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Ensuring stability and efficiency of the Hungarian financial sector

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Ensuring stability and efficiency of the Hungarian financial sector*

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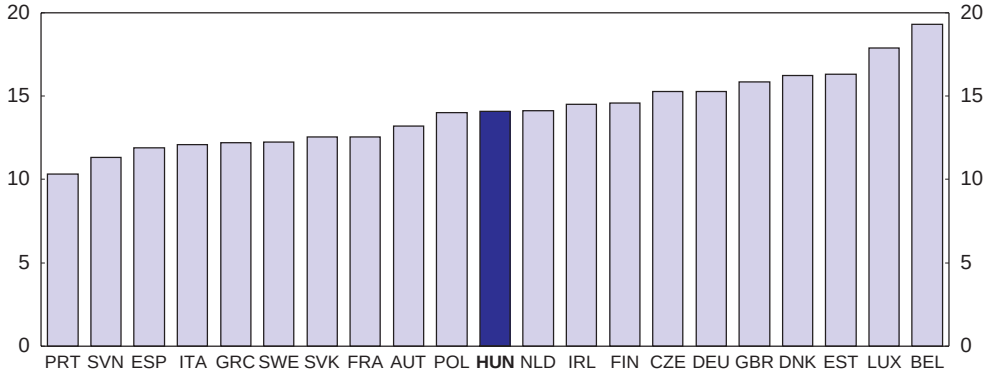
Loan creation has not recovered after the crisis owing to a combination of demand and supply factors. Although the banking sector is sufficiently capitalised in the short term, banks are deleveraging by cutting down their dependence on cross-border financing. The ability of the financial sector to supply credit has been further stifled by a high financial levy, a de facto *ban on foreign currency lending for mortgages, future uncertainties about parent banks' funding and undermined creditors' rights. Up to recently, new measures to restructure household loans did not help borrowers with real repayment difficulties while weakening banks' solvency. The mid-December 2011 agreement between the government and the banking sector was a welcome step towards fair burden sharing. Bank recapitalisation, if necessary, should be done by raising the level of capital so as not to downsize loan portfolios. In the long term, the demand for credit is hampered by large price-cost margins, which call for stiffer competition. The development of the financial markets has also been adversely affected by the* de facto *nationalisation of mandatory pension fund. An effective cooperation between micro and macro-prudential regulation should be ensured in practice and the financial independence of the financial supervisor strengthened. Co-operation between host and home regulatory authorities should be enhanced in a manner that accounts for systemic risks in Hungary. Finally, an effective independence of the central bank has to be guaranteed.*

The banking sector is deleveraging ...

Based on prudential ratios, Hungarian banks appear to have sufficient buffers to absorb unexpected losses in the short run and are not overleveraged by international comparison (Figures 2.1 and 2.2). The capital adequacy ratio of Hungarian banks rose from 10.3% in the first quarter of 2008 to 13.8% in the second quarter of 2011, while the leverage ratio has fallen from 12.8 to 11.7. These two trends are partly connected, as deleveraging has contributed to a one percentage point increase of the solvency ratio. In the medium run, the financial situation of banks can be more fragile, because there is a large heterogeneity in capital adequacy between banks and credit quality is deteriorating.

Figure 2.1. **Capital adequacy ratio**[1]

Per cent, 2010



1. A measure of the amount of a bank's core capital expressed as a percentage of its assets weighted by risk.

Source: ECB (2010), "Consolidated Banking Data", *Monetary and Financial Statistics*, European Central Bank.

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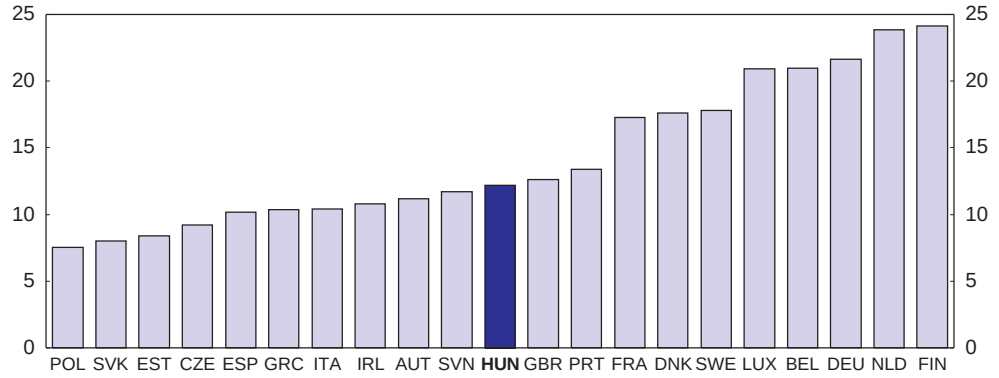
Figure 2.2. **Leverage ratio**

