). In 2013 Q1, bank loans accounted for 31 per cent and cross-border loans accounted for 48 per cent of NFCs' external financing. However, if the credit supply of the banking sector tightens, cross-border loans can only facilitate the financing of firms with a parent company. As alternative funding sources mainly loans from other financial intermediaries and the securities market may be the options for domestic-owned enterprises. In the case of a bank credit crunch, it is mainly the SME sector that is hit by financing constraints.⁷ On the one hand, due to their size, SMEs are unable to access the corporate bond market. On the other hand, financing by foreign companies is rare within the sector. Consequently, SMEs may mainly rely on non-bank borrowing and trade credit as alternative financing. The latter is typically short-term, and therefore, financial enterprises or cooperative credit institutions are the ones that can provide longer-term funding for SMEs.

⁷ At the same time, the prevail of securitization may contribute to access to credit of SMEs, as corporate loans get out of the balance sheets of banks with this, which raises lending capacity subject to unchanged willingness-to-lend.

In addition to credit institutions, financial enterprises also play a significant role in SME financing. While the market share of the sector is 12 per cent within total corporate loans (roughly equalling that of small and medium-sized banks), they account for a larger, 15 per cent share in the case of long-term loans. Moreover, their share is even greater in lower-amount lending with maturities of over one year: while banks clearly dominate in transactions of a higher magnitude (hundreds of millions or in the magnitude of billions), the share of financial enterprises in the case of contracts below HUF 50 million is 35 per cent. Together with cooperative credit institutions they account for nearly 50 per cent of the lower-amount segment under review. Asset-financing (leasing) transactions mostly dominate in the longer-term transactions of financial enterprises.

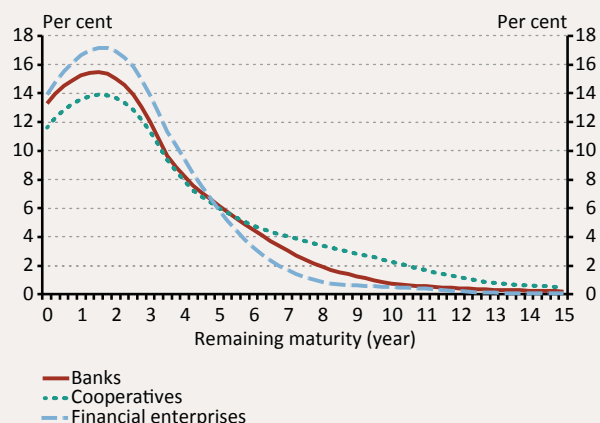
In the case of SME loans with maturities over one year, the residual maturity is also lower for financial enterprises' relatively lower-amount SME loans, compared to those of credit institutions. While the average residual maturity of banks' long-term SME loans is 3.4 years, that of financial enterprises is 2.8 years. However, cooperative credit institutions have contracts with the longest average maturity, as in their case the average residual maturity is 4.2 years. The maturity of financial enterprises' SME loans most frequently falls within the 1–5-year period, while maturities over 5 years are the most frequent in the case of cooperative credit institutions. At the same time, this also means that on average the credits of SMEs which borrowed investment loans from financial enterprises expire the earliest: 76 per cent of contracts end within 5 years.

SME loans over 1 yr maturity broken down by outstanding amount and lenders



Source: CCIS.

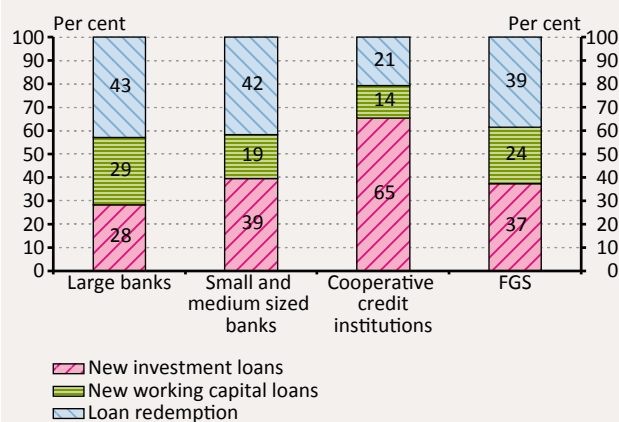
Distribution of remaining maturity of SME loans outstanding with an original maturity over 1 yr



Source: CCIS.

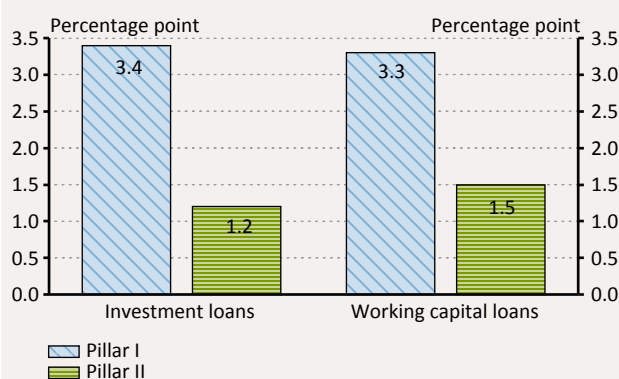
Due to the stronger demand for new loans, funds were regrouped from Pillar II into Pillar I of the FGS. Achieving more than 93 per cent utilisation, a total amount of HUF 701 billion was lent within the framework of nearly 10,000 contracts in the Funding for Growth Scheme announced on 4 April and launched at the beginning of June 2013. In order to satisfy the stronger demand for Pillar I, on 1 August 2013 the Monetary Council decided to allow credit institutions to use the allocated credit line still available in Pillar II, which facilitated the refinancing of foreign currency loans, for lending in accordance with the conditions of Pillar I. As a result, contracts amounting to a total HUF 472 billion and HUF 228 billion were extended in Pillar I and Pillar II, respectively.

Chart 23
Distribution of loans contracted in Pillar I of the FGS by types of loans and institutions



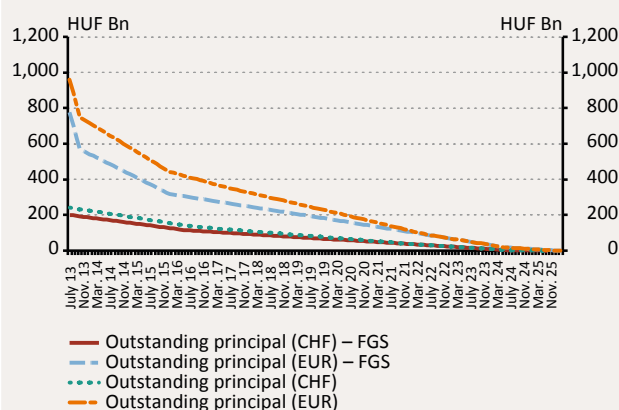
Source: MNB.

Chart 24
Decline in interest rate on loans refinanced in Pillars I and II



Source: MNB.

Chart 25
Estimated principal amortisation of SME foreign currency loans outstanding in June 2013 with and without loan refinancing



Note: The chart only depicts the amortisation of SME loans that do not have natural hedge.

Source: MNB estimate.

New loans, including investment loans in particular, comprise a major part of Pillar I in the FGS. New loans accounted for 63 per cent of disbursements in Pillar I, while loan refinancing only amounted to 37 per cent (Chart 23). The high ratio of new loans in Pillar I means that the Scheme had a significant impact on the activity of the demand and supply sides. It is particularly favourable that 60 per cent of the new loans are investment loans, which exceeds our preliminary expectations. With regard to the types of institutions, it can be established that the ratios of refinancing and new loans extended by large banks as well as small and medium-sized banks were nearly identical, but within new loans the share of investment loans was higher in the case of small and medium-sized banks. In Pillar I, investment loans accounted for nearly two thirds of disbursements by mutual savings banks, while the share of loan refinancing was nearly 20 per cent.

Companies' interest burdens declined considerably in the case of loan refinancing, and their exchange rate exposure also decreased. Firstly, the objective of the Scheme in the case of loan refinancing was to reduce the interest burden, and secondly, to mitigate the exchange rate risk in Pillar II. In Pillar I, the interest rates on refinancing loans to be paid by customers declined by 3.3–3.4 percentage points on average, and by 1.2–1.5 percentage points in the case of refinancing in Pillar II (Chart 24). In addition, as a result of the conversion of foreign currency-denominated loans into forints, the exchange rate risks of companies participating in Pillar II of the FGS declined or were eliminated entirely. In Pillar II, more than 80 per cent of the refinanced loans were euro-denominated loans. The share of Swiss franc exceeded 20 per cent only in the case of investment loans. As a result of loan refinancing, companies' sensitivity to the exchange rate risk declines over the entire time to maturity of the loans outstanding, and thus the vulnerability of the country to external shocks also decreases (Chart 25).

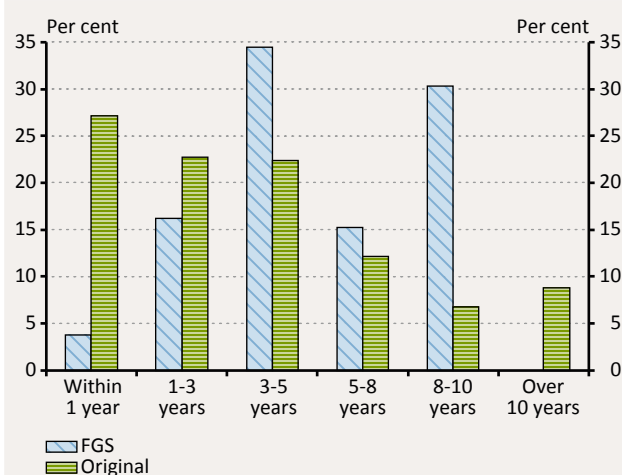
In the case of refinancing loans extended via the FGS, maturities of working capital loans grew considerably longer. During the crisis, risk aversion was reflected not only in subdued lending, as banks also curtailed maturities. Accordingly, the easing in credit supply constraints is also shown by the fact that – in the Scheme – maturities grew tangibly longer than before (Chart 26). This is basically observed in the case of working capital loans, as the maximum 10-year maturity of the FGS is an already perceptible constraint for investment loans. In the case of loan refinancing, the average maturity of loans extended for the refinancing of investment loans is 7.6 years, while that of working capital loans is 5.9 years.

Table 1
Comparison of the first and second phases of the Funding for Growth Scheme

	FGS – first phase	FGS – second phase
Refinancing interest rate	0 per cent	0 per cent
Maximum spread	2.5 percentage point	2.5 percentage point
Time window	4 months June 2013–September 2013	15 months October 2013–December 2014
Allocated sum	425 billions (I pillar) 325 billions (II pillar)	Initially 500 billions, can be extended to the maximum of 2,000 billions HUF
Form of allocation	“in accordance with rules of card dealing”	“first come first serve”
Estimated effect on GDP	0.2–0.5 per cent	In the first period: 0.2–0.4 per cent

Source: MNB.

Chart 26
Comparison of the maturity structures of business loans refinanced within the FGS



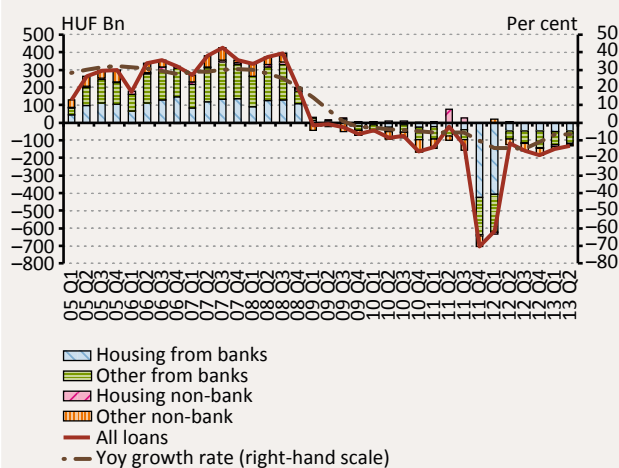
Source: MNB.

In the SME segment, the Scheme facilitated stronger competition. In the Scheme, the possibility of switching banks increased competition, as it better encouraged credit institutions to keep their current customers and acquire new ones. In the case of loan refinancing, based on the contract amount, every fifth customer on average took the opportunity to switch banks. Small and medium-sized banks as well as mutual savings banks mainly acquired new customers from other credit institutions, which is basically a result of the card dealing method, as large banks could obtain less FGS funds than their market shares. Thus, these funds were used to serve their outstanding customers' needs.

Given the success of the FGS, the Monetary Council decided to continue the programme. The favourable reception of the Funding for Growth Scheme is justification for extending it. During the extension of the Scheme, the MNB continues to provide refinancing loans with a 0 per cent interest rate. Banks are allowed to add a maximum 2.5 percentage point premium to this when they extend loans using this facility. The second phase of the Scheme covers a longer period, from 1 October until end-2014, with an initial upper limit of HUF 500 billion. Of this amount, 90 per cent is for new lending in Pillar I, while 10 per cent can be used for loan refinancing in Pillar II. In contrast to the first round, allocation within the framework of the Scheme occurs on a 'first come, first served' basis (Table 1). In order to achieve the objectives of Pillar I more efficiently, the range of possible purposes of SME loans has been narrowed. Firstly, in the case of investment loans, only activities that are closely related to the business activity can be financed via the Scheme, taking account of some individual restrictions (e.g. exclusion of loan purposes related to real estate classified as residential real estates or holiday homes, etc.). Secondly, in the case of working capital loans, the maximum maturity has been limited to one year.

2.2 Households' deleveraging continued, but determinants of lending indicate an improving trend

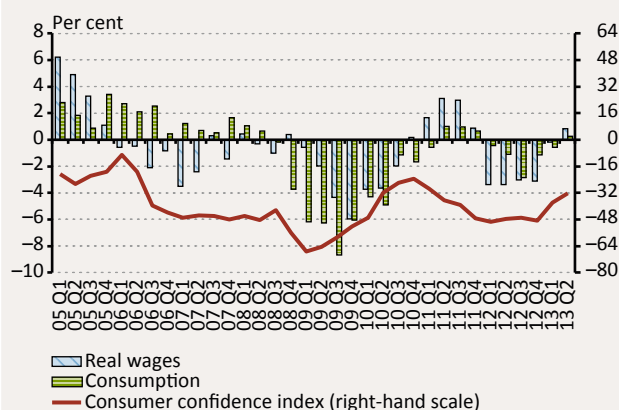
Chart 27
Annual growth rate of and net quarterly changes in household loans in two types of breakdowns



Source: MNB.

Household loans outstanding continued to decline as a result of the reduction in foreign currency loans. In 2013 Q1 and Q2, household loans outstanding fell nearly to the same extent, dropping by 6.5 per cent on a year-on-year basis (Chart 27). Almost all of the contraction in loans outstanding was the result of the reduction in foreign currency loans, while no major change took place in households' forint loans outstanding in Q2. Accordingly, currency composition of loans outstanding continues to shift in favour of forint loans. The steady decline in loans outstanding is attributable to indebted households' natural deleveraging as well as to cautious borrowing by those who do not have debts.

Chart 28
Household consumption, changes in real wages and the consumer confidence index



Source: MNB.

Slight increase in consumption demand was observed in Q2. Developments underlying household consumption improved slightly in 2013 Q2. Permanently low inflation since the beginning of the year improved households' income position via an increase in real wages, which was also reflected in a moderate rise in consumption (Chart 28). Moreover, the rise in the consumer confidence index reveals an improvement in households' longer-term income expectations, in line with the increase in employment. In addition, falling housing prices improve housing affordability (Box 3), which may have a stimulating effect on households' behaviour. All of this may result in an increase in households' consumption demand and housing investment demand.

Box 3

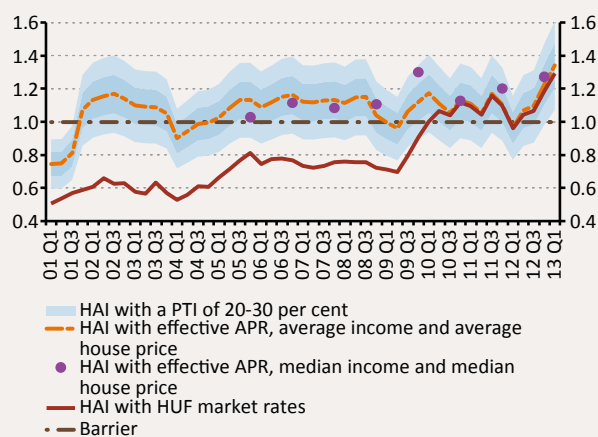
Housing Affordability Index

Housing market demand is significantly determined by the affordability of housing, i.e. whether households can afford to buy homes, and if yes, under what conditions. The HAI⁸ (Housing Affordability Index) shows the affordability of buying homes by condensing the information derived from changes in housing prices, financing costs of housing loans, credit conditions and monthly net average earnings. If the value of the HAI is 1, it shows that under a given set of credit conditions (*loan-to-value ratio, payment-to-income ratio, maturity*) a typical household (with two average earnings) has just enough monthly income to take out the mortgage loan necessary to purchase an average flat.⁹ 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, whereas with a value below 1 and considering the given credit supply factors it is unable to buy a home.

Based on the index, purchasing a home was mostly affordable for households in the 2000s, as the cost of housing loans was significantly reduced by the state interest rate subsidy and by the markedly lower lending rates of foreign currency loans. The increase in the HAI in the past one and a half years is mainly attributable to the declining APR levels following the cuts in the central bank policy rate and to the housing prices, which are still falling.

However, the actual affordability of housing is also influenced by banks' willingness to take risks as well as by households' savings position and their uncertainty about their future financial situation. While the latter is difficult to measure, banks' risk assumption is well-reflected in non-price credit conditions. In the mid-2000s, banks extended loans under more relaxed conditions (higher LTV and PTI, longer maturity), the result of which was that riskier, less creditworthy customers could also borrow for house purchase. Banks' credit conditions became considerably tighter following the crisis. Therefore, the HAI calculated with permanently fixed conditions (LTV, PTI) distorted downwards in the mid-2000s and upwards in recent years. Accordingly, the conclusion that can be drawn from the current value the index for 2013 Q1 is that the affordability of housing has increased among creditworthy households with sufficient savings.

Housing Affordability Index



Source: MNB.

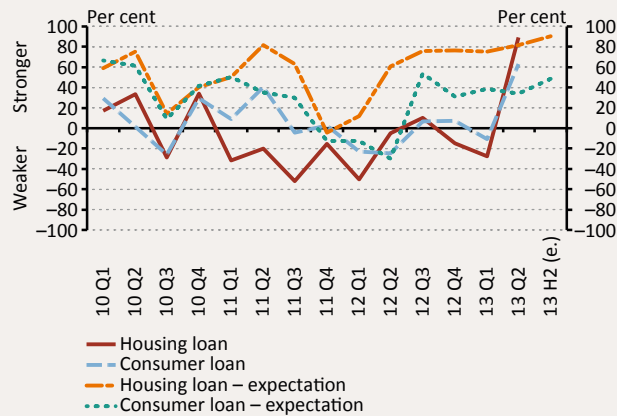
Lending to households is characterised by improving demand. Compared to earlier trends, the findings of the Lending Survey show a turnaround: credit demand perceived by most of the banks increased in 2013 Q2. A net 90 per cent of banks reported an increase in demand for housing loans and a somewhat smaller share of them indicated growing demand for consumer credit (Chart 29). The stronger demand for housing loans may mainly be attributable to the decline in lending rates as a result of cuts in the policy rate and of the state interest rate subsidy. The rising credit demand for the first time after several years is also reflected in the increase in new lending.

⁸ Source: NAR (National Association of Realtors).

⁹ Originally, the HAI was calculated with median income and median housing price. At present, in Hungary, the median income is lower than the average, and the median housing price is also lower than the average; therefore, the HAI calculated from them is close to the one calculated on the basis of the averages.

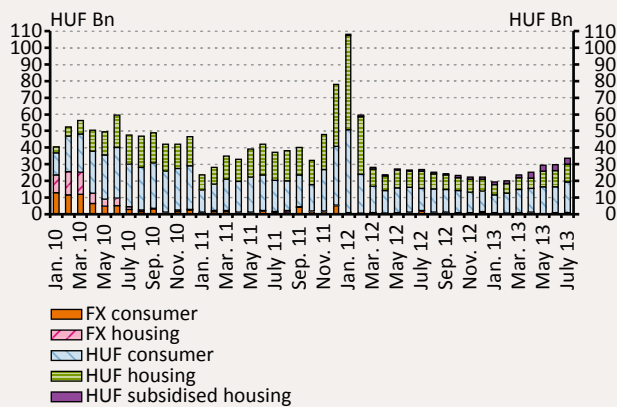
In a standard situation, the index was calculated with the help of a constant 25 per cent payment-to-income (PTI) ratio, 60 per cent loan-to-value (LTV) ratio and the average maturity of new loans. In the case of the APRs, the interest rate subsidy and the APRs on foreign currency loans were also taken into account.

Chart 29
Changes in households' credit demand



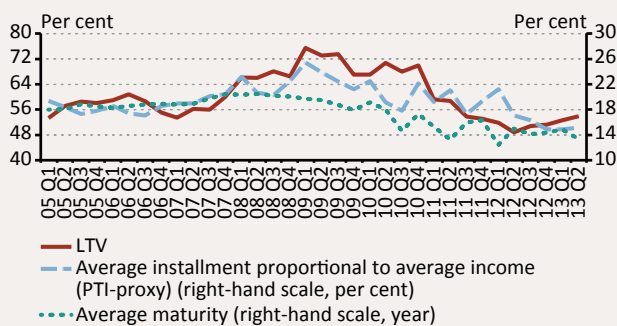
Source: MNB.

Chart 30
New household loans



Source: MNB.

Chart 31
Average LTV and estimated PTI ratios and average maturity of new housing loans



Sources: CCIS and MNB.

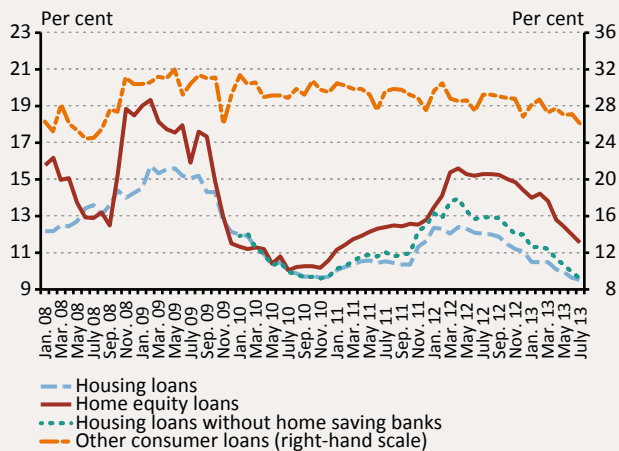
The volume of new loans moved away from the historical low observed in January 2013. The volume of credit institutions' new loans in the household segment increased steadily in the six months following January 2013. The volume of new loans amounted to HUF 33.6 billion in July, exceeding the January figure by nearly 70 per cent (Chart 30). Volumes of both housing and consumer loans increased, and new loans continue to be almost entirely forint-denominated ones. Loans with state interest rate subsidy play an important role in the rebound in new lending: the share of subsidised loans within new housing loans rose from 20 per cent in 2013 Q1 to nearly 30 per cent in Q2. However, a high concentration is seen in new lending, particularly in the case of consumer credit.

On the supply side, easing non-price conditions may also have contributed to the improvement in lending. Based on the Lending Survey, in addition to the pick-up in demand, credit conditions also continued to ease in the household segment, with further easing expected in the future. However, in spite of the easing in non-price conditions, they can be considered tight overall. Based on actual transactions, a slight increase in the loan-to-value (LTV) ratio was observed (Chart 31). In 2013, this indicator rose to somewhat above 50 per cent,¹⁰ which is still well below the 70 per cent figure observed in 2008. At the same time, the amount that can be borrowed also declined because of the lower LTV ratio, which reduced the payment-to-income (average earning) ratio (PTI) as well. Following the crisis, however, the average maturity also shortened from 20 to 15 years, which increased the PTI ratio.

In spite of the decline in nominal interest rates, households have access to credit at relatively high spreads in international comparison. The annual percentage rate charged (APR) on new loans is declining in general, which is primarily attributable to the central bank's rate-cutting cycle (Chart 32 and Box 6). In addition, the cost of housing loans was also significantly reduced by the state interest rate subsidy in the past half year. The APR on home equity loans declined more than the policy rate, but the APR on housing loans only partly tracked the downward path of the policy rate. As a result, the spread increased to some extent. The latter is considered extremely high in both European and regional comparisons (Chart 33). In June 2013, the spread on housing loans in Hungary was somewhat above 5 percentage points, while it was around 3 per cent in the majority of the countries of the region. The non-negligible difference between the spreads is attributable to the uncertain environment and the higher loan losses. In addition,

¹⁰ At the same time, the lower LTV ratio may be attributable to customers' cautiousness as well.

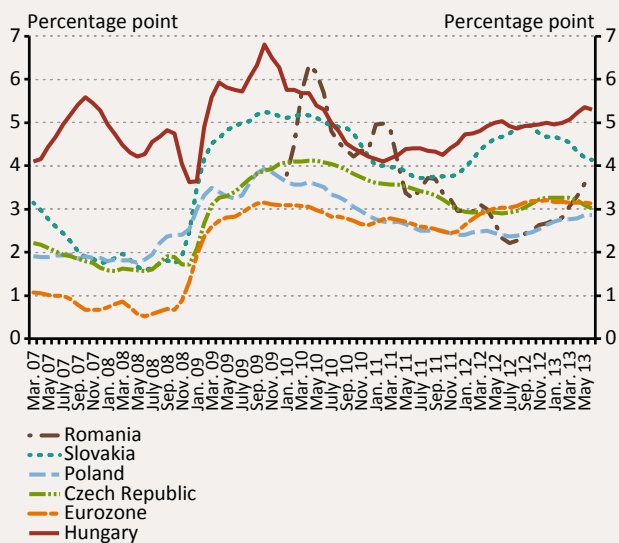
Chart 32
Annual percentage rate of charge (APR) of new forint loans to households



Source: MNB.

government programmes to help debtors and surtaxes improving the fiscal balance reduced the profitability of the sector, and banks are striving to offset these factors by keeping spreads high. At the same time, there are marked differences in spreads among banks and within products (Box 4).

Chart 33
Spread on new housing loans in a regional comparison



Source: MNB.

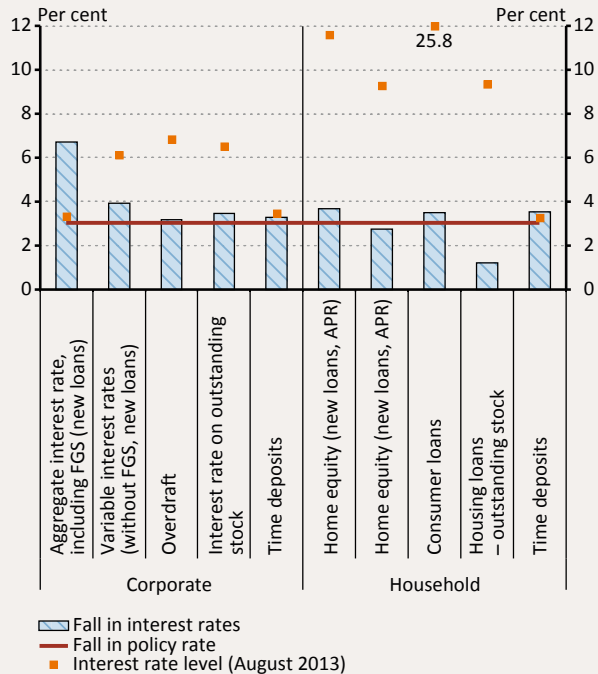
Box 4
Interest rate transmission in the household and corporate loan markets

Between August 2012 and September 2013, the Magyar Nemzeti Bank cut the policy rate by a total 3.4 percentage points in 14 steps. The effect on the real economy of these cuts depends on their pass-through into lending rates, both in the household and corporate segments. Interest rates on new loans influence the investment decisions of households and corporations, whereas changes in interest rates on outstanding portfolios affect the income position of economic agents. Developments in lending rates suggest that, overall, the cuts in the policy rate were passed through in the rates charged to customers. At the same time, it is important to emphasise that in addition to changes in the policy rate, lending rates are influenced by numerous other factors as well, which may offset or amplify the effect of base rate reductions.

The APR on household loans followed the decline in the policy rate in most credit segments. Within new loans, only the decline in the APR on housing loans and within unsecured consumer loans that of personal loans did not reach the amount of central bank steps. Looking at individual banks, significant heterogeneity is observed in the extent of lending rate cuts, which is mostly seen within unsecured consumer loans. However, in all periods, the APR on these types of products shows a significantly greater dispersion than in the case of mortgage loans. Interest rates on outstanding portfolios also declined to a lesser extent than the policy rate. There may be two underlying reasons for this: firstly, there is state interest rate subsidy on a significant portion of forint loans outstanding, and therefore, their interest rates do not change in line with market movements; secondly, the decline in the interest rate level of loans priced on a market basis may be hindered by the negligible role of the pricing tied to a reference rate in the outstanding portfolio. Transmission may be strengthened by the amendment of law on transparent pricing implemented in April 2012, which obliges reference rate-based pricing for new mortgage loans. However, the stock with new pricing principles must first be built up, which will take several years, even if there is a significant pick-up in new lending.

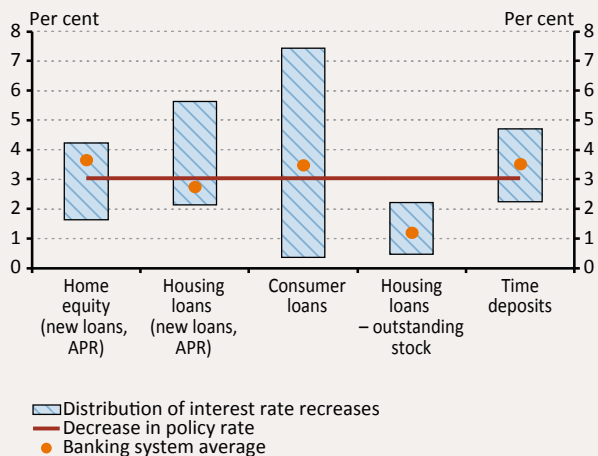
In the corporate segment, interest rate pass-through is efficient not only in new lending, but in relation to the outstanding portfolio as well, because of the prevalence of pricing tied to a reference rate. The decline in the level of the interest rate of market products exceeded the fall in the policy rate in the case of loans with variable rates or maximum one-year interest rate fixing and overdraft facilities. Meanwhile, the aggregate interest rate level of new loans fell significantly due to FGS disbursements, and thus the average interest rate level of the total new lending was already below the policy rate in August. It is worth noting that in the future the build-up of the fixed-rate stock as a result of FGS disbursements may significantly influence the effect of central bank interest rate steps on the interest rates on outstanding portfolios.

Decrease of average interest rates in the corporate and household segment between July 2012 and August 2013



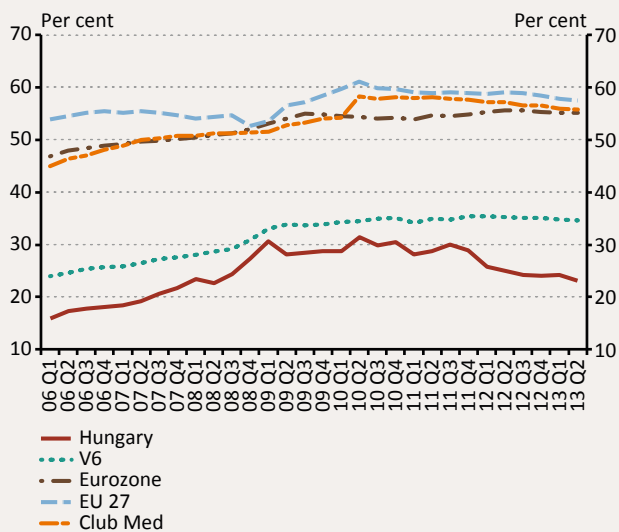
Note: The difference in the policy rate is calculated by using monthly average values. In July 2012 the average was 7 per cent, in August 2013 it was 3.97 per cent.
Source: MNB.

Distribution of the fall in forint interest rates and APRs among banks with substantial market share



Note: The distribution is determined by the minimum and maximum value of banks having greater market share than 3 per cent.
Source: MNB.

Chart 34
Household loans/GDP in international comparison



Source: ECB.

In an international comparison, the total amount of household loans outstanding is not extremely high. Households have already been through a significant amount of deleveraging since the crisis. In a regional comparison, the household credit-to-GDP ratio in Hungary can be considered average. Moreover, the credit-to-GDP ratio of Poland and the Czech Republic continued to increase even after the crisis. The household credit-to-GDP ratio in the CEE countries is still well below the euro-area average (Chart 34). Accordingly, based only on this, further adjustment of households in Hungary would not be necessary any longer. At the same time, due to the high nominal interest rate level and interest rate spread, the debt servicing burden of loans is considerably greater. This is particularly reflected in the distribution of the payment-to-income ratio across income groups, which already shows significant risks (Box 5).

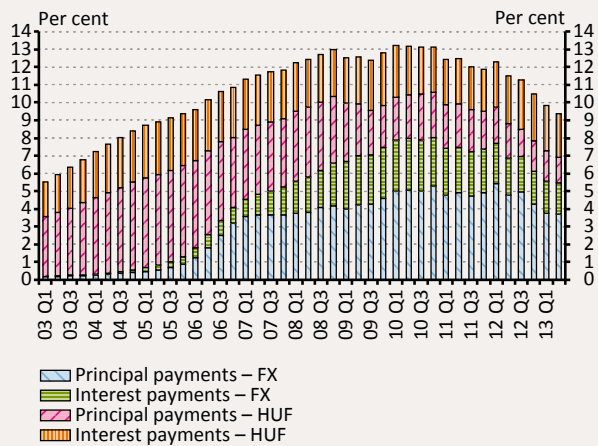
Box 5

Indebtedness of households – findings of a representative questionnaire-based survey

As a result of government measures and falling demand for loans, the household loans-to-GDP ratio is now only nearly half of the euro-area level, and the level of this indicator in Hungary can also no longer be considered high in a regional comparison either. In addition to this indicator, the payment-to-income (PTI) ratio is also often applied as flow indicator, which is also relevant as it contains information about the interest rate level as well as the maturity of liabilities. Accordingly, the latter indicator exhibits a closer relationship to households' consumption and investment decisions, and subsequently with economic growth. Although the PTI reached 13 per cent prior to the crisis in Hungary, households later became net loan repayers. In parallel with that, the debt servicing burden dropped to around 9 per cent of disposable income,¹¹ which cannot be considered high at all in international comparison.

Although neither the stock-type, nor the flow-type indicators suggest excessive indebtedness in the household sector as a whole at the moment, such risks may arise in the case of individual borrowers. This issue is also particularly important because based on stock-type indicators, the credit penetration in the Hungarian household sector is much lower. Although statistics based on international micro database are not available, the 32 per cent ratio of the 1.2 million indebted Hungarian households is presumably lower than what is

Debt service burden of households by denomination in proportion of disposable income



Source: MNB.

¹¹ When evaluating this level, it is important to emphasise that only interest and principal actually repaid by customers have been taken into account in the estimation. This means that the interest payments made pending because of the deteriorating portfolio quality and the unpaid principal repayments due are not included in the calculation. At the same time, unpaid instalments were deliberately left out, because upon foreclosure, creditors' claims are usually satisfied e.g. from selling real estates or movable property, and not from disposable income.

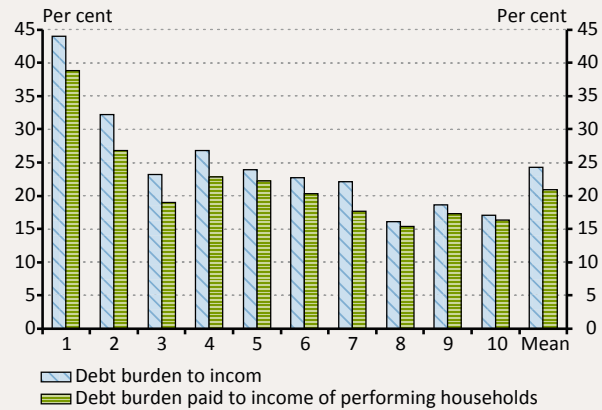
observed in developed countries. Therefore, the distribution of debt servicing burden to the disposable income is worth examining separately as well. The relevant analysis is made possible by a representative questionnaire-based survey of indebted households.¹²

According to the findings, the distribution of payment-to-income ratios continues to show an unfavourable picture, and the average burden of households belonging to the two lowest income deciles now already exceeds the critical 30 per cent level.¹³ All of this means that serious social problems may arise in the households of these income categories.

In the case of households with foreign currency loans, the exchange rate cap scheme may ensure a broader reduction of the exchange rate burden. Its utilisation, however, is the lowest among the poorest households. By contrast, utilisation also rises in parallel with increasing income levels. At the same time, the worse utilisation in the lower income categories reveals that presumably the current exchange rate cap scheme does not provide a solution exactly for the households in the most difficult situations.

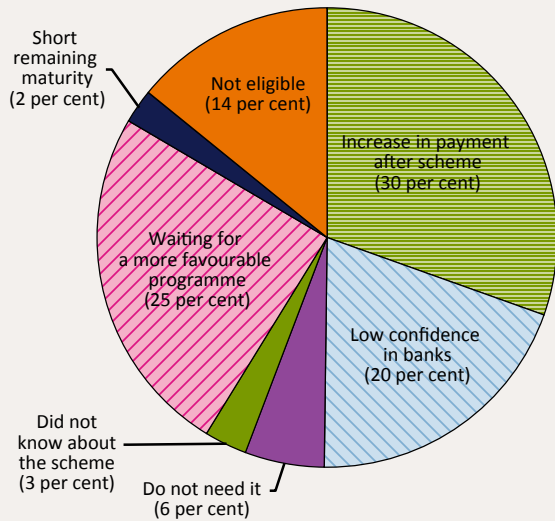
Within the framework of the questionnaire-based survey, we also asked why eligible households did not enter the exchange rate cap scheme. Based on the responses, it can be considered a favourable finding in any case that only 3 per cent of the respondents did not know about the scheme. Half of those not participating in the exchange rate cap scheme explained their opt-out either with lack of trust in banks or the increase in the burden following the expiry of the grace period. One quarter of those not participating are hoping for an even more

Payment-to-income ratio of indebted households by income deciles



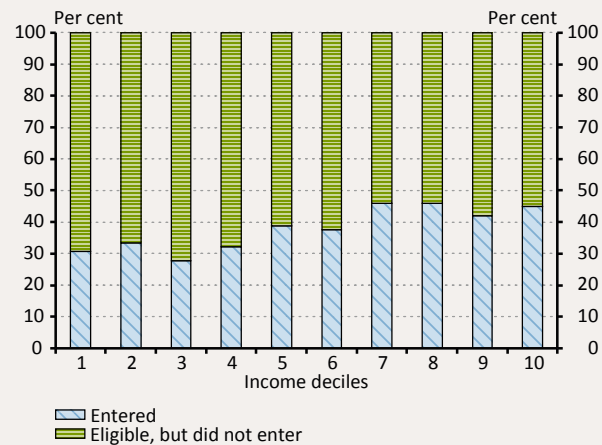
Source: GfK, MNB.

Reasons for not entering the exchange rate cap scheme



Source: GfK, MNB.

Utilisation of the exchange rate cap scheme by income deciles



Source: GfK, MNB.

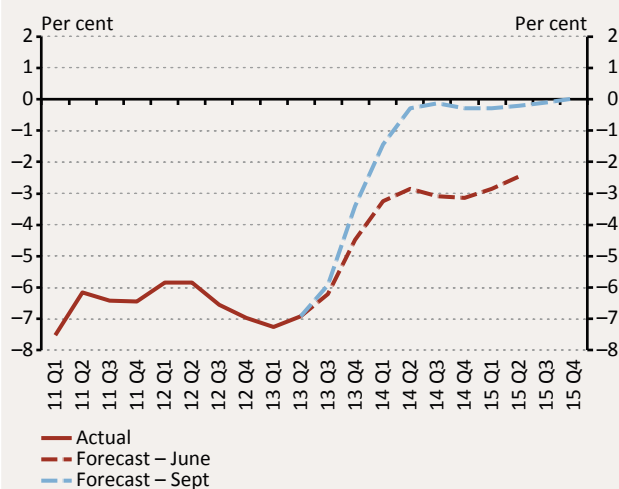
¹² The questionnaire-based survey in which 1,000 households were asked was conducted by GfK Piackutató Kft. on behalf of the MNB.

¹³ There are several estimates in literature concerning the exact size of the payment-to-income ratio that is still affordable for households. Presumably, it is an increasing function of income, but can be influenced by various characteristics of households (such as the number of people in the household, consumption as a proportion of income, etc.). The 30 per cent applied here roughly corresponds to the magnitude that was found in the studies published on this subject.

favourable government measure than the exchange rate cap. Accordingly, the current scheme is only partly able to manage the risks stemming from the indebtedness in foreign currency. Presumably, a significant portion of households could be 'enticed into' the scheme only with the definitive exclusion of the exchange rate risk. This, however, may as well require major changes in the exchange rate cap scheme, within which the period of taking advantage of it should be extended, while the matter of loans accumulating on the collecting account should also be settled.

2.3 Funding for Growth Scheme triggers a turnaround in lending to the SME sector

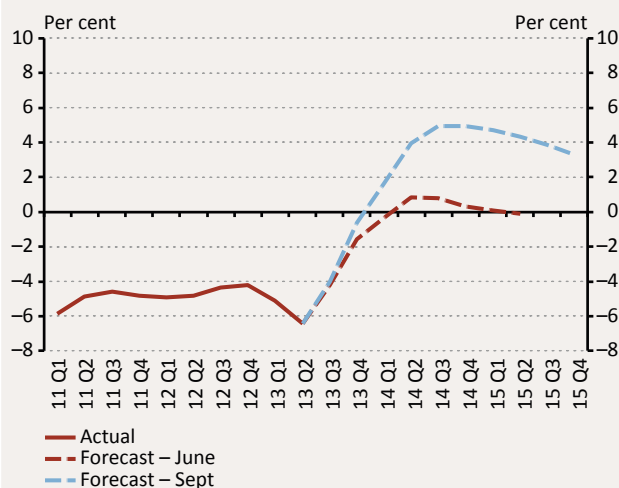
Chart 35
Forecast for lending to non-financial corporates



Source: MNB.

Prolongation of the FGS and its increased amount may stop the decline in corporate lending. The positive impact of the reallocation from Pillar II of the first phase of the FGS to Pillar I was already felt in 2013 Q3. In addition, based on disbursements it can be seen that maturities grew considerably longer in the case of refinanced loans. Looking ahead, through the maturities, this will have a positive impact on lending developments as a whole. The initial HUF 500 billion extension of the FGS and the prolongation of the Scheme until end-2014 will give further impulse to lending to the corporate segment starting from end-2013. While an overall decline of 0.3 per cent is still expected in corporate loans outstanding in 2014, the stock is expected to remain unchanged in 2015 (Chart 35). However, in order there to be a durable turnaround in lending, large banks will have to ease their lending conditions. Although the greater willingness to lend of cooperative credit institutions and smaller banks may improve NFCs' access to credit, due to liquidity and capital constraints, these institutions can only partly replace the activity of the large banks over the short run. At the same time, at cooperative credit institutions the planned capital increases by the state may contribute to easing capital constraints, while the provision of liquidity may be facilitated by prolongation of the FGS.

Chart 36
Forecast for lending to SMEs

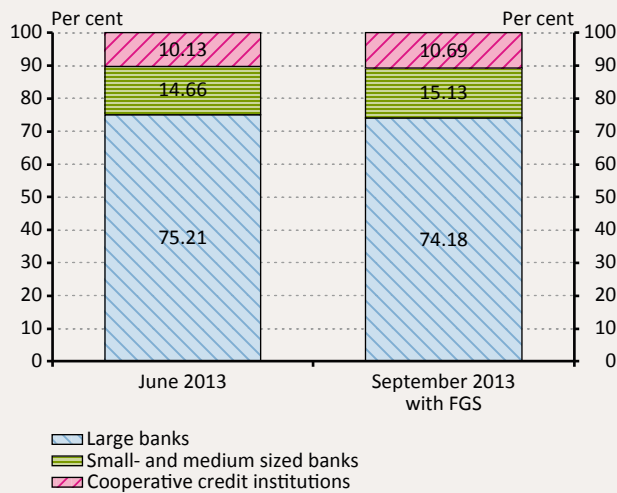


Source: MNB.

Total loans to the SME sector will start to increase this year already. Within the SME segment, the lending stimulation effects of the Scheme are even more visible. As a result, loans outstanding will start to increase this year already. The annual growth rate is expected to peak with a slight delay, probably at around 5 per cent in 2014. Domestic financial intermediaries' SME loans outstanding may expand by a total 5 per cent in 2014 and another 3.3 per cent in 2015 (Chart 36). Considering the individual groups of institutions, a slight change will also take place in the structure of creditors: as a result of the allocation mechanism during the first phase of the FGS, the market share of cooperative credit institutions and smaller banks may increase, while that of large banks is expected to decline (Chart 37).

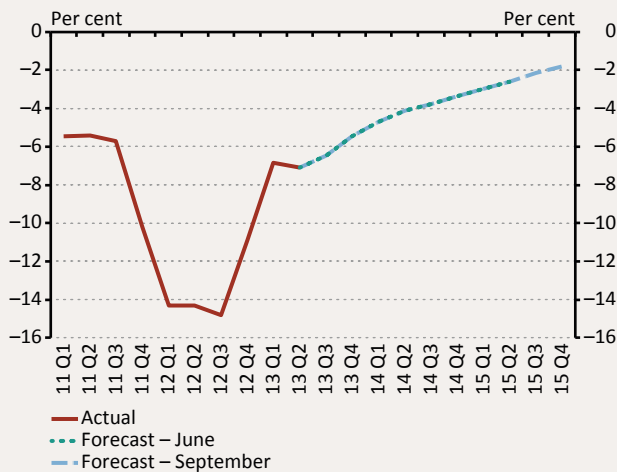
Supporting guarantee funds could considerably accelerate the easing of supply constraints. In our previous reports, we

Chart 37
Expected distribution of SME loans by bank size following the first phase of the FGS



Source: MNB estimate.

Chart 38
Forecast for lending to households



Source: MNB.

argued strongly that – due to the tight supply constraints – the more active involvement of guarantee funds is indispensable for an improvement in developments in lending. Understanding this, several countries have already decided to support their guarantee schemes with capital. Therefore, it would be necessary to improve capitalisation of these funds in Hungary as well. This would also be necessary in order to ensure smooth access to the MNB’s lending stimulus programme for smaller-size SME customers as well.

We maintain our earlier household lending forecast. The slight easing in banks’ credit conditions continued in line with our earlier expectations. These conditions are expected to ease going forward as well. In the period under review, the contribution of the state interest rate subsidy programme to the improvement in new lending was also in line with our earlier expectations, and further improvement can be expected in the coming quarters. Accordingly, compared to our earlier forecast, no major change is perceived in the underlying developments in household lending. Therefore, the forecast has not been revised, and we expect a gradually decelerating decline in loans outstanding over the forecast horizon (Chart 38).

3 Portfolio quality

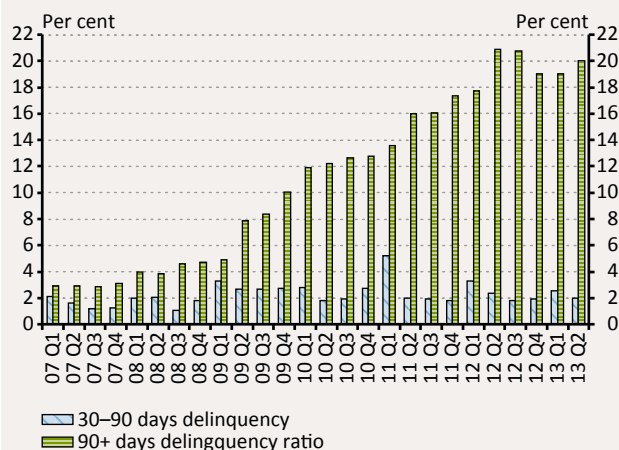
– Solving households' foreign currency indebtedness problem may result in major improvement

During H1, the 90+ day delinquency rate increased to 20 per cent within the corporate portfolio, but still remained below the historical peak. The entire increase took place in Q2. Portfolio quality deteriorated to a greater extent than in the previous quarters, and the declining amount of portfolio cleaning was unable to offset this. The cost of provisioning increased considerably during H1, and thus the coverage ratio remained above 55 per cent, reducing the risk of the non-performing portfolio.