Total assets divided by total own funds, September 2011

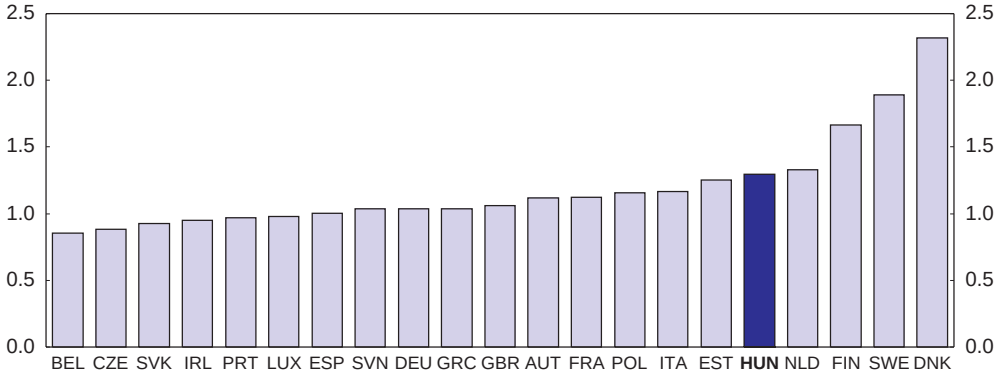


Source: ECB (2011), "The balance sheets of monetary financial institutions (MFI)", *Monetary and Financial Statistics*, European Central Bank, November.

Before the global crisis, banks in Hungary relied on high loan-to-deposit ratios and cross-border financing from parent banks (Figure 2.3). However, this model has become less attractive as illustrated by the announcement of the Austrian Financial Market Authority and the *Oesterreichische Nationalbank* that subsidiaries of Austrian banks should ensure that the ratio of new loans to new stable refinancing (funding raised locally or from multilateral institutions, such as the EIB or the EBRD) does not exceed 110%. Even prior to this announcement, parent banks had been less willing to extend loans to a market that has experienced a sharp deterioration of the economic situation and rising non-performing loans. This is compounded by the situation of some parent banks that need to raise capital in the wake of EU–wide stress tests and the euro area sovereign debt crisis. Moreover, the Hungarian market has become less attractive to foreign investors due to levies on financial institutions and unpredictable regulations concerning household-debt restructuring, though a recent agreement with the banking association is an improvement compared to earlier schemes (see next section). As a result, there was a significant outflow of the banks' foreign financing: the drop in cross-border loans, deposits and bonds reached 19% in 2010-11 (Figure 2.4). This fall has not been compensated by a growth in deposits of households (stable) or non-financial enterprises, which fell by 10%. Such deleveraging is likely to continue in the future, as some foreign banks are announcing the closure of some of their branches and employee layoffs.

Figure 2.3. **Loan-to-deposit ratio**

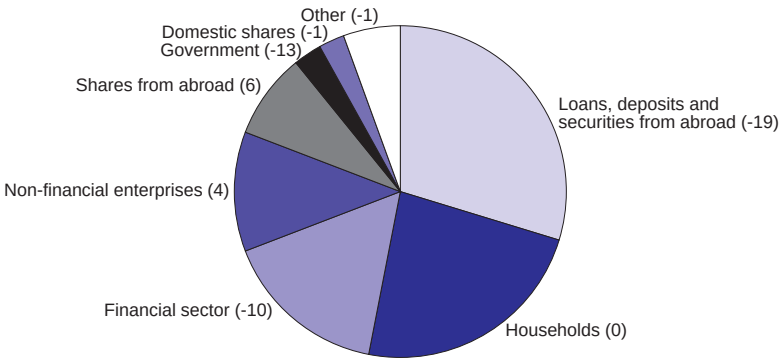
September 2011



Source: ECB (2011), "The balance sheets of monetary financial institutions (MFI)", *Monetary and Financial Statistics*, European Central Bank, November.