Partly due to non-recurring events, the share of non-performing loans increased within the household portfolio, reaching 17.7 per cent at the end of the period. Following a significant increase, the cost of provisioning amounted to 2.7 per cent at the end of H1. This was enough to boost the coverage above 50 per cent. Any major improvement would require the management of foreign currency indebtedness of still performing customers, which means the elimination of exchange rate risk. In the case of already non-performing customers, one solution may come in the form of a considerable increase in the activity of the National Asset Management Company and the introduction of a private bankruptcy scheme as soon as possible.

3.1 Corporate loan quality deteriorated slightly in 2013 H1

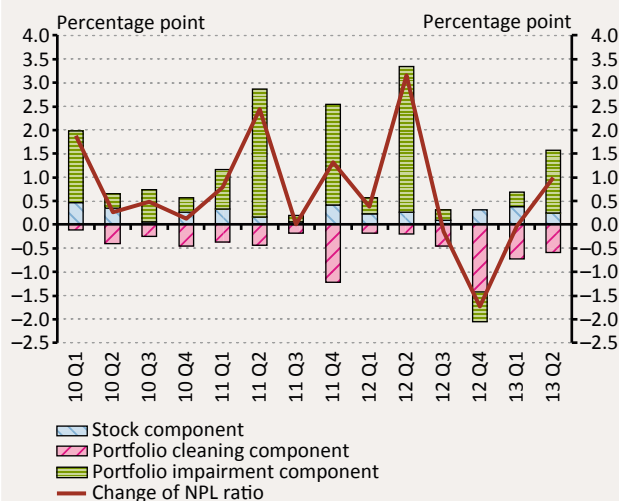
Chart 39
Share of non-performing corporate loans of the banking sector by customers



Source: MNB.

The share of non-performing loans within the corporate portfolio rose slightly in H1, but still remains below the historical peak recorded last year. The ratio of non-performing loans (NPL) within total loans outstanding was 20 per cent at the end of the second quarter of 2013. The slight increase seen during H1 was typical of most of the banks that play a major role in corporate lending. By contrast, following an increase in Q1, the ratio of loans 30–90 days past due declined to its earlier 2 per cent level. The aforementioned 20 per cent NPL ratio is still below the peak observed a year earlier, but can still be considered high (Chart 39). The decomposition of the change reveals that portfolio deterioration in Q2 significantly exceeded that seen in the previous quarters, although it was not an outlier by historical standards (Chart 40). As before, the impact of the decline in loans outstanding on the indicator was low but positive in the past half year. This was only partly offset by portfolio cleaning. The high NPL ratio continues to pose a risk, and therefore we consider it extremely important that cleaning activity in the banking sector be strengthened. For this reason, it would be important to remove the obstacles that may hinder cleaning (e.g. inefficient liquidation proceeding).

Chart 40
Factors affecting changes in the ratio of non-performing corporate loans in the banking sector

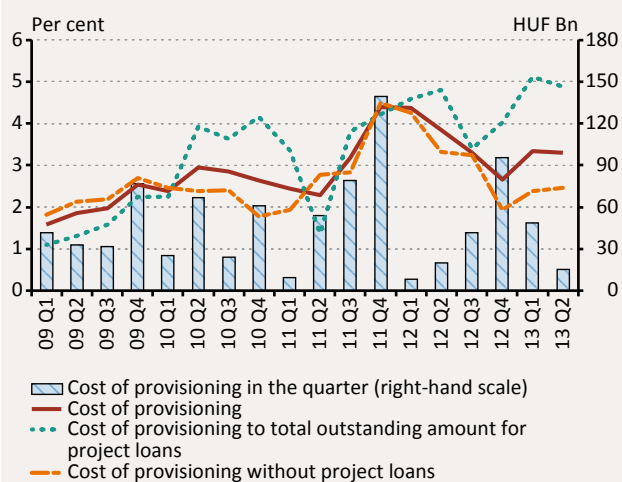


Source: MNB.

The cost of provisioning increased considerably for corporate loans in Q1, and remained at that level at the end of H1 as well. Following the 2.6 per cent figure in December 2012, the ratio of loan loss to total loans amounted to 3.3 per cent at end-June 2013. The annual indicator rose in spite of the fact that the value of provisioning in the last two quarters was not historically high. The deterioration in the indicator mainly results from the base effect, as new loan loss provisioning was expressly low in early 2012. Accordingly, the average loan loss provisioning this time was sufficient to significantly increase the rolling one-year indicator. Examining the loan loss provisioning for project loans and other loans separately, no major difference is seen: the increase was significant in both cases (Chart 41).

Loan loss coverage increased slightly for the whole portfolio in H1. Against the background of a slight rise in non-performing loans, the average-sized new loan loss provisioning was sufficient to somewhat increase the coverage of non-performing corporate loans (Chart 42). From a stability point of view, high coverage is a positive

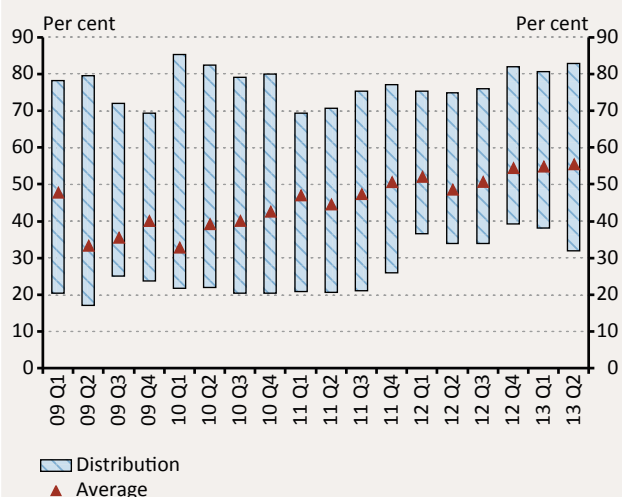
Chart 41
Cost of provisioning to total loans in the corporate segment



Source: MNB.

development, but the dispersion across banks is still significant. It poses a risk that the coverage declined at the bank that has the lowest indicator. Instead of the 39 per cent at the end of last year, the minimum value among the banks that are important in corporate lending was only 32 per cent at end-June.

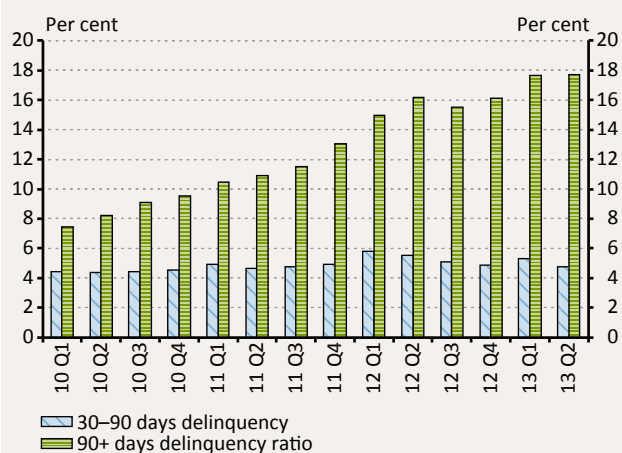
Chart 42
Loan loss coverage of corporate loans



Source: MNB.

3.2 Household portfolio quality continued to deteriorate, partly due to one-off factors

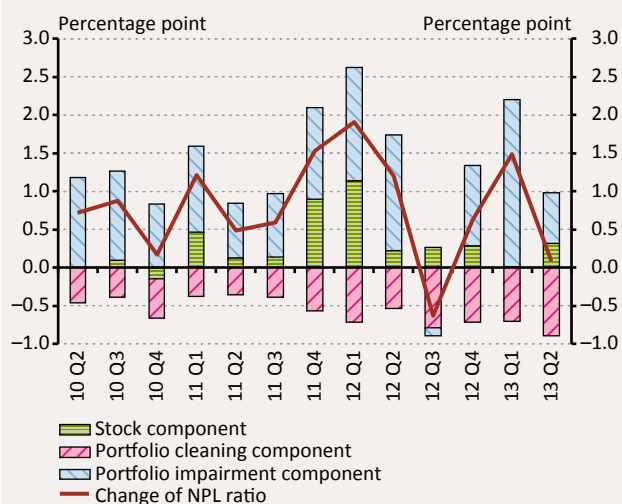
Chart 43
Share of non-performing household loans of the banking sector by contracts



Source: MNB.

The ratio of non-performing loans increased considerably in the household segment in H1. Within household loans, the ratio of NPLs (90 days past due) increased from 16.1 per cent to 17.7 per cent in H1 (Chart 43). This increase is mostly explained by the fact that during the period under review there was a financial enterprise that merged into its parent bank, and thus the portfolio of the financial enterprise became completely included in the balance sheet of the banking sector. As the portfolio of a financial enterprise is generally of a lower quality than that of a bank (partly due to the different product structure), a step of this nature in itself is able to raise the value of the indicator. The decomposition of the increase reveals that the portfolio deterioration component was extremely high in Q1. This contains the above-mentioned technical effect. At the same time, it is important to note that without this effect, the portfolio deterioration component would have shown a significantly positive value. The steady decline in loans outstanding continued to raise the indicator, but this was not very different from what had been seen earlier. In addition, the size of the cleaning component also offset the effects that raise the NPL ratio to the usual extent (Chart 44).

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



Source: MNB.

Households' foreign currency indebtedness is of key importance amongst financial stability risks. Foreign currency loans, the majority of which are Swiss franc-denominated, play a key role in the deterioration of the portfolio. In spite of the government measures aimed to reduce foreign exchange debt, the amount of outstanding foreign currency loans is still extremely high, and most of these are long-term mortgage loans (Table 2). Following the onset of the crisis, due to the appreciation of the Swiss franc and an increase in interest rates, households faced increasing indebtedness and repayment burdens, which resulted in a decline in their consumption or, in a worse case, in insolvency. The increase in loan loss provisioning due to the rise in non-performing loans is a serious challenge for banks. For the government, the effect of foreign exchange debt weakening economic growth poses a risk, and the easing of social tensions of households that are struggling with payment difficulties absorbs funds. Last, but not least, the high amount of foreign currency loans hinders the Bank in conducting monetary policy, and involves significant financial stability risks at the same time. In order to be able to prevent

Table 2
Household loans of the banking sector and branches broken down by currencies and products

June 2013		Total	Mortgage loans	Housing loans			Home equity loans	Other loans
				Total	Subsidized	Market		
Total	Amount (HUF Bn)	6,633	5,377	3,298	882	2,416	2,079	1,256
	Contracts (thousand)	5,687	1,030	673	243	431	357	4,605
HUF	Amount (HUF Bn)	2,789	1,878	1,485	882	604	393	911
	Contracts (thousand)	4,822	584	450	243	208	134	4,237
FX	Amount (HUF Bn)	3,844	3,498	1812	0	1,812	1,686	345
	Contracts (thousand)	865	446	223	0	223	222	368

Source: MNB.

the development of risks similar to foreign currency lending, the Bank had already earlier received the authorisation for macroprudential supervision, which was followed by the incorporation of the HFSA, which used to be responsible for microprudential supervision, into the MNB as of the beginning of October (Box 6).

Box 6

Reinforcing financial supervision in Hungary

The Hungarian Financial Supervisory Authority (HFSA) was dissolved as of 1 October 2013, and its tasks were taken over by the MNB. As a result, the Bank, reinforced with the complete range of supervisory functions, became the single authority responsible for the stability of the financial system as a whole and for the safe operation of individual financial institutions. With this change, the MNB is able to prevent single or system-level financial crises more efficiently and effectively and to solve crisis situations that have already occurred.

One of the most important lessons from the financial crisis was that – in addition to the approach of focusing on the safe operation of individual institutions ('microprudential' approach) – greater attention must be paid to the aggregate effect of the collective activity of financial organisations (this is the so-called 'macroprudential' dimension). The spread of foreign currency lending and the underestimation of the risks were also largely attributable to the general character of the microprudential approach. Although the MNB called attention to the risks of foreign currency lending even before receiving macroprudential powers, it did not have any means to prevent this type of lending.

Similar supervisory failures justify the international trend of vesting central banks with supervisory functions, and as a result of the recent crisis, the model of integrating supervision into the central bank is beginning to dominate. In most EU countries, supervision was already one of the tasks of the central bank, and during the crisis several Member States chose this solution or vested their respective central banks with further supervisory functions (Belgium, United Kingdom, France, Ireland and Lithuania). Moreover, as of the autumn of 2014, the scope of duties of the European Central Bank itself will also include bank supervisory functions.

If the banking union is successful, and Hungary does not begin close cooperation with the ECB, the currently existing difference in risks vis-à-vis the euro area may increase further. This potential competitive disadvantage can also be reduced with the supervisory reform, reinforcement of the domestic supervisory system and the reflection of the banking union within the country's own borders. In this context, beside the integrated, new and effective financial supervisory structure, the national regulation of resolution will be established and the deposit insurance system will be reinforced as well.

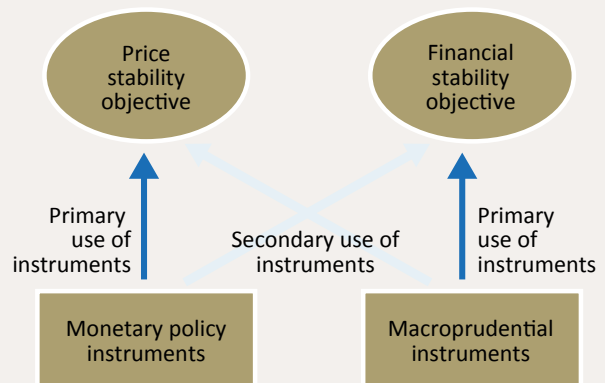
This integration is also supported by empirical studies which find the model of integrating the supervision into the central bank to be more efficient. Integration facilitates the harmonisation of micro- and macroprudential policies. Accordingly, micro- and macroprudential knowledge is able to systematically support one another in the exploration of risks, while the two approaches have a consistent attitude to one another in important decision-making situations. Integration facilitates the optimal allocation of supervisory and regulatory instruments, since the dividing line between micro- and macroprudential policies is often not clear at all, and there are means that can serve both micro- and macroprudential objectives. The most efficient and most flexible application of micro- and macroprudential instruments is ensured if both types of powers to intervene are available for a common, integrated authority.

The supervisory tasks support the more efficient performance of classical central bank functions, including monetary policy in particular, as through them the MNB obtains direct additional information regarding the operation of money markets and the transmission mechanism, and this information provides significant aid for monetary policy. Moreover, direct supervisory information facilitates the oversight of the payment and settlement as well as the securities settlement systems and the Bank's well-founded and quick decision-making as lender of last resort.

The merger of the HFSA with the MNB creates a sufficiently strong, independent supervisory authority, which is able to control the systemically important financial institutions. Having a complete set of micro- and macroprudential instruments, the MNB, which is more independent than the former HFSA, is much more capable of guaranteeing adequate protection from influences that weaken supervisory activity, which is a precondition for efficient control over large banks. The integrated authority is also able to perform the resolution and crisis management of banks that might become insolvent in the most efficient manner.

Integration has other benefits as well. For example, it allows uniform, consistent and credible communication as well as more efficient representation of national interests at international forums.

The relationship of monetary and macroprudential policy



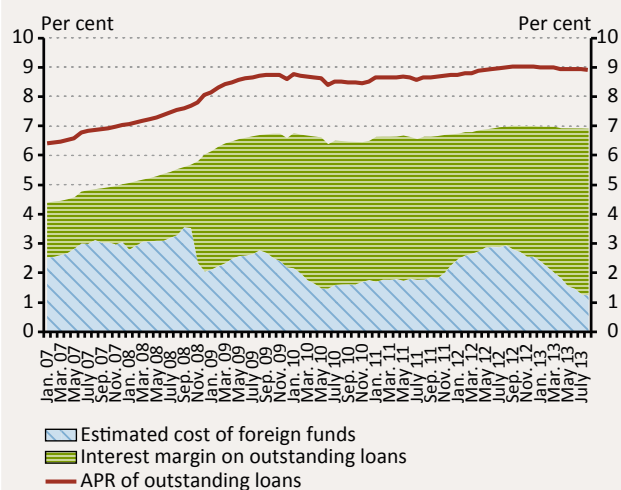
Source: MNB.

In addition to the microprudential supervisory mandate received by the MNB, the new MNB Act effective as of 1 October 2013 reinforced the MNB's macroprudential function as well. Accordingly, the MNB clearly became the authority primarily responsible for macroprudential policy, and for this it has a wider range of instruments than before. Thus, several instruments that used to be in the hands of the Government have been transferred to the MNB's scope of responsibilities (for example, determining the minimum level of liquidity, regulation of maturity match and the matching of denominations, loan-to-value ratios (LTV) and limits on lending (DTI, PTI), etc.).

With the new MNB Act, greater emphasis has been placed on the MNB's financial stability objective, for which a strengthened set of instruments is also available. The achievement and maintenance of price stability have remained the primary objective of the MNB, which supports financial stability without jeopardising this objective. Two separate sets of instruments belong to the two objectives (the central bank base rate to the monetary policy objective and the macroprudential regulatory instruments to the financial stability objective), but a set of instruments cannot be rendered independent of the objective of the other. As a result, they may conflict with one another, but with their intended use they may even amplify one another's effects. An example for the secondary use of monetary instruments may be the use of interest rate policy for tightening against the trend or a central bank swap tender with a financial stability objective and the extension of the scope of eligible collateral. The challenge here is that they should not affect the achievement of the price stability objective of the Bank.

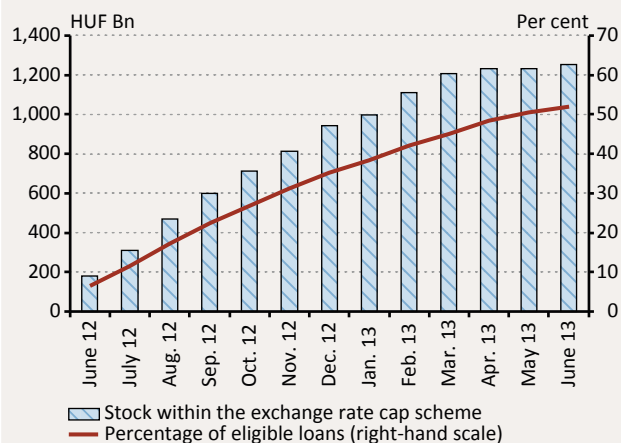
The new decision-making mechanism of the MNB has also been formulated in accordance with this set of objectives. The Monetary Council remains the main decision-making body. It is primarily responsible for monetary policy by determining the central bank base rate, while the Financial Stability Council makes decisions regarding the macro- and microprudential supervisory and regulatory instruments. In addition to the common members of the two decision-making bodies, the primacy of the price stability objective is ensured by the fact that the Financial Stability Council operates within the strategic framework determined by the Monetary Council.

Chart 45
Average estimated cost of foreign funds behind CHF mortgage loans and the average interest rate spread



Source: MNB.

Chart 46
Utilisation of the exchange rate cap



Source: MNB.

Managing exchange rate risk and reducing debtors' burdens are in the interest of all players. It is the clear interest of both economic policy and foreign exchange debtors to eliminate the exchange rate risk in the case of still-performing household mortgage loans in such a way that simultaneously results in a decline in customers' repayment burdens as well. In addition, actors in the banking sector may also be interested, through the lower loan losses and improving reputation. A possible programme, however, may involve significant costs. These costs can be distributed between the state, the banks and the debtors. One important aspect in connection with this is that if, as a result of the programme, foreign exchange debtors achieve a more favourable position than customers who assessed the risks in a more responsible manner before borrowing and became indebted in forints, it could encourage households to take higher risks in the future as well. Therefore, it may occur that the customers concerned also have to be involved in covering the costs. Upon determining the portion of costs incurred by the banks, the potential negative impacts on the financial intermediary system also have to be taken into account.

This programme may also include rules on the interest rates on loans. The possibility granted to banks by their contracts to raise interest rates unilaterally imposed considerable burdens on customers: the borrowing rate increased by an average of 2 percentage points, adding in itself some 20 per cent to the repayment burdens (Chart 45). During this period, banks' margin increased considerably, from 2 to nearly 4–5.5 percentage points, allowing them to partly offset the profitability reducing effect of the higher loan loss provisioning and the bank tax. One solution to future unilateral interest hikes could also be a mandatory extension of the transparent pricing regime that is currently regulated in a government decree (fixed margin tied to the reference rate) to existing loans, in the course of which the margin chargeable above the benchmark should also be maximised.

Utilisation of the exchange rate cap, which partly manages the exchange rate risk, continues to fall short of our expectations. As a result of a significant extension of the deadline for entering the exchange rate cap scheme, which partly neutralises the exchange rate risk of performing debtors, utilisation of the scheme now exceeds 50 per cent (Chart 46). However, it is still well below our earlier forecast. This much lower-than-expected utilisation is partly attributable to banks' contradictory interests and partly to customers' lack of information and distrust stemming from unfavourable experiences in the past. As the scheme means that banks renounce some of their interest income, for them the optimal solution is if only those customers take the opportunity that would more likely become non-performing

Table 3
Non-performing household loans of the banking sector broken down by currencies and products

June 2013		Total outstanding	Mortgage loans	Housing loans	Home equity loans	Other loans
Total	NPL (HUF Bn)	1,092	900	407	493	192
	NPL (Thousand contracts)	747	120			627
	NPL ratio (per cent)	17.7	18.0	12.9	26.7	16.6
HUF	NPL (HUF Bn)	328	191	113	77	138
	NPL (Thousand contracts)	593	42			552
	NPL ratio (per cent)	12.8	10.9	7.9	24.0	16.9
FX	NPL (HUF Bn)	764	709	293	416	54
	NPL (Thousand contracts)	154	79			75
	NPL ratio (per cent)	21.2	21.8	17.0	27.2	15.9

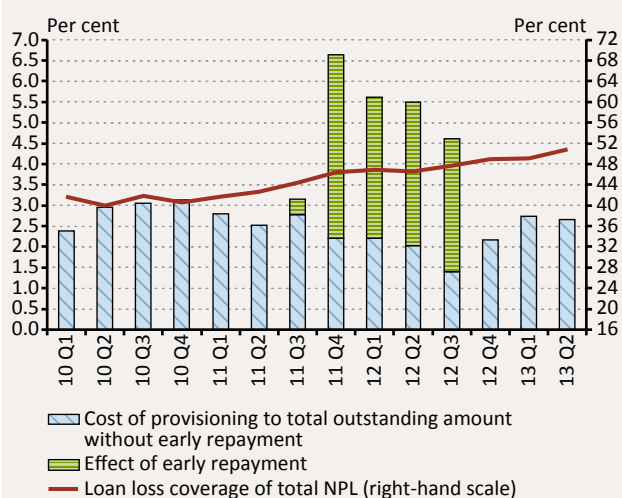
Source: MNB.

without the scheme. On the customers' side, lack of information may be a constraint, while in many cases they do not dare to undertake the new account loan due to the principal not paid within the scheme. Finally, lower level of interest in the scheme is also attributable to debtors' hopes that the government will roll out further, more favourable schemes, prompting them to wait for the best opportunity to enter the exchange rate cap (for more details, see Box 5).

It is absolutely necessary to accelerate the management of non-performing loans. A possible debtor rescue package may help to prevent performing loans from becoming non-performing. At the same time, the amount of problematic mortgage loans has already reached HUF 900 billion in the banking sector alone, and this problem may affect some 120 thousand families (Table 3). There are significant amounts of NPLs at non-bank financial intermediaries as well. The effect of the operation of the National Asset Management Company is still marginal. At end-June, the number of loans purchased by the Asset Management Company had still not even reached 1,000. More intensive activity by the National Asset Management Company would be important, as it would facilitate banks' portfolio clean-up activities. Although the quota of 25,000 is much below the number of problematic mortgage loan contracts (120,000), complete utilisation would still represent a considerable improvement. However, the purchase of non-performing loans by the National Asset Management Company does not necessarily mean a final solution for the debtors.

A broad-based solution to non-performing loans requires the introduction of private bankruptcy as soon as possible. The Bank has already emphasised the importance of introducing private bankruptcy on several occasions. According to our proposal, during the application of the institution of private bankruptcy, customers with mortgage loans would be entitled to a 1–2-year eviction moratorium.

Chart 47
Cost of provisioning to total loans and coverage in the household segment



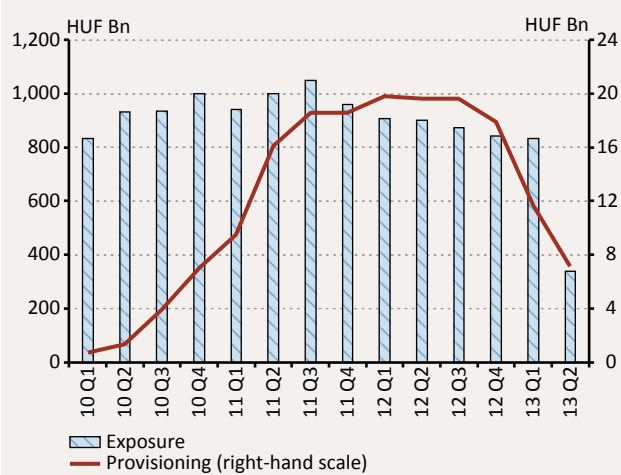
Source: MNB.

We consider it necessary to determine a level of recovery only in the case of unsecured loans; in the case of mortgage loans, repayment should reach at least the value of the collateral in order to avoid harm to the institution of mortgage. If the customer meets the requirements of the private bankruptcy proceedings entirely, he/she will be exempted from the repayment of unsecured claims after 3–5 years. From a regulatory aspect, the exact levels of recovery greatly influence the operability of the whole scheme. If overly high levels of recovery are defined, debtors only have a minimal chance to exit private bankruptcy within a reasonable time and start with clean records. However, an overly low level of recovery may have a harmful effect on lending activity.

In line with the growing ratio of non-performing loans, the cost of provisioning also rose. The ratio of loan loss to total loans increased from 2.2 per cent at end-2012 to 2.7 per cent by the end of H1 (Chart 47), which is considered high in historical terms as well. In Q1, loan losses in the household segment were also relatively high by historical standards. In addition, the low level at the beginning of last year also played a role in the significant increase. Even with an increase in NPLs, new loan loss reserves were sufficient to increase loan loss coverage. Accordingly, at the system level, coverage increased from 49 per cent at the end of last year to nearly 51 per cent. Similarly to companies, asymmetry across banks is significant here as well and increased during H1. While the coverage is 28 per cent for the worst-performing bank, this indicator is close to 70 per cent for the best one. Moreover, the former declined in the past half year.

3.3 Declining exposure and loan loss provisioning in the local government segment

Chart 48
Exposure to local government and its provisioning in the banking sector



Source: MNB.

Risky local government exposures declined considerably in the banking sector as a result of government measures. Local governments' mainly foreign currency denominated outstanding debt accumulated after 2005 was a significant burden on their financial management and at the same time it added to the riskiness of the portfolio of the banking sector. The Government took over the debt of smaller local governments in several steps from end-2011, then – in line with earlier plans – in 2013 it continued its debt consolidation steps with the assumption of the liabilities of larger local governments. As a result, the local government exposure of the banking sector declined to nearly one third (Chart 48). As a result of the government measures, the risks stemming from indebtedness and the high banking sector exposure declined spectacularly by June 2013 (Box 9).

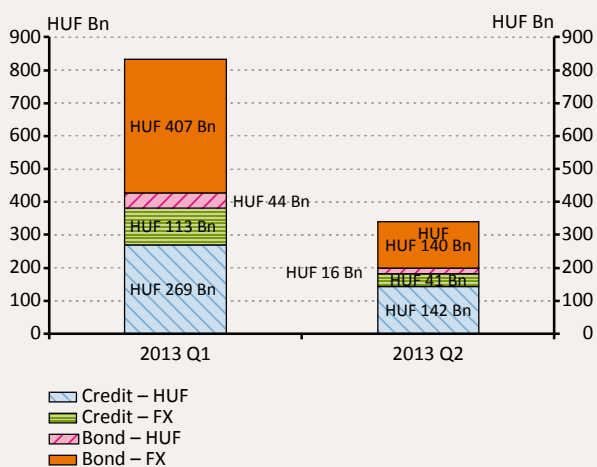
Box 7

Declining local government exposures as a result of debt settlement by the government

In 2007 and 2008, a significant amount of total debt (loans and bonds) was accumulated in the local government sector; more than 60 per cent of this debt was denominated in foreign currencies. The Government attempted to mitigate the risks related to local governments' debt in several steps. Of the municipalities affected by tight budget and significant debt servicing burdens, in the first step the debt of county governments (HUF 170 billion) was assumed in 2011, followed by the assumption of the debt of municipalities with less than 5,000 inhabitants (HUF 74 billion) at end-2012, which may have resulted in a considerably decline in the risk of the local government portfolio of the banking sector. In addition, in 2013, in line with the Government's plans, debt settlement took place in the case of municipalities with more than 5,000 inhabitants as well, resulting in a major decrease in the banking sector's exposure to the local government sector.

By the end of the second quarter of 2013, banks' total local government exposure fell by nearly HUF 500 billion. Foreign

Rearrangement in municipality exposures of the banking sector

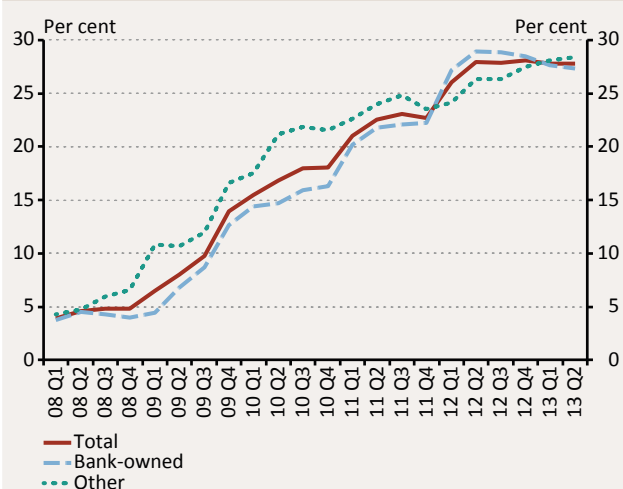


Source: MNB.

currency denominated bonds accounted for more than half of the decline, which fell by some two thirds. Outstanding foreign currency denominated loans also declined by a significant amount (HUF 72 billion), and outstanding forint loans also fell to nearly half of the March 2013 value. Accordingly, local governments' outstanding debt, which had peaked above HUF 1,000 billion, fell to nearly one quarter as a result of the measures.

3.4 The portfolio of financial enterprises and cooperative credit institutions stopped deteriorating

Chart 49
Ratio of non-performing loans at financial enterprises by ownership



Source: MNB.

In 2013 H1, the share of non-performing loans within total loans remained stagnant at financial corporations. Portfolio deterioration came to a sudden halt in 2012 H2, and the ratio of loans 90 days past due remained practically unchanged at around 27 per cent in 2013 H1 as well. The stagnation of the indicator was also attributable to the fact that during the period under review there was an institution that merged into its parent bank, and thus its mostly unsecured loans outstanding became included in the balance sheet of the banking sector (Chart 49). However, the effect of the merger is moderate, as the portfolio quality of this institution was not much different from the sector-level average. The 65 per cent loan loss coverage of the total non-performing portfolio remained in H1 as well, significantly exceeding the above 50 per cent level seen in the banking sector. Considering that financial enterprises mostly hold loans not covered by mortgage in their balance sheets, it is important to keep this high level.

The portfolio of cooperative credit institutions did not deteriorate further in the household or corporate segments. The deterioration in cooperative credit institutions' corporate portfolio stopped in H1, while the ratio of non-performing loans within the portfolio remained unchanged (Table 4). Nonetheless, the more than 28 per cent level

Table 4
Key indicators of corporate portfolio quality at cooperative credit institutions

(Per cent)

	2010 H1	2010 H2	2011 H1	2011 H2	2012 H1	2012 H2	2013 H1
90+ days delinquency ratio	17.8	17.3	25.0	25.9	26.9	28.8	28.7
Loan loss coverage	35.0	36.6	30.4	32.2	35.6	36.1	36.8
Cost of provisioning	–	1.9	2.2	2.0	1.9	1.9	1.8

Source: MNB.

Table 5
Key indicators of household portfolio quality at cooperative credit institutions

(Per cent)

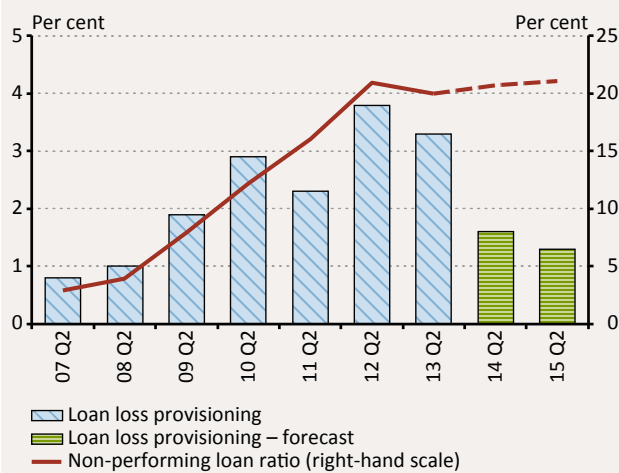
	2010 H1	2010 H2	2011 H1	2011 H2	2012 H1	2012 H2	2013 H1
90+ days delinquency ratio	13.0	13.8	16.9	17.0	15.5	16.5	16.1
Loan loss coverage	46.7	47.7	45.3	46.2	47.0	47.2	50.2
Cost of provisioning	–	1.2	1.1	1.7	1.3	1.6	1.5

Source: MNB.

observed at the end of H1 can still be considered very high. Simultaneously, there was no major change in the cost of provisioning, resulting in a marginal increase in the coverage of non-performing loans on the whole. The level of coverage is much lower than the banking sector average, which may pose a risk. Slight improvement was seen in the household portfolio. On the whole, the ratio of non-performing loans within the sector amounted to 16 per cent at the end of the period (Table 5). In parallel with the slight improvement, the level of the cost of provisioning remained unchanged, and thus loan loss coverage also increased. The around 50 per cent value observed at the end of H1 is equal to the level registered for the banks.

3.5 Improving portfolio quality is expected in the case of household loans

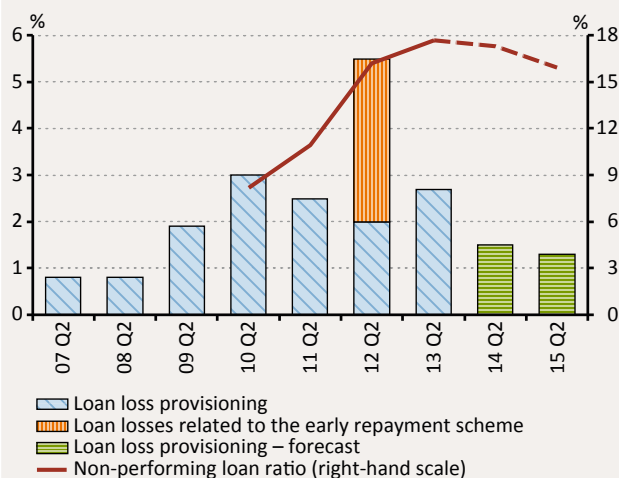
Chart 50
Ratio of non-performing loans and cost of provisioning in the corporate segment



Source: MNB.

Owing to the more favourable trend during the past one year and the improving macro forecast, no major increase is expected in the corporate NPL ratio. Although the ratio of non-performing loans increased in the corporate portfolio in 2013 H1, its level is still below the historical peak. Growth prospects improved, which has a positive impact on the income position of the corporate sector, reducing individual actors' probability of default. We foresee some improvement in other factors as well that have an effect on the NPL ratio. Although the cleaning ratio is still not high, it clearly increased over the past one year; therefore, we also raised it slightly in our forecast. The corporate portfolio will shrink in the coming two-year period, but to a lesser extent than in the previous forecast. As a result of all this, the NPL ratio may remain at the current high, above 20 per cent level in the coming two years,¹⁴ but we now only expect slight deterioration (Chart 50). With the slow increase in the NPL ratio, the cost of provisioning may be lower than in previous years, assuming that the loan loss provisioning behind the currently non-performing loans is adequate and no additional loan loss provisioning is required. Nevertheless, it will still not decline to pre-crisis levels yet.

Chart 51
Ratio of non-performing loans and cost of provisioning in the household segment



Source: MNB.

We expect a slight improvement in the household segment in the coming two years. The ratio of non-performing loans increased to nearly 18 per cent in the case of household loans in H1, partly due to one-off factors. However, government programmes may help to curb this upward trend. The exchange rate cap scheme may provide significant assistance for debtors with debt servicing difficulties caused by elevated instalments; the upper limit of CHF/HUF 180 reduces the probability of default of participants. The forecast presumes that the activity of the National Asset Management Company will increase considerably, resulting in accelerated cleaning in this segment as well. At the same time, we do not expect any change in the level of utilisation of the exchange rate cap. On the whole, the NPL ratio is expected to decline slightly in the coming two years (Chart 51). The indicator may fall to close to 16 per cent by the end of the period. If another programme is launched to reduce foreign currency indebtedness, it may also result in a major

¹⁴ Nevertheless, the value of the banking sector indicator may even considerably be reduced by the portfolio cleaning already decided by MKB, within which a portion of non-performing corporate loans will be transferred to the financial enterprise owned by the parent bank.

improvement in customers' ability to pay. As a result, the NPL ratio may even be more favourable. In parallel with a declining NPL ratio, the cost of provisioning may also improve. At the end of the two-year horizon, the indicator may drop below the level of 1.5 per cent, assuming that the loan loss provisioning on current outstanding non-performing loans is adequate, and thus no additional provisioning is necessary.

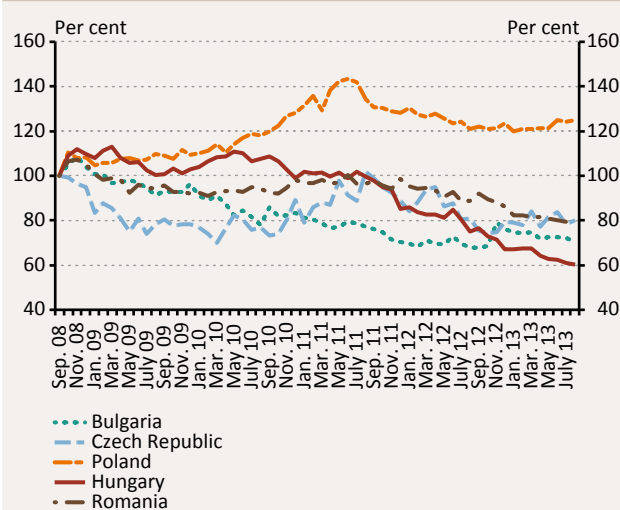
4 Bank liquidity

– Banking sector liquidity is adequate despite withdrawal of foreign and household funds

In 2013, the outflow of foreign funds from Hungary, which was primarily determined by the decline in parent bank funds, continued with slowing dynamics. The withdrawal of foreign funds was accompanied by a slight increase in swaps outstanding and the banking sector's balance sheet adjustment in parallel with that. The loan-to-deposit ratio continued to decline in the past half year. For the time being, the current major outflow of households' deposits is not causing strains in banks' balance sheets, which is attributable to the significant banking sector liquidity and continued balance sheet adjustment.

Chart 52
Changes in foreign funds in selected CEE countries

(September 2008 = 100 per cent)

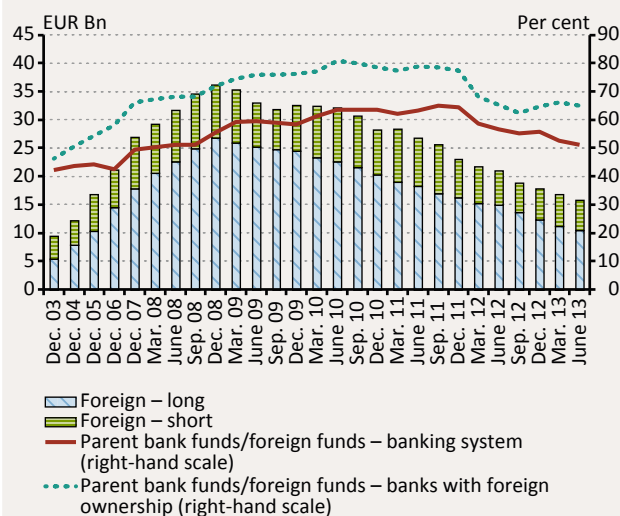


Source: ECB.

Outflows of foreign funds from Hungary slowed in the past half year. The rate of withdrawal of foreign funds from Hungary accelerated starting from 2011 H2, but the dynamics of these outflows already decelerated in the past half year (Chart 52). Since the outbreak of the crisis, the amount of foreign funds has fallen considerably in Hungary, declining by nearly 40 per cent. For the year to date, the decline amounts to nearly EUR 2 billion, most of which originally were long-term funds. In the immediate CEE region, developments in foreign funds show a mixed picture. Foreign funds increased in Poland, while the amount declined gradually compared to September 2008 in the other countries of the region, just like in Hungary. Following a gradual slowdown, the outflow of foreign funds stopped in Bulgaria and the Czech Republic last year, followed by slight correction in 2013. By contrast, developments in Hungary deviated slightly from the regional trend, and the amount of foreign funds continued to decline. The role of foreign funds in financing varies across the countries of the region; its ratio is the second highest in Hungary after Romania.

In 2013, the decline in foreign funds was basically driven by the decrease in parent bank funds. The ratio of parent bank funds within foreign financing has fallen sharply since the end of last year and presently stands at 51 per cent, representing a 7 percentage point decline since the beginning of the year (Chart 53). Although the dynamics of the decline in parent bank funds slowed this year, the stock has fallen by nearly 20 per cent since the beginning of 2013, while market

Chart 53
Role of foreign and parent funding in the banking sector



Source: MNB.

funds have increased slightly. In addition, foreign funds were also reduced by Pillar III of the FGS, within the framework of which FX financing is provided by a central bank swap instead of foreign funds (Box 8).

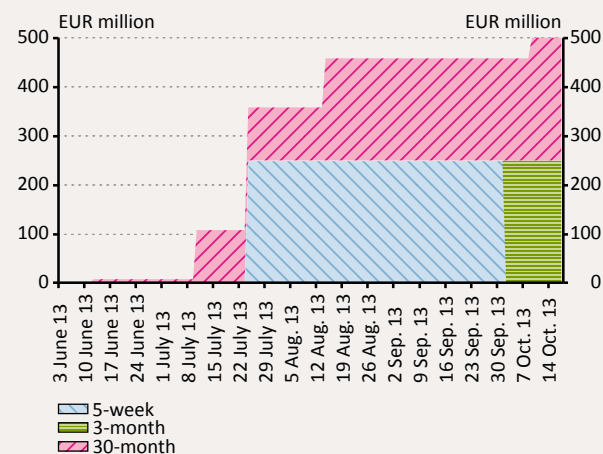
Box 8

Results of pillar III of the FGS to date

The MNB announced Pillar III of the Funding for Growth Scheme on 4 April 2013. In cooperation with credit institutions, it aimed at the reduction of Hungary's short-term external debt and two-week MNB bill holdings as well as the MNB's interest rate risk. In order to achieve this objective, the Bank announced FX swap transactions, in which it absorbs forint liquidity from credit institutions that are ready to reduce short-term external debt in exchange. In addition, the Bank formulated a proposal to put greater-than-planned emphasis on forint-based financing in the financing of government debt, which also contributes to the reduction of external debt and two-week bills outstanding.

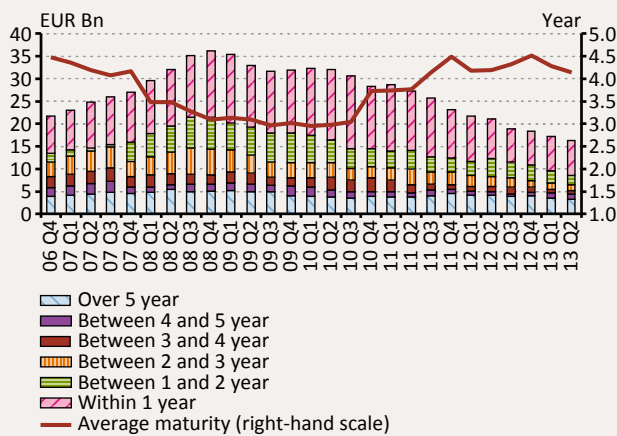
As of June 2013, within the framework of Pillar III of the FGS, every week the MNB offered FX swap transactions with 8 different maturities. The maximum amount in each tender was a total EUR 2.5 billion. At end-August, FGS swaps outstanding amounted to a total EUR 458 million (HUF 136 billion) provided by the Bank for its counterparts partly within the framework of the shortest, 5-week maturity transactions and partly within the framework of the longest, 30-month transactions. The Scheme, which had been announced as lasting until end-August 2013 under the original conditions, was extended by the Bank from the beginning of September until cancellation. The Bank also determined that the maximum value of FX swaps that can be allocated within the Scheme was EUR 2.5 billion.

FGS swaps outstanding



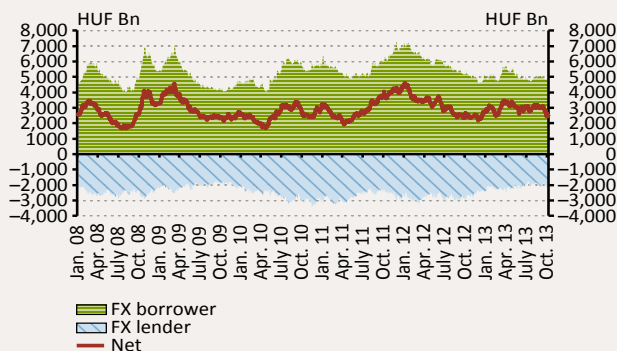
Source: MNB.

Chart 54
Original maturity structure of foreign funds in the banking sector



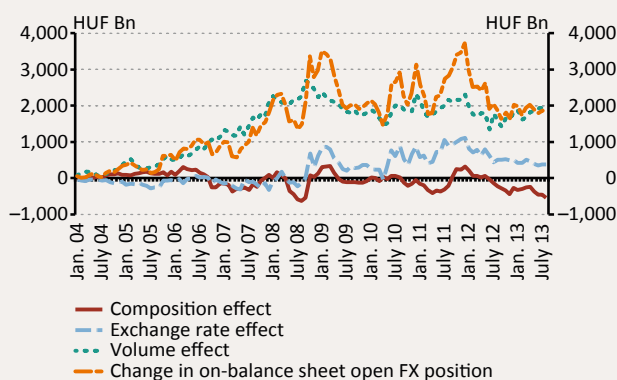
Source: MNB.

Chart 55
Banking sector's outstanding swaps vis-à-vis the forint



Source: MNB.

Chart 56
Decomposition of the change in the on-balance-sheet foreign exchange position of the banking sector and branches



Note: Composition effect: clients change the denomination composition of their loans or deposits. Volume effect: the on-balance-sheet FX position changes as a result of items that are coupled with increases or decreases in the balance sheet total. Exchange rate effect: the value of on-balance-sheet foreign exchange assets and liabilities expressed in forints changes as a result of changes in foreign exchange rates.
Source: MNB.

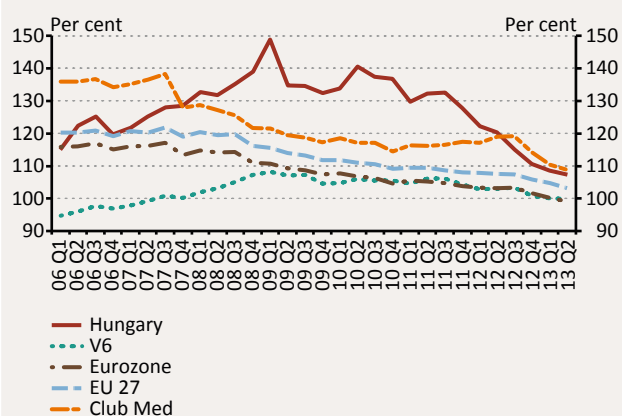
The share of longer-term funds in the original maturity structure of the banking sector's foreign funds declined slightly in the past half year. The ratio of foreign funds maturing within one year has increased, whereas that of funds over 5 years has declined slightly since the beginning of 2013. Average maturity was 4.1 years in 2013 Q2, representing a slight decline compared to the figure at the end of last year (Chart 54). Although the swaps outstanding increased slightly in parallel with the outflow of foreign funds, this does not result in any liquidity tensions, which is attributable to banks' balance sheet adjustment, as the decline in foreign exchange loans continued in banks' balance sheets in the past half year.

Swaps outstanding increased slightly, in parallel with the continued withdrawal of foreign funds. Banks made up for a part of the foreign exchange liquidity shortage stemming from the outflow of foreign funds through increased swap holdings. The banking sector's swap exposure increased by nearly HUF 250 billion in 2013 H1, while banks' foreign exchange assets declined to a similar extent. The swap exposure at the banking sector level stood at HUF 3,062 billion (EUR 10.2 billion) at end-August (Chart 55), which is at the lower edge of the critical range according to our earlier estimates. The volume effect played a key role in the increase in swaps outstanding. The slight decline in the on-balance-sheet foreign exchange position in 2013 H1 was mainly influenced by the composition effect and – to a lesser extent – by the exchange rate of the weakening forint (Chart 56).

The banking sector's loan-to-deposit ratio declined only slightly. The fall in the loan-to-deposit ratio in the domestic banking sector continued this year as well, but decelerated in Q2 due stronger outflows of funds originating from households. Another unfavourable trend is that while the decline in the indicator in the countries of the region is typically attributable to a faster increase in deposits than in loans, in Hungary it is the outstanding loans that are falling faster than deposits, which have been declining by now, which can be considered a less sound structure (Chart 57).

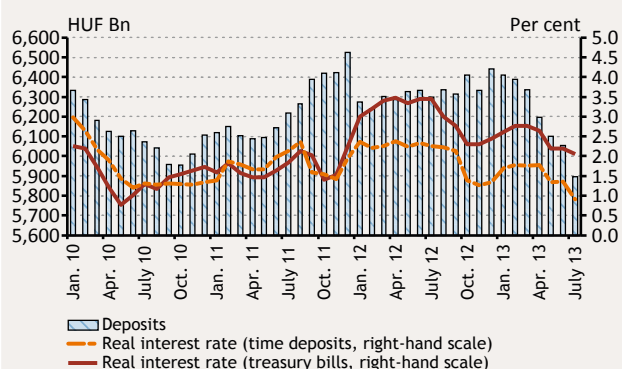
In view of the abundant banking sector liquidity, the outflow of household deposits does not presently result in strains in banks' balance sheets. At the banking sector level, household deposits have declined considerably, falling by some 8.5 per cent (HUF 545 billion) since the beginning of 2013. Most of this was reflected in short-term time deposits (Chart 58). The withdrawal of deposits mainly affected large banks, where the decline in volumes was significant. The withdrawal of deposits is primarily attributable to the falling trend in deposit yields. The decline in deposit rates in parallel with the policy rate resulted in a shift towards

Chart 57
Loan-to-deposit ratio in international comparison



Source: ECB.

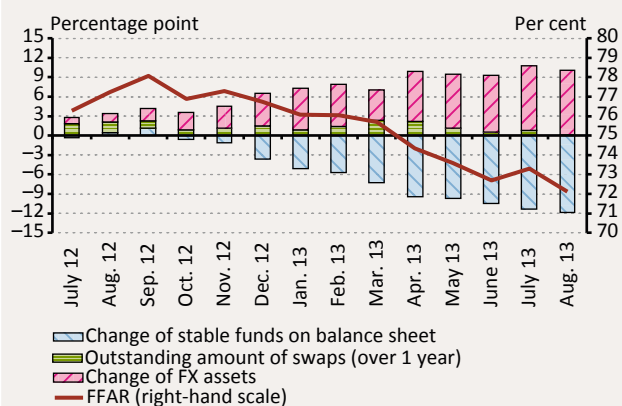
Chart 58
Household deposits and the real deposit rate



Source: MNB.

Chart 59
Decomposition of the change in the FFAR of the banking sector

(exchange rate adjusted, change calculated since end-June 2012)



Source: MNB.

higher-yield instruments. In recent months, it was observed that as a result of the restructuring of the household portfolio, households' government securities and mutual fund shareholdings increased in parallel with the outflow of deposits. At the same time, investment funds return a portion of the assets they manage to the banking sector, thus mitigating the impact of the outflow of household deposits. In view of the abundant banking sector liquidity, the outflow of deposits does not presently result in strains in banks' balance sheets. At end-August, the banking sector's liquidity surplus exceeded the required amount by HUF 3,100 billion.

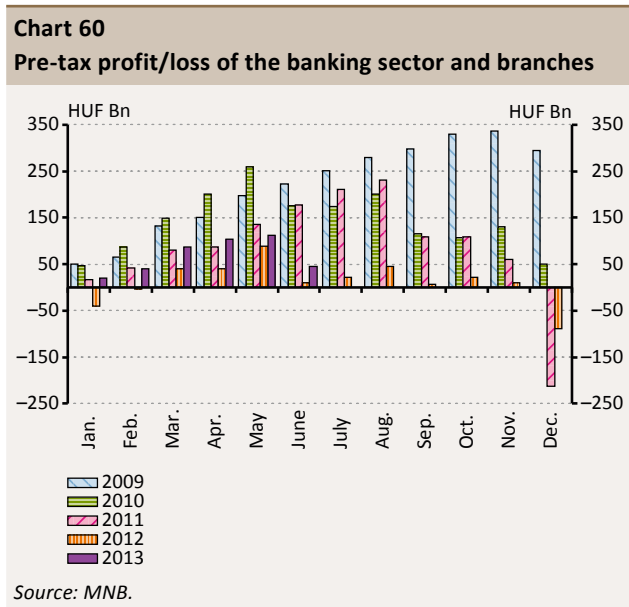
The banking sector's adequacy ratio related to foreign currency financing (FFAR) remained practically unchanged last year; its value is well above the required level. As a result of the FFAR regulation that entered into force on 1 July 2012, following introduction, banks increased the maturities of their swap transactions to be able to comply with the required 65 per cent level. Decomposition of the indicator reveals that the slight decline in recent months is primarily attributable to the decrease in on-balance-sheet stable liabilities, which could largely be offset by a decrease in foreign exchange assets (Chart 59). All but two small banks complied with the required level in July 2013. Accordingly, the FFAR of the banking sector as a whole was above 73 per cent.

5 Banking sector profitability

– Persistently low profitability may lead to market consolidation

The profitability of the banking sector remained low; at end-June 2013, the banking sector's cumulative pre-tax profit amounted to HUF 45 billion. The net interest margin remained at a high level, as banks continue to pass on part of their loan losses to their performing customers. The asymmetry of profitability within the banking sector is extremely high. The number of loss-making banks was 17 in June 2013, and their market share based on the balance sheet total amounted to nearly 40 per cent. 74 per cent of the total profit originates from three banks, while the three banks with the highest losses account for 80 per cent of the gross loss of the banking sector as a whole. Banking sector profitability may remain at a low level in the future, which may lead to the consolidation of the banking sector. The capital adequacy ratio is at a several-year high, but capital buffers are concentrated.

The six-month pre-tax profit of cooperative credit institutions amounted to HUF 4 billion, which was slightly below the figure for the same period last year. The capital adequacy ratio of cooperative credit institutions is adequate at the sector level, but there is strong asymmetry. Financial enterprises posted a profit again, after four years of losses.



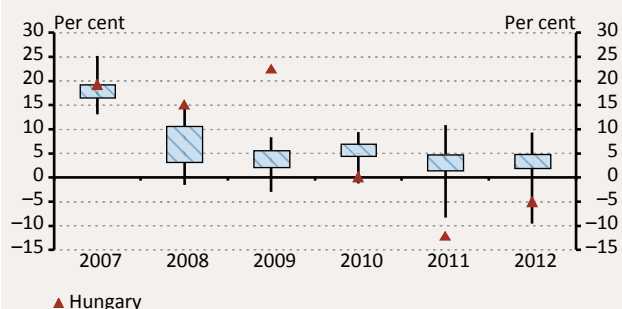
The profitability of the banking sector continues to be low.

At end-June 2013, the cumulative pre-tax profit of the banking sector amounted to HUF 45 billion (Chart 60), which is much more than the previous year's HUF 11 billion, but is well below the profit figures recorded in earlier years. Profitability indicators continue to be negative: the banking sector's pre-tax 12-month rolling ROA indicator was -0.2 per cent, while its ROE indicator amounted to -2 per cent, which continues to indicate a competitive disadvantage in terms of profitability (Chart 61). As a result, domestic affiliate banks are in worse positions both in capital and fund allocations, which may lead to further balance sheet adjustment.

The most stable income of the banking sector is interest income.

Interest income accounts for the majority of income, albeit its volume also declined in the past one year. In the meantime, the volume of net profit from commissions and fees as well as from trading income increased. The growth in the profit of trading income from is mainly attributable to the exchange rate effect. On the cost side, the level of operating costs declined slightly, but there was no material change in this figure compared to the level one year earlier. Loan loss provisioning was not extremely high in H1. Banks paid the pro-rata portion of the bank levy. Banks must pay

Chart 61
Profit after tax ROE in international comparison



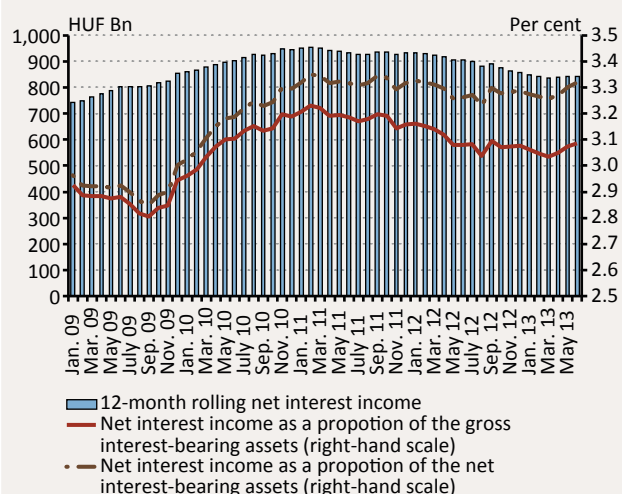
Note: The chart depicts the 46–60, 20–80 percentile value of the member states' banking systems together with the Hungarian banking systems' ROE.

Sources: ECB CBD database.

the one-off extra transaction tax in four instalments between September and December.

The net interest margin remained at a high level, as banks continue to pass on a part of their loan losses to their performing customers. In 2013, following a slow but steady decline in Q1, the 12-month cumulative interest income was stagnant in Q2. Interest income compared to both gross and net interest-bearing assets increased in Q2 (Chart 62), albeit only very slightly. This is basically attributable to the decline in the stock of interest-bearing assets. Although the persistently high and rising level of the interest margin partly serves to offset the elevated loan loss provisioning and the bank levy, it may also indicate insufficient competition in the banking sector.

Chart 62
Net interest income as a proportion of the gross and net interest-bearing assets of banks and branches

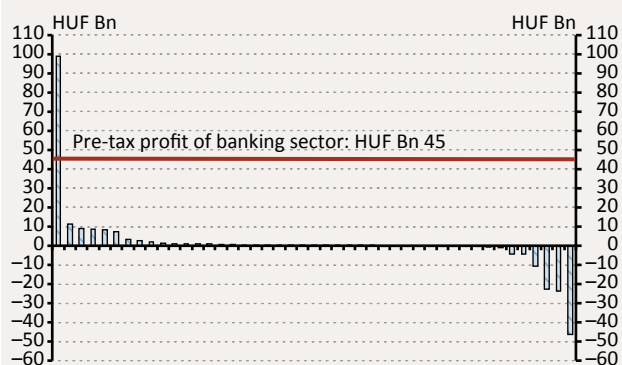


Source: MNB.

The asymmetry of profitability within the banking sector is extremely high. The number of loss-making banks was 17 in June 2013, and their market share based on the balance sheet total amounted to nearly 40 per cent. Extremely high concentration is observed in pre-tax profit. One single bank's profit accounts for HUF 99 billion of the banking sectors' profit. On the whole, the banking sector's pre-tax profit of HUF 45 billion is the balance of losses amounting to HUF 116 billion and profits amounting to HUF 161 billion. 74 per cent of the total profit originates from three banks, while considerable concentration is observed in the case of loss-making banks as well: the three banks with the highest losses account for 80 per cent of the gross loss of the banking sector as a whole (Chart 63). Polarization within the profitability is also justified by our cluster analysis (Box 9).

Chart 63
Pre-tax loss and profit of banks and branches at the individual level

(June 2013 data)



Source: MNB.

Box 9**Groups within the sector of domestic credit institutions identified with cluster analysis**

Using the balance sheets and profit and loss statements of individual banks, we carried out a cluster analysis in order to map the structure of the domestic credit institution sector as well as the similarities and dissimilarities observable in the behaviour of its individual groups. The groups were formed with the help of hierarchical cluster analysis based on the proximity measure calculated using so-called random forests. For more details on the methodology, see Shi and Horvath (2006) as well as Breiman and Cutler (2003).¹⁵

The analysis covered the characteristics of domestic financial intermediaries in the last 10 years. Based on their characteristics, the individual institutions may be classified into relatively homogeneous groups. Both cross-sectional and time dimensions were taken into account through the clustering, and thus not only can the individual groups be compared with one another, it also becomes possible to examine the dynamics of the individual groups and developments in various structures (e.g. lending, collecting deposits, foreign funding).

The data, which are mostly available with monthly frequency, were divided into two main periods: a pre-crisis, upswing period (2005–2008) and a recession period following the onset of the crisis (2009–2012). The selected indicators for the individual periods were examined in such a manner that allows condensing of both structural and behaviour-type information. The variables included in the analysis can be classified into four larger groups, depending on whether they describe credit institutions' characteristic features in terms of their assets, liabilities, profitability or capital.

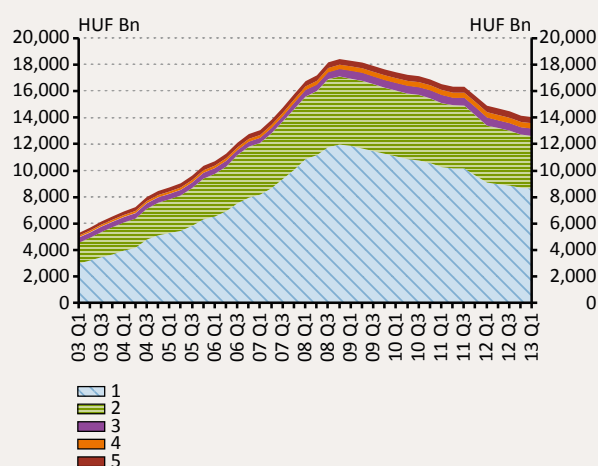
Using the examined indicators, the following groups can be identified within the sector of domestic credit institutions:

1. Foreign-owned large banks: This group, which is homogeneous in terms of many criteria, comprises the nine largest foreign-owned affiliate banks. It is typical of the group that the ratio of corporate Swiss franc loans is the highest here, and the ratio of household foreign currency loans is also considerable. Foreign funds account for a significant share of total liabilities, and the banks belonging to this group are characterised by high ratios of non-performing loans and loss-making operation in the crisis period.

2. Mainly domestic-owned large and medium-sized banks active in foreign currency lending to households: In terms of many properties, this group is more heterogeneous than the previous one, but the expansion in foreign currency lending in the pre-crisis period and its decline during the crisis are typical here as well. Members of this group were less active in foreign currency lending to corporations, but high ratios of external liabilities and even insignificant deposit collection in the case of several banks are typical in this group.

3. Smaller banks with less activity in foreign currency lending and moderate overall lending activity prior to the crisis: A heterogeneous group of smaller banks, foreign branches and specialised credit institutions. They have a low total market share both in corporate and household lending, but expanding lending was typical of the group in both segments during the crisis, while the average ratio of non-performing loans is the lowest in this group.

4. Larger cooperative credit institutions that have access to interbank funds as well and also participate in foreign currency lending: Of the cooperative credit institutions, this is the group that is most similar to banks. Based on their size, the larger cooperative credit institutions (or former ones that have already become banks) can be classified into this category. Similarly to banks, they were active in foreign currency lending to households in the pre-crisis period, and thus – unlike in the case of other cooperatives – interbank and foreign funds have a considerable weight in the

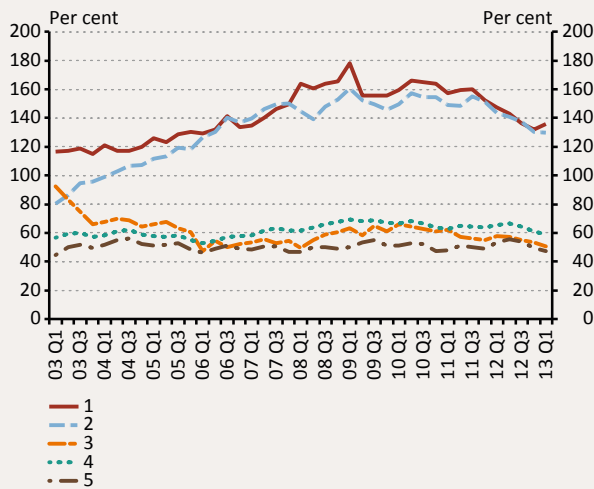
Private sector loans outstanding

Source: MNB.

¹⁵ SHI, TAO AND STEVE HORVATH (2006), "Unsupervised Learning with Random Forest Predictors", *Journal of Computational and Graphical Statistics*, Vol. 15 No. 1 March, pp. 118–138 (21).

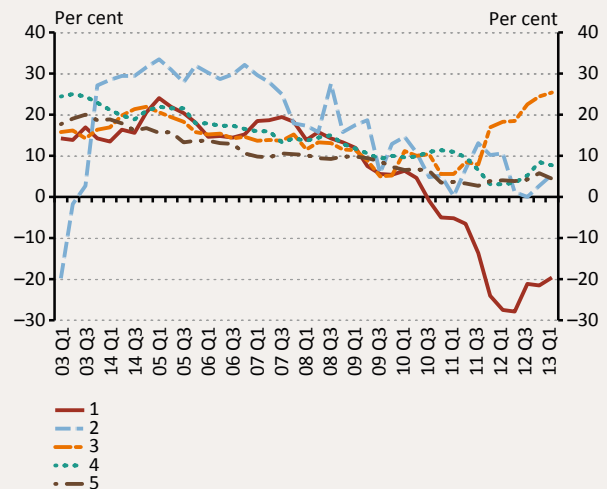
BREIMAN, LEO AND ADELE CUTLER (2003), "Random Forests Manual v4.0", *Technical report*, UC Berkeley.

Loan-to-Deposit ratios



Source: MNB.

Profitability (ROE)



Source: MNB.

liability structure of the mutual savings banks of this group. Compared to the others, the average ratio of non-performing loans is the highest in this group.

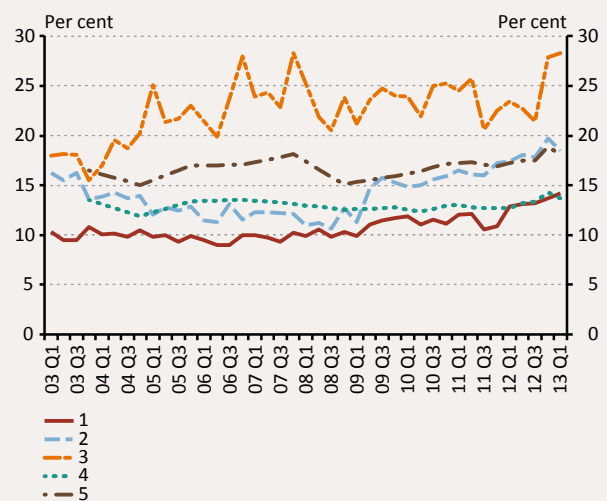
5. Other cooperative credit institutions: In addition to their market share, the cooperative credit institutions classified into this group are mainly different from the others in terms of their liability structure: their weight is typically extremely low or they do not have interbank or foreign exchange liabilities at all.

A dynamic analysis of the main indicators also reveals remarkable differences between the individual groups. In terms of market share, the significant dominance of Groups 1 and 2 was typical of practically the entire period under review. The concentration of market share reached its peak before the crisis, followed by gradual easing observed in the recent years. The result of deleveraging of the two largest groups, which play an important role in lending to the private sector, is a steady contraction in loans outstanding since the start of the crisis, but the slight increase in the lending activity of the other groups is unable to offset this.

The pre-crisis credit expansion of Groups 1 and 2 resulted in a rise in loan-to-deposit ratios, leading to an overall increase of reliance on foreign funding in these two groups. It is noteworthy that while the loan-to-deposit ratios of foreign subsidiaries (Group 1) were above 100 during the whole period under review, the initial value of Group 2 was below 100, and it rose to risky levels practically during the expansion period. The loan-to-deposit ratios of the other groups were typically low in the whole period under review, and in this respect there were no major changes before or after the crisis.

In the period following the outbreak of the crisis, profitability (ROE) is the weakest at the banks of the two largest groups, which is mainly apparent in the case of the group of foreign banks with weaker portfolio quality. The profitability of Group 3 was able to improve during the crisis as well. Meanwhile, despite deterioration in recent years, the profitability of Groups 4 and 5 (cooperative credit institutions) has remained positive. In addition, the profit of more active cooperatives (Group 4) systematically exceeds those which are less active in lending (Group 5).

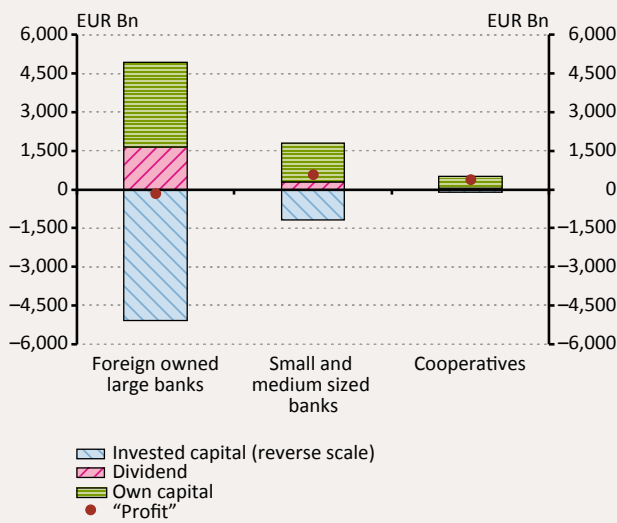
Capital adequacy (CAR)



Source: MNB.

There are no major differences in capital adequacy across the groups. The capital adequacy ratio (CAR) of the banks in Group 3 is the highest (mainly because of the home savings and loan associations that belong to this group), while all other credit institutions have a considerably lower CAR. Although the CAR value of the banks in Group 1 is systematically lower than that of Group 2, the former includes some subsidiaries managing their capital adequacy with their parents actively. A fundamental difference can be seen in the case of cooperative credit institutions as well, as over the entire time horizon the CAR is naturally lower in the case of the group that takes a higher risk.

Chart 64
Relationship between the invested capital of selected groups of institutions and the present equity capital and dividends disbursed



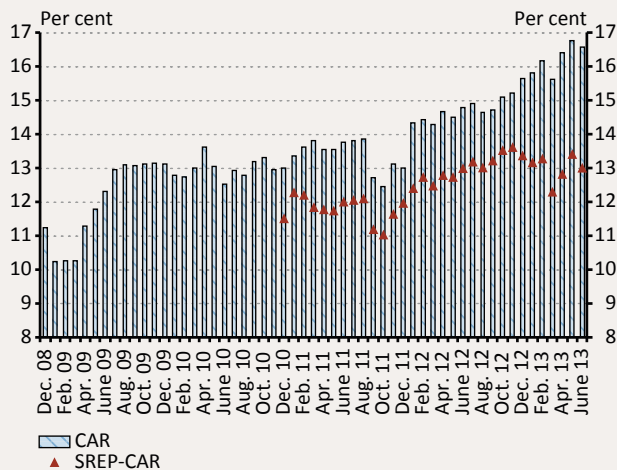
Note: Between 1997 and June 2013, amounts calculated not at present value. Invested capital means the initial equity capital and the capital increases carried out in the period under review.
 Source: MNB.

The fundamental profitability of the banking sector is impaired by several factors. The current weak profitability of the banking sector is strongly attributable to the high loan loss provisioning requirements and the bank levy. At the same time, several factors have a negative impact on future earning power. Due to the cuts in the central bank base rate interest sensitive funds may leave the banking sector, resulting in an increase in the cost of funds. The entry of the state into competition for sources of financing may also add to interest rates. The introduction of a health contribution on bank deposits may result in a competitive disadvantage. Postponement of the phasing out of the bank levy for an indefinite period of time also reduces profits. Finally, the forecasted decline in lending activity also impairs profitability, although banks are able to influence it in a more active manner.

Low profitability may result in consolidation of the banking sector. Over the past 15 years, 4 of the 6 largest foreign-owned banks recorded losses on aggregate (Chart 64). The decline in predictability and the persistently low level of profitability may make some market participants rethink their respective strategies. All of this may mean that a consolidation process may start in the Hungarian banking market. This is also attributable to the fact that the modest growth prospects make it practically impossible to increase market shares within the framework of organic development. Therefore, participants which consider the Hungarian market strategically important can only expand their respective shares by way of acquisitions.

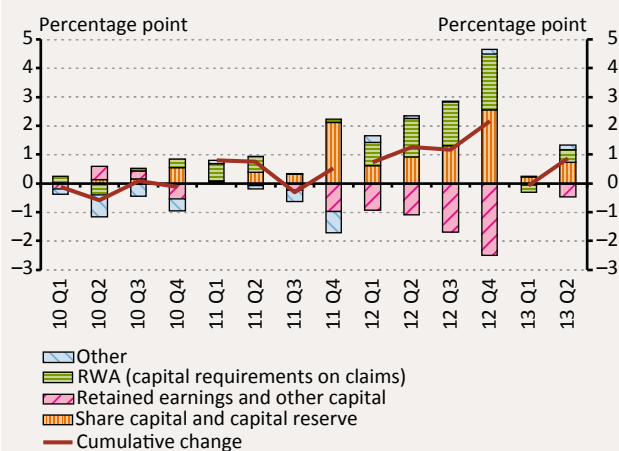
The consolidation process may be slowed down by the high ratio of parent funding. Parent funding of foreign-owned domestic financial institutions can still be considered significant, in spite of the decline seen in recent years. Therefore, when acquiring a financial institution that is for sale, the new owner not only has to pay the purchase price, but must also take over financing of the acquired institution. Accordingly, it is conceivable that a partial reduction of foreign financing may take place as a first step in consolidation, and the bank is only sold when its reliance on domestic financing has increased.

Chart 65
CAR and SREP CAR of the banking sector



Source: MNB.

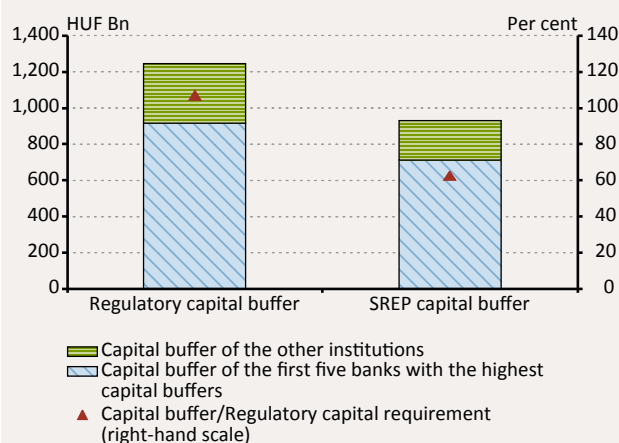
Chart 66
Factors affecting the cumulative changes in the capital adequacy ratio of the banking sector



Source: MNB.

Capital adequacy is satisfactory at the banking sector level, but capital buffers are concentrated. The CAR increased from 15.6 per cent at end-December 2012 to 16.6 per cent by end-June (Chart 65). Decomposition of the change reveals that in H1 an increase in available capital and capital reserves along with a decline in the RWA raised the indicator, while losses reduced it to a lesser extent (Chart 66). The banks with the five largest buffers account for more than 73 per cent of the banking sector's capital buffer. While the total regulatory capital buffer exceeds the minimum capital requirement by 107 per cent, in the case of the SREP it is 63 per cent, indicating a more stretched, but still strong capital position (Chart 67).

Chart 67
Capital buffer of the banking sector at end-June 2013



Source: MNB.

Financial enterprises posted a profit again after four years of losses. The pre-tax profit of the sector in the middle of the year amounted to HUF 16 billion, resulting from the HUF 5 billion pre-tax profit of bank-owned financial enterprises and the pre-tax profit of HUF 11 billion of non-bank enterprises (Table 6). Financial enterprises restrained their activity considerably. Some banks decided to incorporate their affiliates. As a result, large, loss-making bank-owned financial enterprises were included in banks' balance sheets, reducing the losses of the financial enterprises. Another effect of incorporations is that this market segment continues to shrink.

Cooperative credit institutions show a pre-tax profit, although it is slightly below the level of the same period of last year. The half-year pre-tax profit of cooperative credit institutions amounted to HUF 4 billion. The profitability of cooperative credit institutions is much more balanced than that of the banking sector. Provisioning is lower in this sector due to the traditionally smaller proportion of corporate and household lending and lending in foreign currency. Moreover, the bank levy also burdens these institutions to a lesser extent. The profitability ratio of the sector is much better

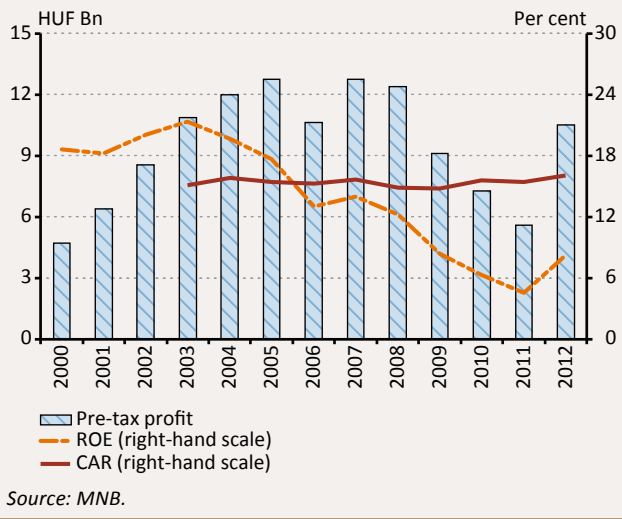
Table 6
Pre-tax profit/loss of financial enterprises

(HUF Bn)

	Financial enterprises owned by banks	Financial enterprises without bank ownership	Sector total
2008	17.7	25.8	43.5
2009	-14.4	4.5	-9.9
2010	-39.9	-2.6	-42.5
2011	-38.7	-15.4	-54.1
2012	-30.0	-17.0	-47.0
June 2013	5.0	11.0	16.0

Source: MNB.

Chart 68
CAR and ROE indicators and pre-tax profit of cooperative credit institutions



than that of the banking sector; ROE amounted to 6.7 per cent (Chart 68).

The capital adequacy ratio of cooperative credit institutions is adequate at the sector level, but masks strong asymmetry.

The 16.9 per cent capital adequacy ratio of cooperative credit institutions sector in June 2013 indicates an adequate capital position at the aggregate level for the sector. At the same time, significant asymmetry is observed in capital adequacy at individual level; the relevant risks will be reduced by the guarantee system of the Integration Organisation. At present, the sector's SREP CAR of 12.8 per cent also indicates strong shock-absorbing capacity (Chart 68). It is important to emphasise that one of the underlying reasons for the high capital adequacy ratio is that the proportion of loans is low on the asset side of the balance sheet of cooperative credit institutions, while the ratio of government securities and interbank loans with low capital requirement is high. Consequently, a pick-up in lending may quickly absorb the capital buffer.

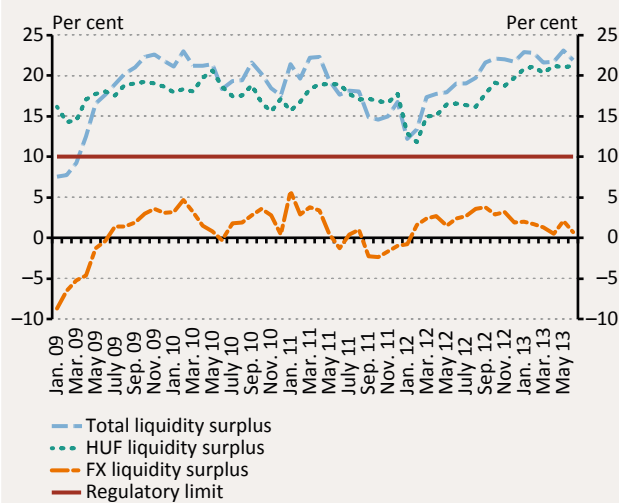
6 Liquidity and solvency stress tests – capital need is increasing, but its magnitude is manageable in a stress scenario

Banks' short-term liquidity is mainly available in forints; the level of this liquidity is more than twice the regulatory requirement. The stressed liquidity surplus of banks also exceeds the regulatory minimum, although it consists of only forint reserves. As a result, smooth functioning of the swap market is indispensable in a protracted stress scenario. The Liquidity Stress Index is 10.7 per cent, which means that if the stress scenario occurred, only some of the participants in the banking sector would fall below the regulatory minimum. In addition, another favourable aspect is that at individual level all banks would remain liquid even in a stress situation.

The significant 2012 losses were largely offset by capital increases, but several institutions suffered losses in 2013 H1 as well. Therefore, in the stress test the banking sector's initial capital position and shock-absorbing capacity was not able to improve compared to the end of last year. This is also confirmed by the Solvency Stress Index, the level of which remained almost unchanged compared to the end of the year. Expected losses declined somewhat in the stress scenario compared to our previous stress test, but at the same time, the earnings capacity of banks also deteriorated. Accordingly, two major banks have capital shortage over the two-year time horizon. The banking sector's total capital need of HUF 116 billion is considered significant, although it is manageable with parent banks' continued commitment.

6.1 Based on the stress tests, the banking sector's liquidity is satisfactory

Chart 69
30-day liquidity surplus as a proportion of balance sheet total by currencies



Source: MNB.

Banks' short-term liquidity is mainly available in forints, the level of this liquidity amounts to more than twice the regulatory requirement. In the first half of the year, the level of 30-day forward-looking liquidity surpluses was continuously higher than the regulatory limit of 10 per cent to total assets. However, the surplus is mostly available in forints. FX liquidity surplus is negligible, and it declined slightly in H1, but also remained continuously in the positive range (Chart 69).

The short-term complex liquidity stress test measures the effect of an assumed simultaneous occurrence of financial market turmoil, deposit withdrawal and exchange rate shock. In determining household and corporate deposit withdrawals and the price decline of eligible securities, we applied so-called value-at-risk (VaR) type stresses calculated on the basis of historical data. The magnitude of the exchange rate shock is consistent with the data of our macro stress scenario. Crisis experiences were taken as a basis for determining the other stress measures (Table 7).

The stressed liquidity surplus of banks also exceeds the regulatory minimum, but only consists of forint reserves. The 30-day forward-looking stressed liquidity surplus was higher than the required minimum level in H1. After stress, however, only forint liquidity remains. Moreover, a shortage of foreign exchange evolves, although only a slight one (Chart 70). As a result, smooth functioning of the swap market is indispensable in a protracted stress situation.

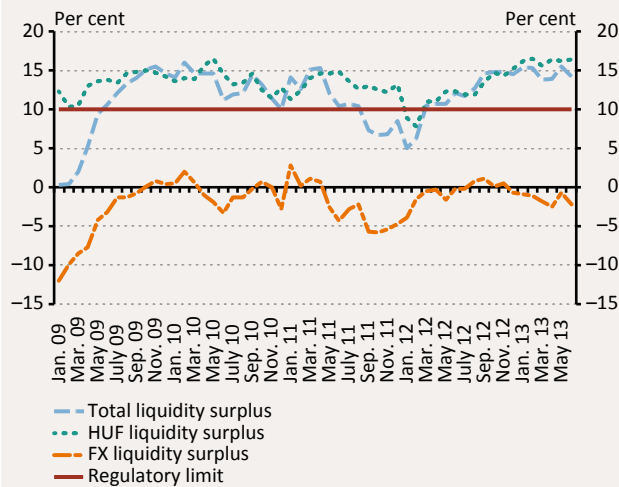
Table 7
Main parameters of the liquidity stress test

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.

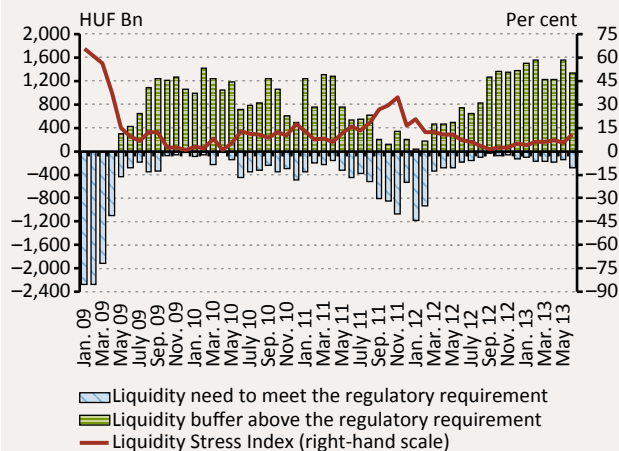
Chart 70
30-day stress liquidity surplus as a proportion of balance sheet total by currencies



Source: MNB.

The Liquidity Stress Index is at a low level in spite of an increase. The Liquidity Stress Index shows the extent to which the liquidity buffer of banks falls short of the regulatory limit of 10 per cent to total assets, and the number of banks experiencing a shortfall. Taking account of the extent of the deviation from the regulatory limit as well, and then weighted by the balance sheet total of banks, the value of the index amounts to 10.7 per cent. This means that if the stress scenario took place, the banking sector would be only slightly below the regulatory minimum. It is favourable that no bank would fall below zero; in other words each bank would remain liquid even in a stress situation (Chart 71).

Chart 71
Liquidity Stress Index and banks' liquidity surplus or deficit relative to the regulatory level in the stress scenario



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

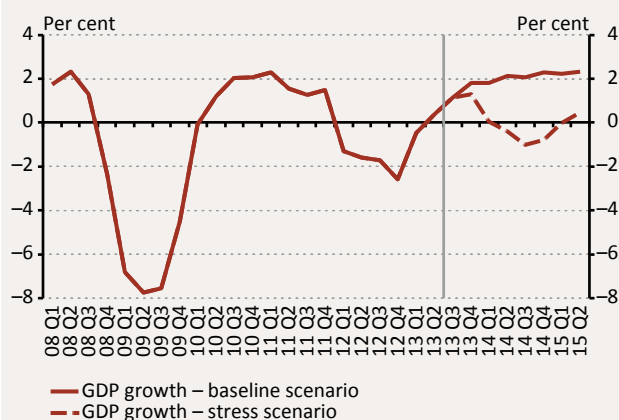
Source: MNB.

6.2 Due to the weaker initial capital position of some banks, increasing capital needs are seen in the stress scenario

Chart 72

GDP growth rate along the scenarios

(compared to the corresponding period of the previous year)

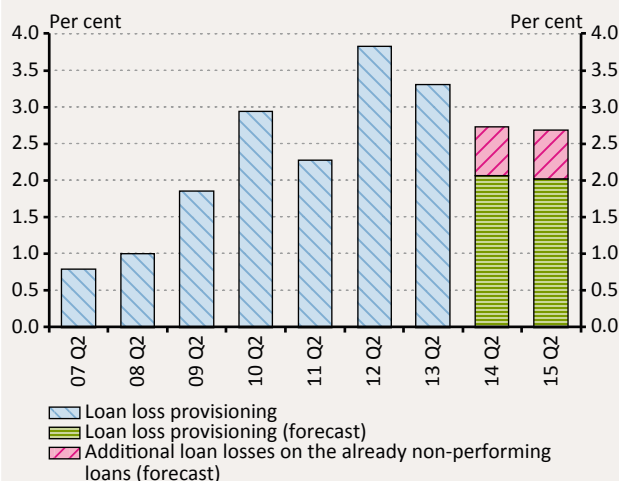


Source: MNB.

Our stress scenario is based on a significant economic downturn, exchange rate and interest shocks as well as an increase in the coverage of non-performing loans. The current macroeconomic baseline scenario is identical with the forecast published in the September issue of the Quarterly Report on Inflation. While the baseline scenario outlines the most probable scenario, the stress scenario examines the consequences of a low-probability, severe but plausible series of events over the next two years. As before, the stress size was determined on the basis of expert judgement in the current stress test as well. In the two years, economic growth is 4.3 percentage points below the baseline scenario (Chart 72). At the same time, the exchange rate of the forint against the euro depreciates by 15 per cent right at the beginning of the time horizon under review, and this difference remains unchanged in both years. The interest rate level, i.e. both domestic and external financing costs, moves up by 300 basis points and remains there for the whole period. As a result of more severe risks and the worsening growth outlook, companies cut the number of employees, leading to a persistent deterioration in households' income position. Finally, on the part of banks we expect further loan loss provisioning on non-performing loans, thus increasing their coverage.

Chart 73

Loan loss rate for the corporate portfolio in the stress scenario

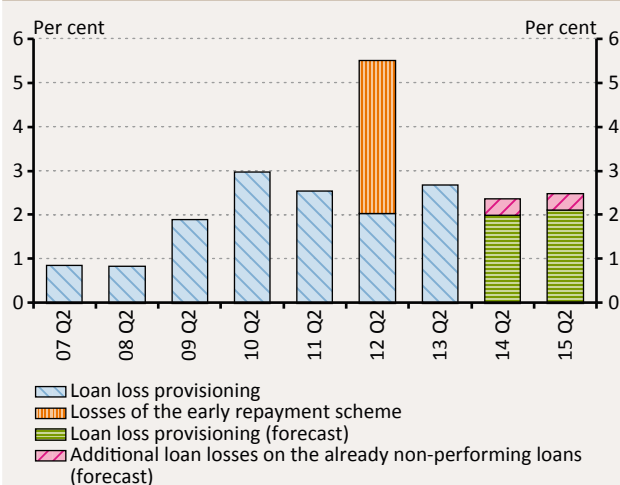


Source: MNB.

The weak profitability experienced in the last one and a half years is expected to remain in our stress test. Profitability is forecasted using the econometric model presented in our earlier reports. In the stress scenario, earnings before loan losses amount to 40–80 per cent of the average of the last three years. The transaction tax is assumed to be passed on fully to customers, but at the same time the additional one-off tax payment completely burdens the profitability of the banking sector.

Due to the credit portfolio deterioration, significant, but lower loan loss provisioning is expected in the stress scenario. The need for loan loss provisioning stems from two sources: the expected loss on loans that become non-performing and additional provisioning on the outstanding non-performing portfolio. Due to the improving baseline scenario, the stress scenario is also better than the one half a year ago, which reduced the default risk both in the case of households and corporations. Accordingly, loan loss to total

Chart 74
Loan loss rate for the household portfolio in the stress scenario



Source: MNB.

loans is below historical highs. For both sectors, we expect high values of between 2.5 and 3 per cent in the stress scenario (Charts 73 and 74). In nominal terms, the value of loan loss is lower compared to our stress test carried out half a year ago. In addition to the improving probability of default (PD), the loss is also reduced by the declining exposure at default (EAD), due to the steadily narrowing performing portfolio.

In the stress scenario, a rise in government securities yields would have a significant negative effect on profitability, which is only partly offset by the profit obtained on the open exchange rate position. In the market risk stress test, we look at the impact of interest and exchange rate shocks through the immediate revaluation of market exposures. In the case of the interest and exchange rate shocks as well, the average difference between the baseline and stress scenarios was used as the size of the shock. The resulting profit impact was evenly distributed over the two-year forecast horizon. A 300 basis point parallel upward shift in the yield curve results in a HUF 90 billion loss at the banking sector level, mainly due to revaluation of the government bond portfolio (Table 8). In the stress scenario, the exchange rate depreciates by 15 per cent, which *ceteris paribus* (disregarding higher loan losses due to portfolio deterioration) boosts the profits of banks with foreign exchange surpluses, i.e. the majority of the banking sector, by approximately HUF 69 billion, and reduces the profits of banks with forint surpluses by HUF 2 billion in aggregate through the total open FX position.

In the baseline scenario, practically every bank is able to meet the 8 per cent regulatory criterion. Domestic banks receive further significant capital injections from their parent banks. The 2012 losses were partly offset. In addition, the capital position was improved by a decline in domestic

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	390	745
Loan losses on new non-performing corporate loans	187	282
Loan losses on new non-performing household loans	203	315
Additional loan losses on the already non-performing loans		147
Loan losses on local government portfolio	4	9
Exchange rate risk of open position		-67
Interest rate risk		90
Bank levy	234	234
Interest cost of the exchange rate cap scheme	27	41

Source: MNB.

Table 9
Stress test result with the 8 per cent regulatory capital adequacy ratio

	Baseline scenario		Stress scenario	
	End of first year	End of second year	End of first year	End of second year
Capital need of banks (HUF Bn)	0	1	33	116
Capital buffer of banks above 8 per cent CAR (HUF Bn)	1,386	1,594	1,104	1,108
Total capital buffer (HUF Bn)	1,386	1,593	1,071	992

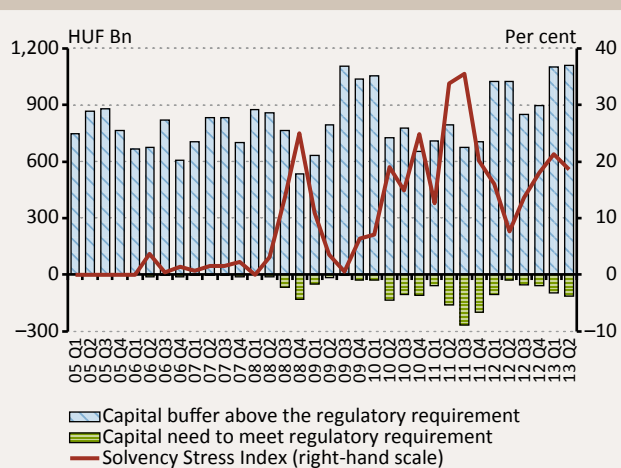
Source: MNB.

banks' loans outstanding. In addition to the relatively favourable initial position, banks are supported by the improving macro environment, which reduces expected losses. By contrast, however, according to our forecast the banking sector's profitability potential will remain weak. As a result of all these effects, in the baseline scenario only one bank has a minimal capital need in H2 (Table 9).

In a stress situation, however, primarily due to the deteriorating profitability outlook, the capital requirement increased considerably. In the first year of the stress period, two banks would need capital injection to meet the regulatory minimum. In the case of a persistent stress, the amount of capital to be injected would be HUF 116 billion (Table 9). Taking account of parent banks' commitment shown to date, this capital need seems to be manageable. However, continuously arising capital needs may reduce parent banks' commitment over the long term. Due to the increasing capital need and major banks' capital shortage, the value of the Solvency Stress Index continues to be relatively high, although it declined compared to Q1 (Chart 75). The decline was the result of the capital raise of one bank in the spring.

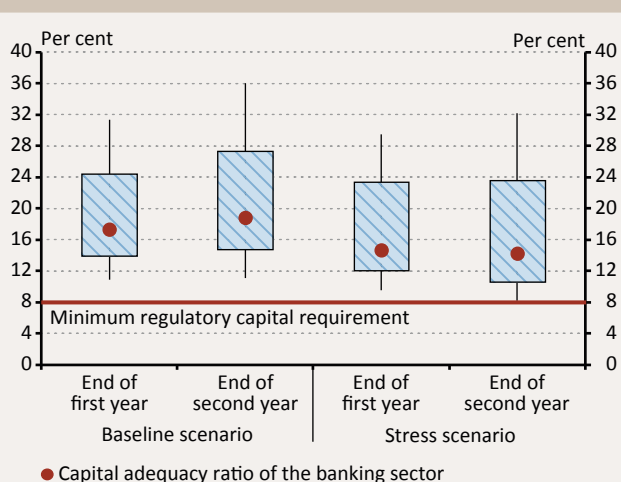
Although average capital adequacy is satisfactory, the aggregate indicator masks significant asymmetry. The capital adequacy ratio of the banking sector is robust, at nearly 19 per cent by the end of the two years in the baseline scenario (assuming no dividend payment), and exceeding 14 per cent in the stress scenario (Chart 76). However, this seemingly favourable indicator masks considerable asymmetry: the capital adequacy ratios of individual institutions are dispersed in a wide range by the end of the two-year stress period. Furthermore, poor performers include two major institutions, which have considerable capital needs by the end of the second year.

Chart 75
Solvency Stress Index



Source: MNB.

Chart 76
Distribution of the capital adequacy ratio based on number of banks

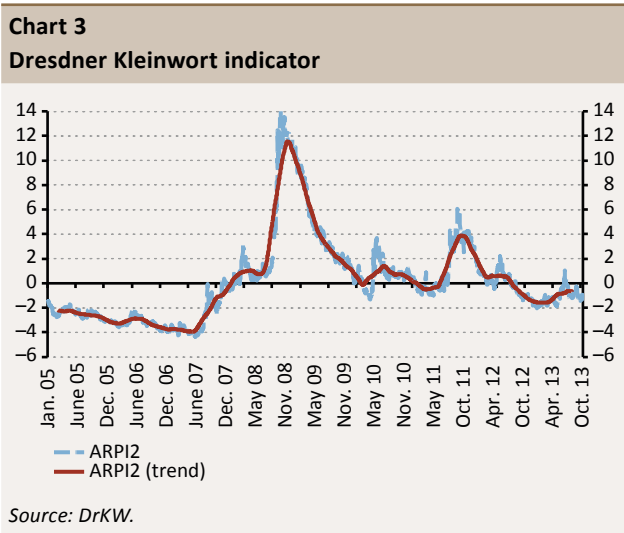
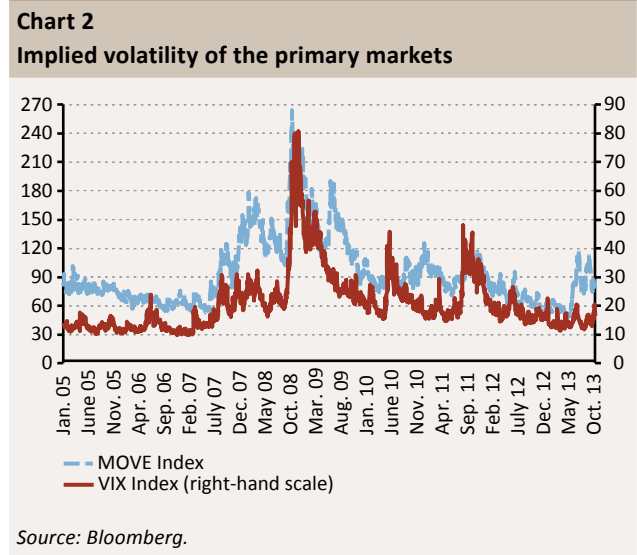
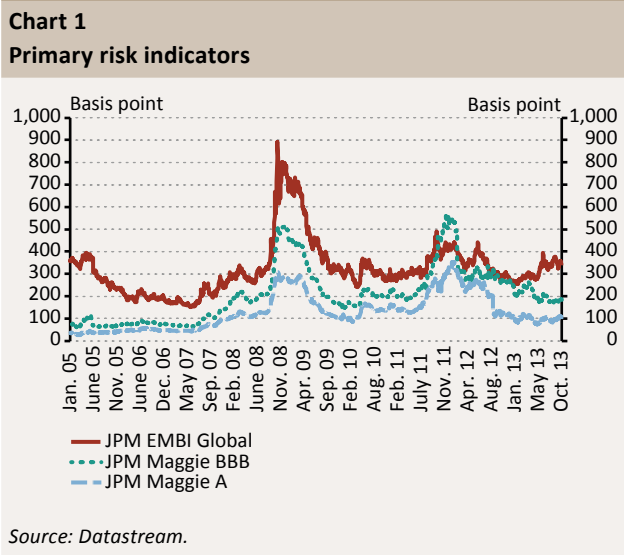


Note: Vertical line: 10–90 per cent range, rectangle: 25–75 per cent range.

Source: MNB.

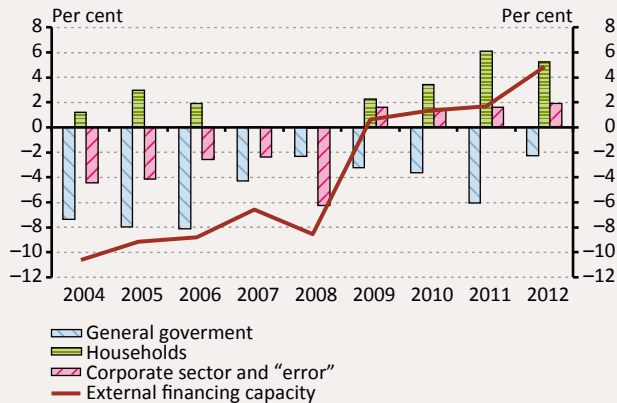
Appendix: Macroprudential indicators

1 RISK APPETITE



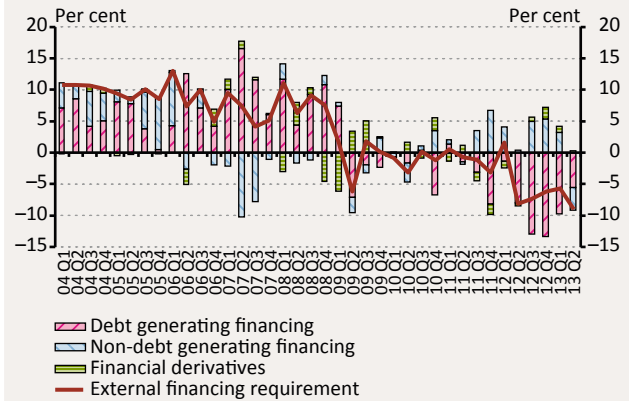
2 EXTERNAL BALANCE AND VULNERABILITY

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



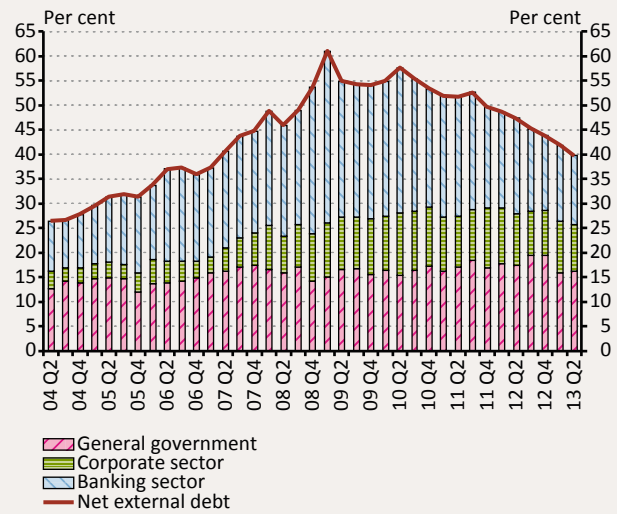
Source: MNB.

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



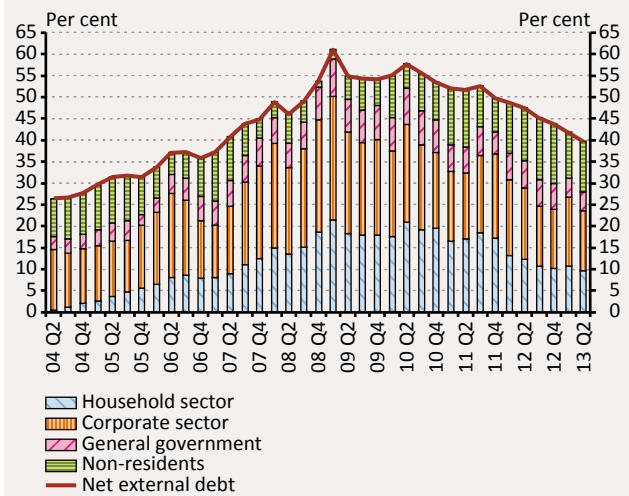
Source: MNB.

Chart 6
Net external debt as percentage of GDP



Source: MNB.

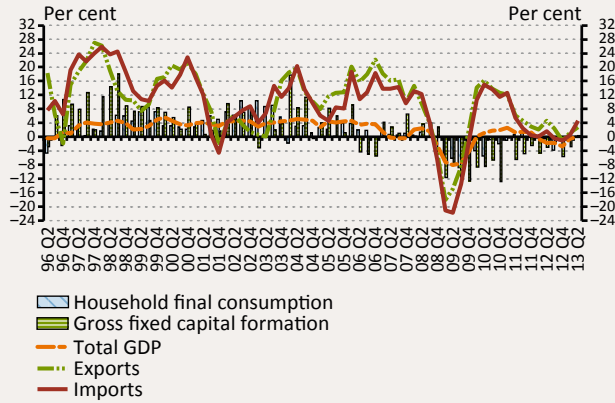
Chart 7
Open FX position of the main sectors as percentage of GDP



Source: MNB.

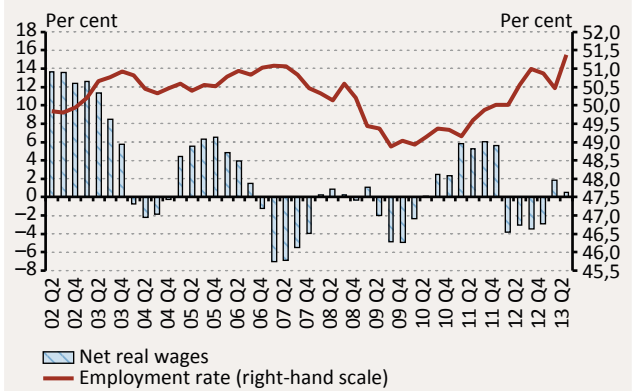
3 MACROECONOMIC PERFORMANCE

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



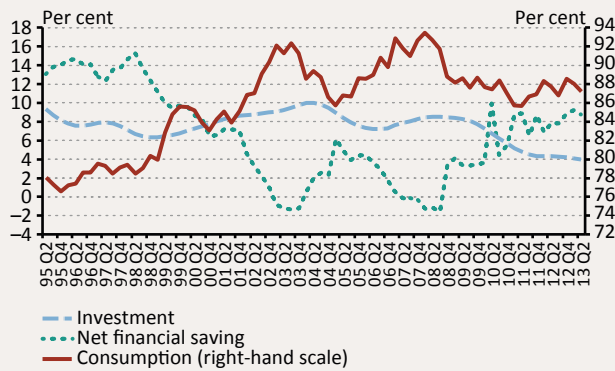
Source: HCSO.

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



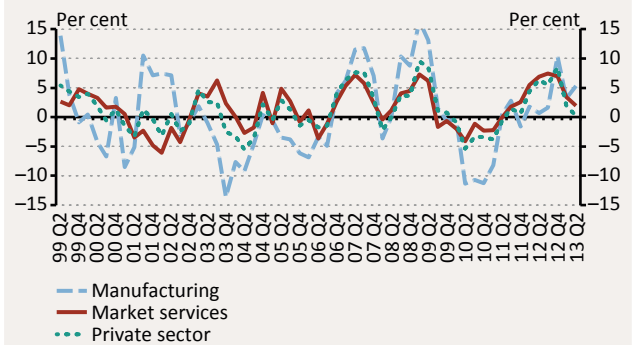
Source: HCSO.

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



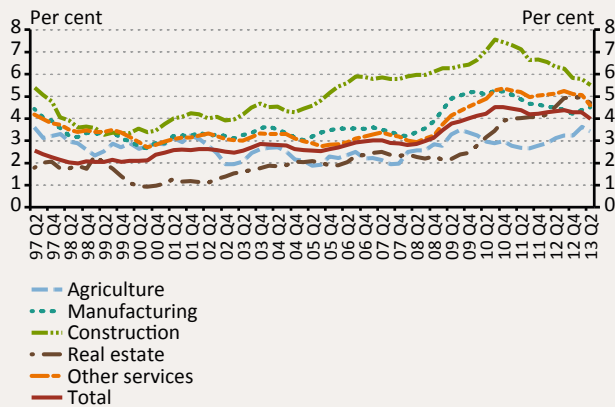
Source: HCSO, MNB.

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



Source: HCSO, MNB.

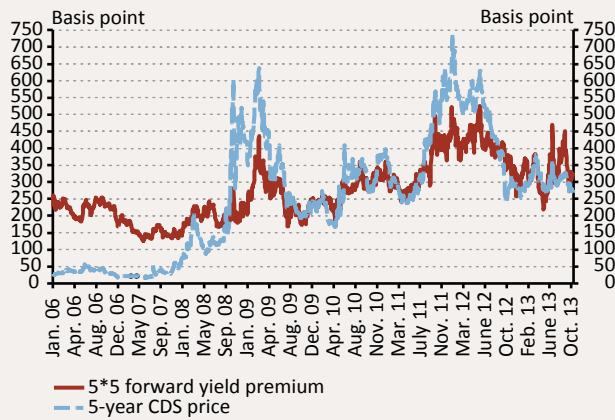
Chart 12
Sectoral bankruptcy rates



Source: Opten, MNB, HCSO.

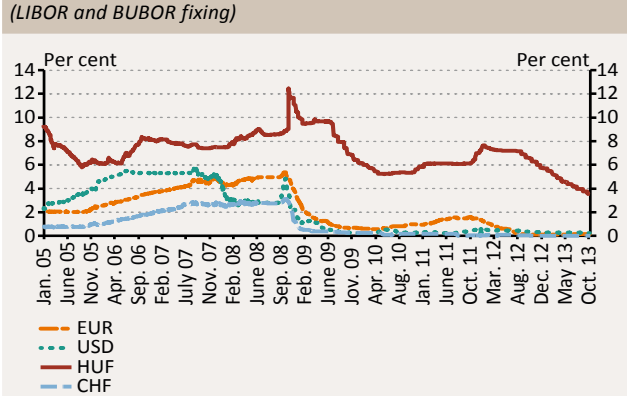
4 MONETARY AND FINANCIAL CONDITIONS

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



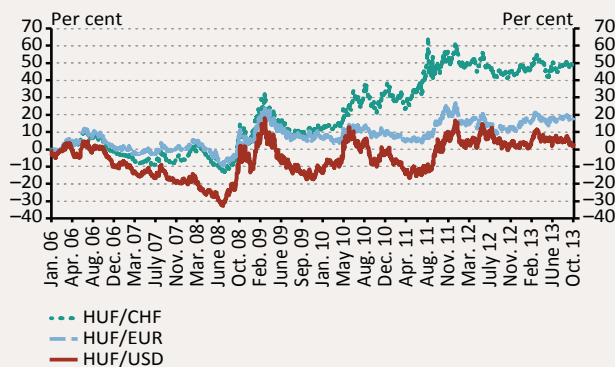
Source: Datastream, Reuters.

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



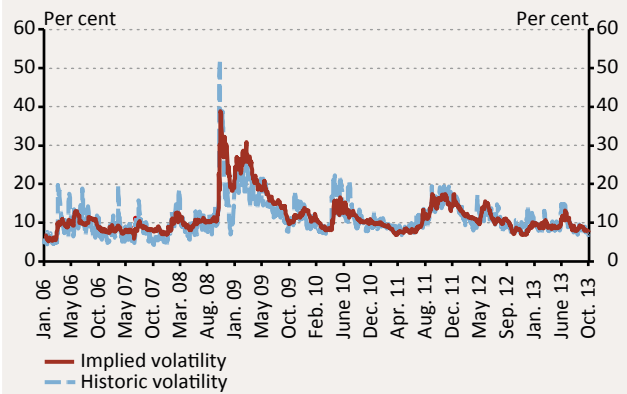
Source: Reuters.

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



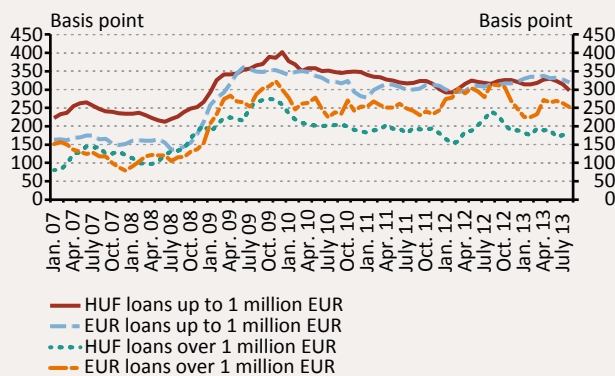
Source: Reuters.

Chart 16
Volatility of the HUF/EUR exchange rate



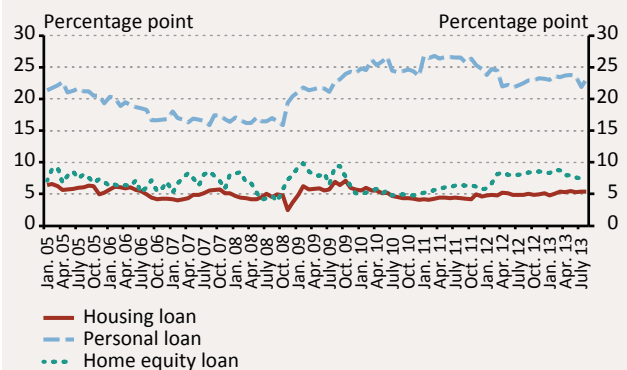
Source: Reuters, MNB.

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



Source: MNB, EURIBOR.

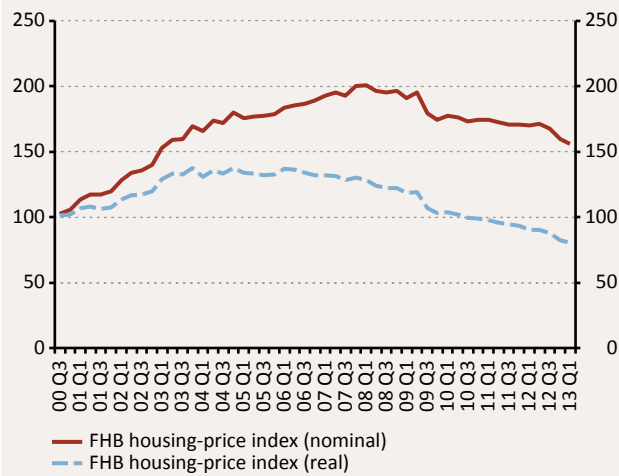
Chart 18
Interest rate premium of new HUF loans to households
(over 3-month BUBOR)



Source: MNB.

Chart 19
FHB housing-price index

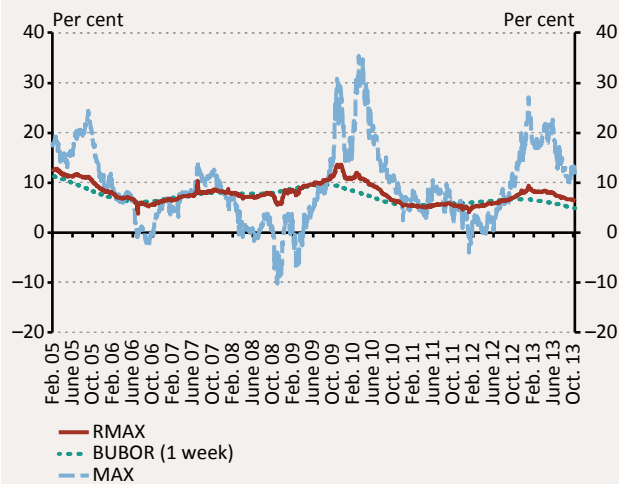
(2000 = 100)



Source: FHB.

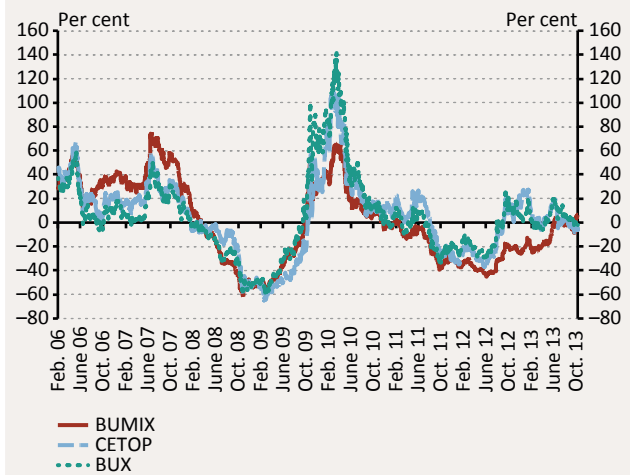
5 PRICES OF INSTRUMENTS

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



Source: ÁKK, MNB, portfolio.hu.

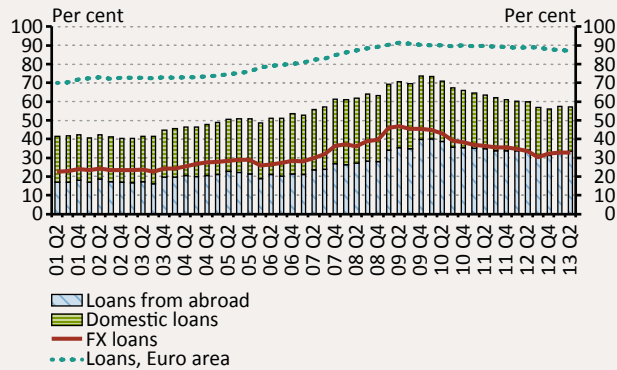
Chart 21
Annual yield of key Hungarian and Central and Eastern European stock market indices



Source: BÉT/BSE, portfolio.hu.

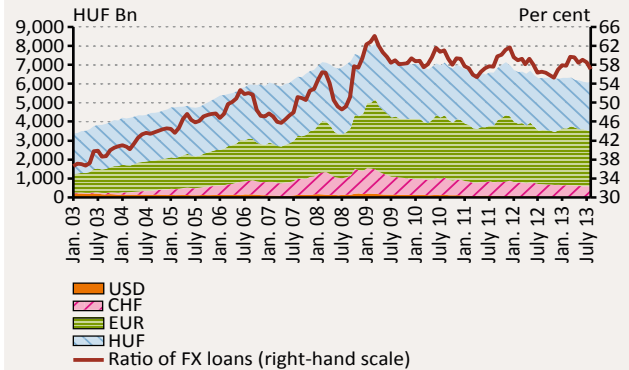
6 RISKS OF THE FINANCIAL INTERMEDIARY SYSTEM

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



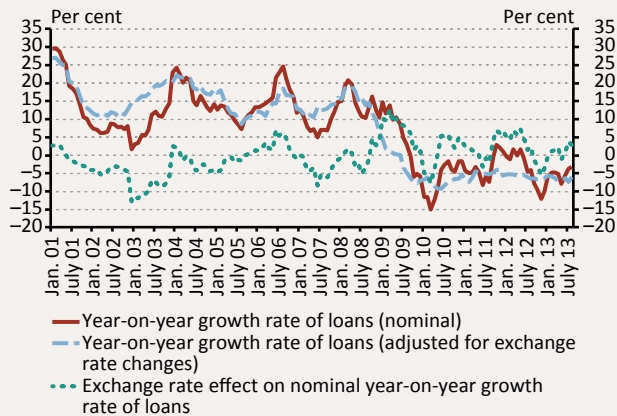
Source: MNB, Eurostat.

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



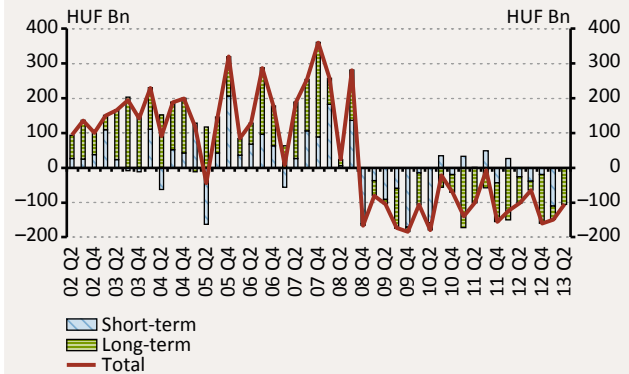
Source: MNB.

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



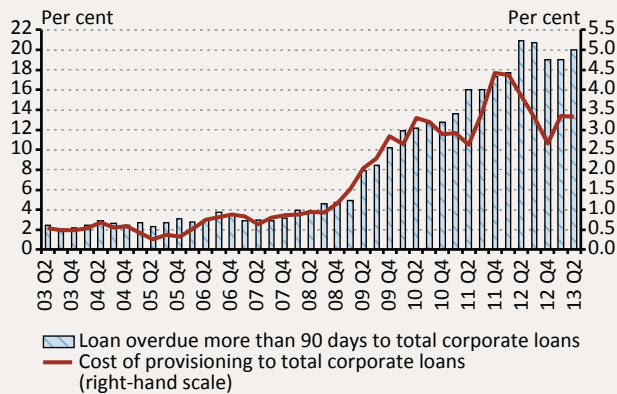
Source: MNB.

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



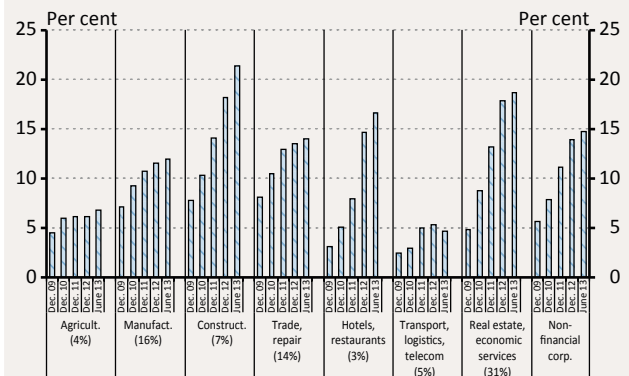
Source: MNB.

Chart 26
Quality of the corporate loan portfolio



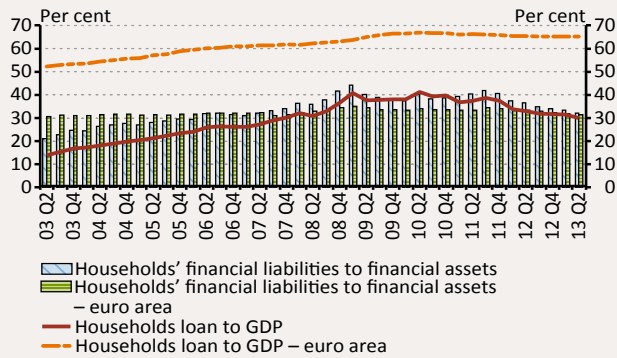
Source: MNB.

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



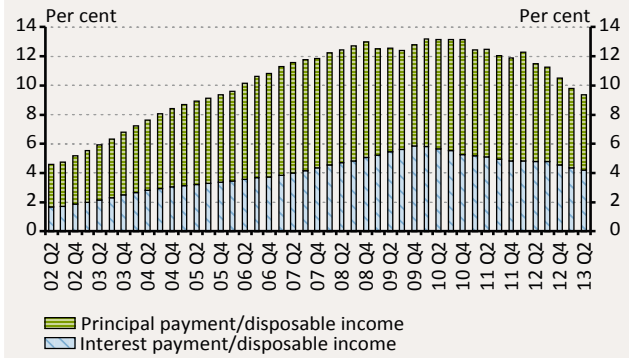
Source: MNB.

Chart 28
Indebtedness of households in international comparison



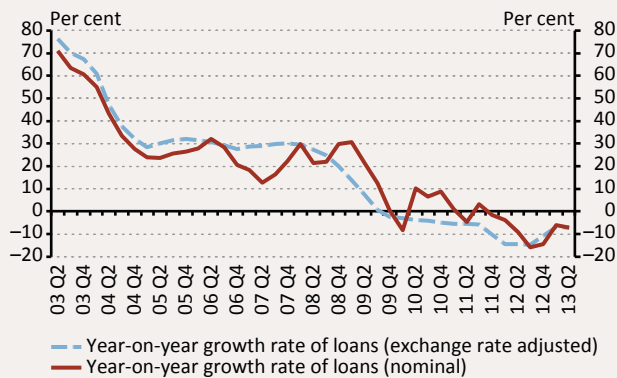
Source: MNB, ECB.

Chart 29
Debt service burden of the household sector



Source: MNB.

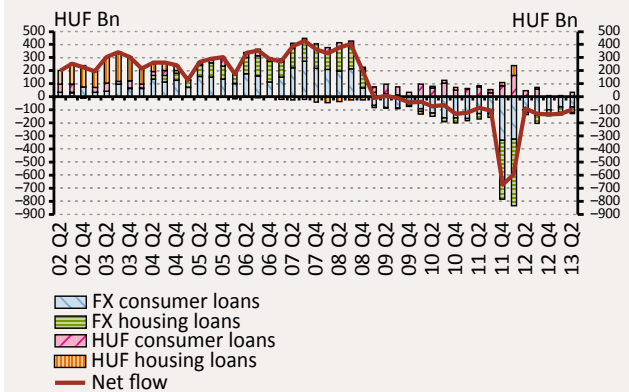
Chart 30
Annual growth rate of total household loans



Source: MNB.

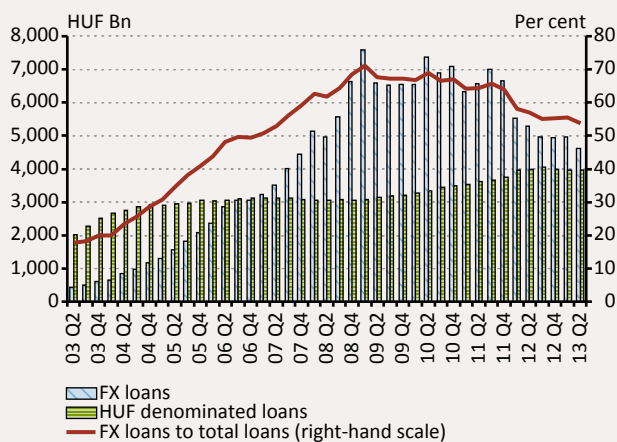
Chart 31
Net quarterly change of bank loan volumes of households by main products and currencies

(adjusted for exchange rate changes)



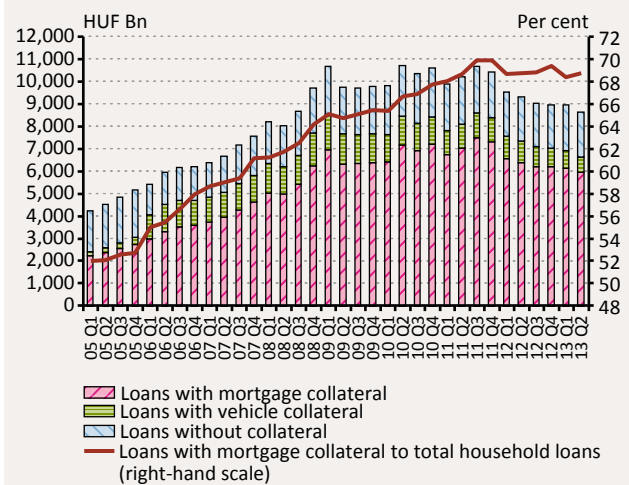
Source: MNB.

Chart 32
Household loans distribution by denomination



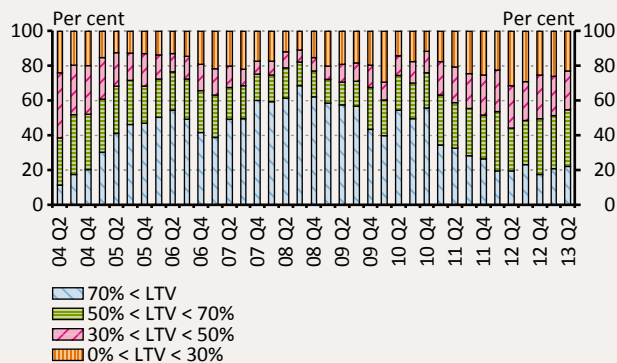
Source: MNB.

Chart 33
Household loans distribution by collateral



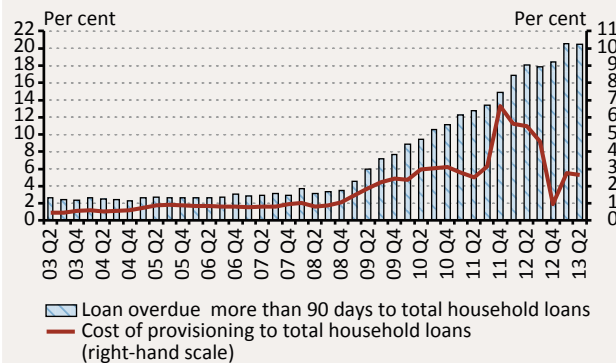
Source: MNB.

Chart 34
Distribution of new housing loans by LTV



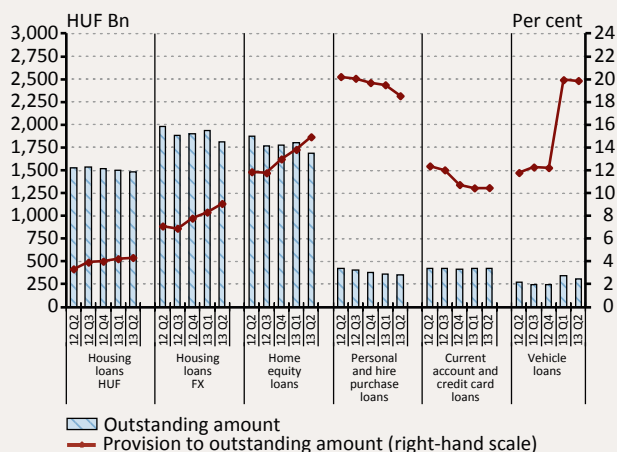
Source: MNB.

Chart 35
Quality of the household loan portfolio



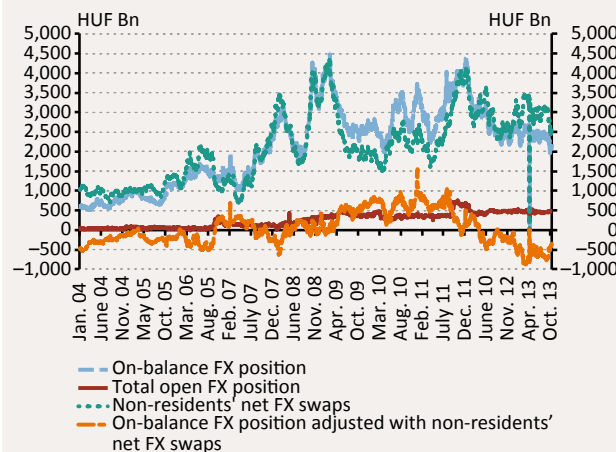
Source: MNB.

Chart 36
Provisioning on household loans



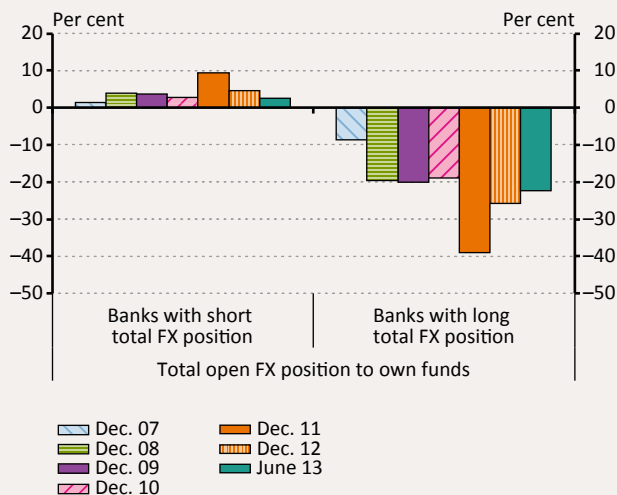
Source: MNB.

Chart 37
Open FX position of the domestic banking system



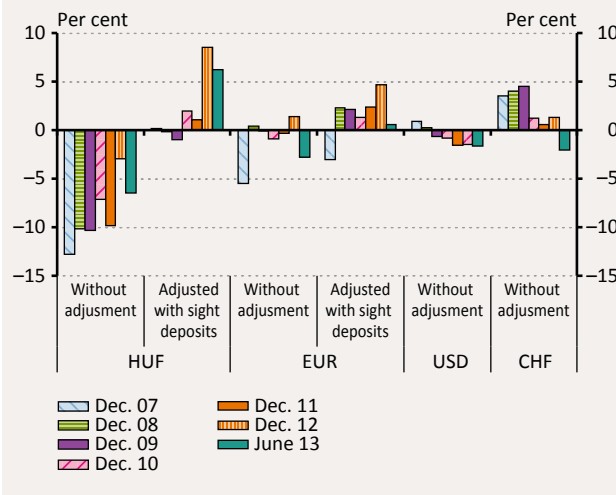
Source: MNB.

Chart 38
Banking sector's exchange rate exposure



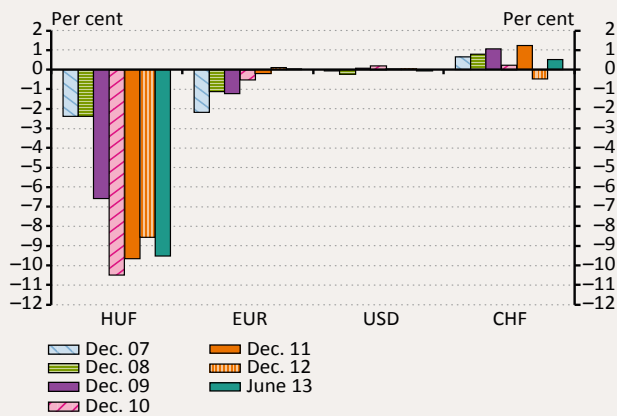
Source: MNB.

Chart 39
90-day re-pricing gap of the banking sector



Source: MNB.

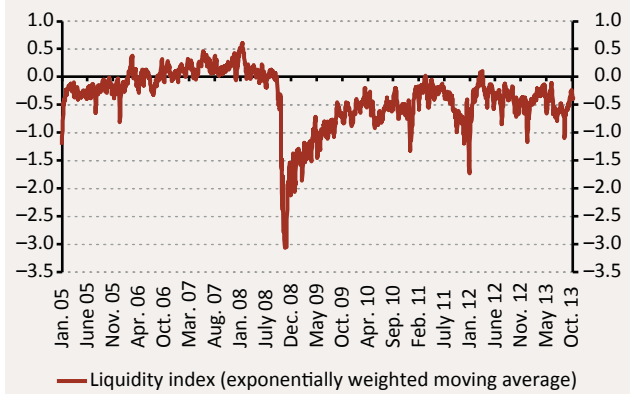
Chart 40
Estimated maximum loss based on interest rate risk stress tests relative to equity



Source: MNB.

Chart 41
Liquidity index

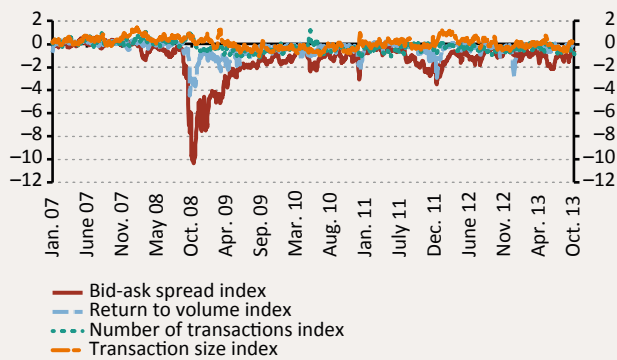
(exponentially weighted moving average)



Source: MNB, KELER, Reuters, DrKW.

Chart 42
Liquidity sub-indices

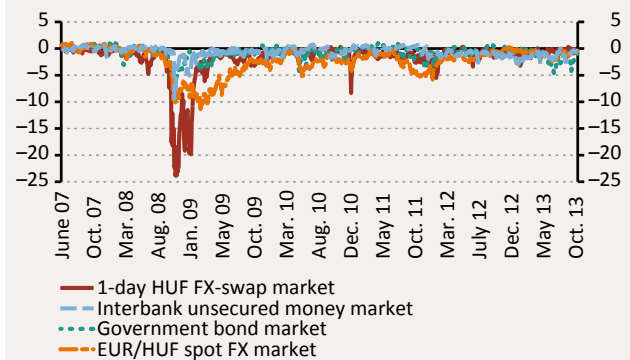
(exponentially weighted moving average)



Source: MNB, KELER, Reuters, DrKW.

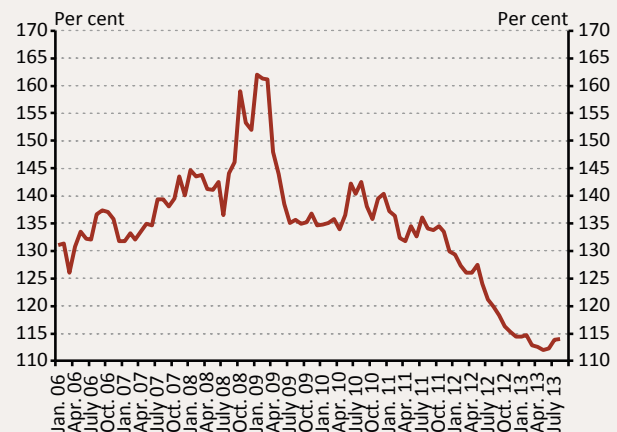
Chart 43
Bid-ask spread indices of the major domestic financial markets

(exponentially weighted moving average)



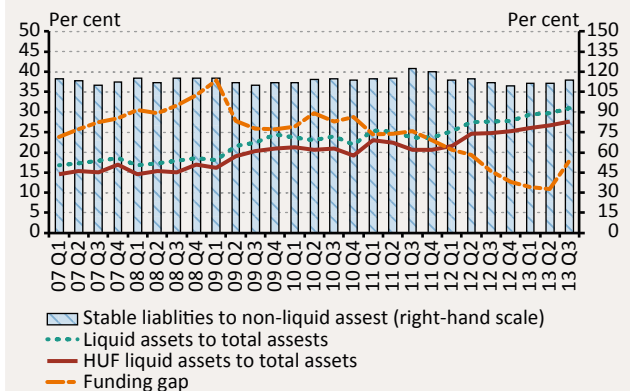
Source: MNB, KELER, Reuters, DrKW.

Chart 44
Credit to deposit ratio of the banking sector



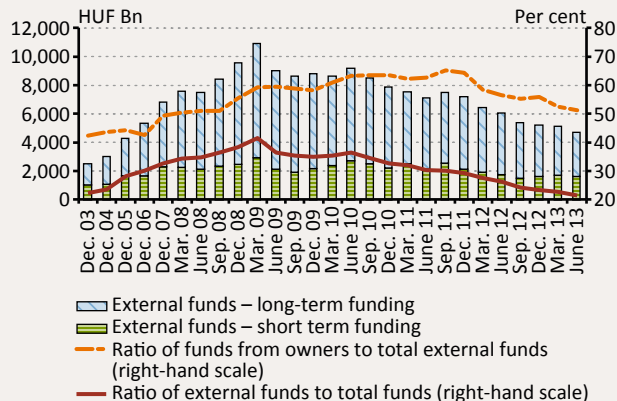
Source: MNB.

Chart 45
Liquidity ratios of the banking sector



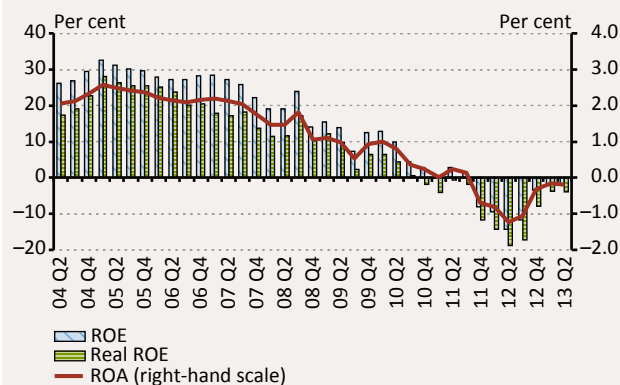
Source: MNB.

Chart 46
External funds of the banking sector



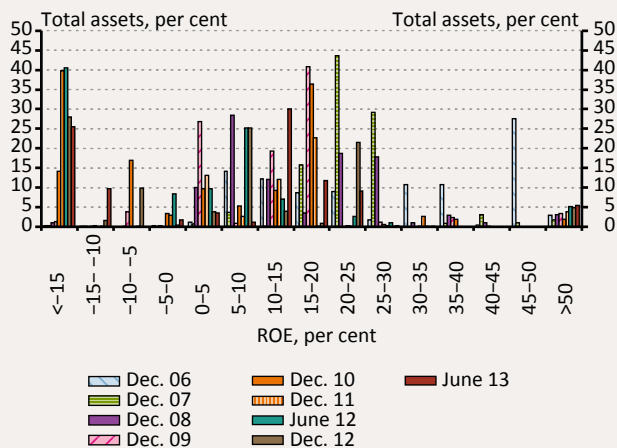
Source: MNB.

Chart 47
ROA, ROE and real ROE of the banking sector



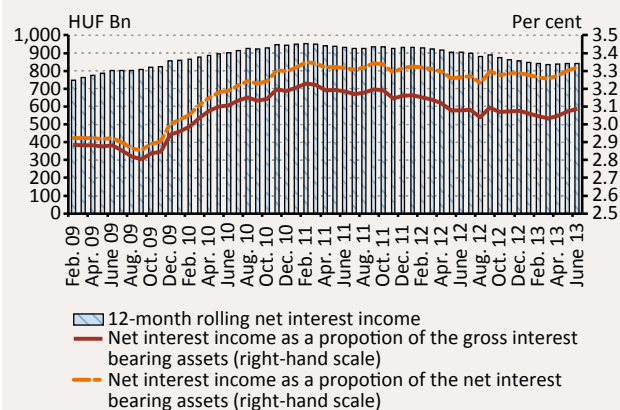
Source: MNB.

Chart 48
Dispersion of banks' total assets by ROE



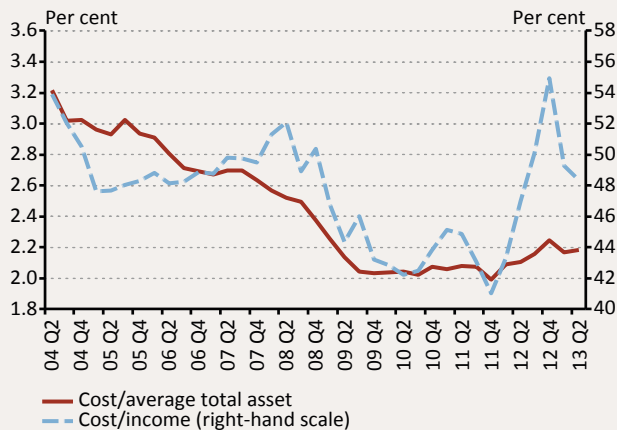
Source: MNB.

Chart 49
Net interest income as a proportion of the gross and net interest bearing assets in the banking sector



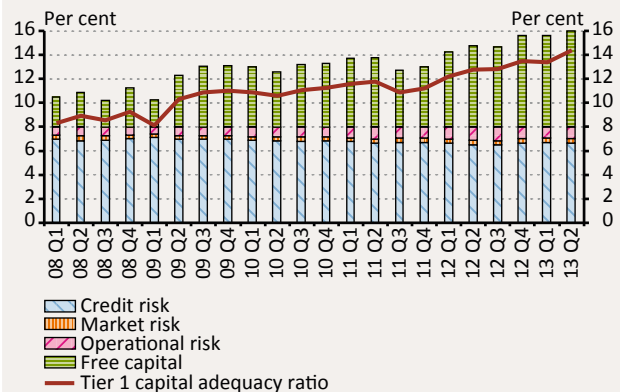
Source: MNB.

Chart 50
Operating efficiency indicators of the banking sector



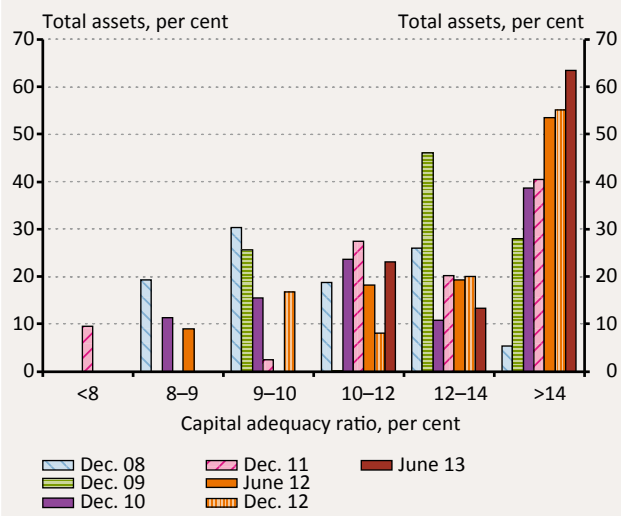
Source: MNB.

Chart 51
Banks' capital adequacy ratios



Source: MNB.

Chart 52
Dispersion of banks' minimum capital requirement by capital adequacy ratio



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: according to SNA methodology.

Corporate sector and "error": the financing requirement of corporate sector is calculated as a residual, so it includes errors.

External financing requirement: adjusted by the difference caused by imports brought forward on account of EU accession and by the import increasing impact generated by customs warehouses terminated due to EU accession and Gripen acquisitions.

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 19:

FHB House Price Index.

Chart 24:

FX loans, exchange rate as of end-June 2012, HUF loans adjusted by state loan refinancing in December 2002.

Chart 25:

FX loans on December 2000, end of month exchange rate.

Chart 37:

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 40:

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 500 basis points for the forint, and by 200 basis points for the euro, the US dollar, and the Swiss franc. For the calculations we applied re-pricing data and the Macaulay duration derived from them.

Chart 41:

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

Chart 42:

Similarly to the liquidity index, increase in liquidity sub-indices suggests an improvement in the given dimension of liquidity.

Chart 43:

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 44:

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 45:

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

Chart 47:

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 48:

Pre-tax profit.

Chart 49:

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 50:

Cost: previous 12 months

Income: previous 12 months

Average total asset: mean of previous 12 months

Chart 51:

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%

Report on Financial Stability

November 2013

Print: D-Plus

H-1037 Budapest, Csillaghegyi út 19-21.