Figure 2.4. **The structure of banks' liabilities**

Per cent, first quarter of 2011[1]



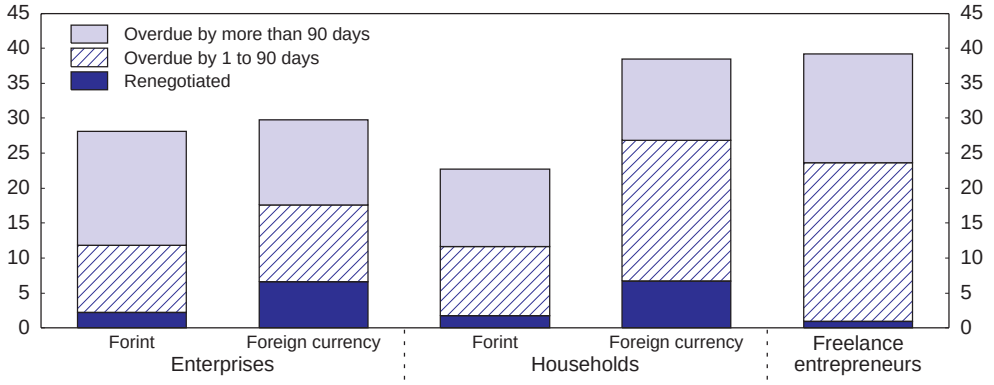
1. The wedges of this pie chart represent the shares of different sources of banks' liabilities in the first quarter of 2011, whereas the numbers refer to corresponding transactions in 2010 and the first quarter of 2011 in per cent of stock for each type of liability at the end of 2009. The data is exchange rate adjusted.

Source: MNB (2011), "Financial Accounts", *Statistical Time Series*, Magyar Nemzeti Bank, July.

On the asset side, the quality of the bank portfolio has significantly decreased in the wake of the crisis. Growing unemployment, falling housing prices (by close to 7% from their peak in 2008) and a depreciated forint have rendered loan repayment difficult for many borrowers, but particularly so for those that have loans in Swiss francs and other foreign exchange (FX) currencies. Yet the depreciation of the currency was larger against the Swiss franc than against the euro (Figure 1, Panel F in the Assessment and recommendations). Moreover, banks were able to hike interest rates on loans by unilaterally modifying contract conditions, even though the costs of their own financing on the foreign markets have fallen and the policy rate of the Swiss central bank was cut by more than 250 basis points since mid-2008 (ESRB, 2011). In September 2011, the share of overdue or renegotiated loans climbed to almost 40% for loans in foreign currencies to households (Figure 2.5). The rise in delinquencies reflects a combination of negative equity and high debt servicing burdens. According to the central bank (Magyar Nemzeti Bank, MNB), the debt burden of Hungarian households has increased to a much larger extent than in other OECD countries in Central and Eastern Europe. The probability of delinquency is the highest for unsecured loans and for loans issued between 2007-08. These non-performing loans impair the balance sheets of the financial sector, imposing losses and leaving them with less capital to lend. As a result, expected losses from non-performing assets not covered by provisions have increased to 55% of banks' capital (Table 2.1), which indicates that despite some regulatory action the increase in capital has not kept up with the deterioration of credit quality.

Figure 2.5. **Overdue and renegotiated loans**

Per cent of gross loans, September 2011



Source: HFSA (2011), *Time series data of sectors supervised by HFSA*, Hungarian Financial Supervisory Authority, November.

Table 2.1. **Claims in arrears**

In June, per cent

	2009	2010	2011
Current claims not in arrears	86.8	83.6	80.1
Renegotiated claims	1.5	1.9	2.5
Claims in arrears			
0-30 days	6.5	7.3	7.8
31-90 days	1.7	1.6	1.8
91-365 days	2.4	2.9	3.8
Over 1 year	1.2	2.6	4.1
Estimated losses per total claims[1]	4.9	7.0	9.3
Provisions per estimated losses	38.8	45.3	46.3
Estimated losses net of provisions per own funds	35.8	45.2	54.8

1. Regarding expected loss rates, no loss is assumed for loans that are not overdue and perform duly. A 50% loss rate is assigned to renegotiated receivables, 20% to loans that are in less than one month default, 30% to loans that are overdue for 1 to 3 months, 70% to those between 3 to 12 months and 100% to receivables that have been overdue for more than a year.

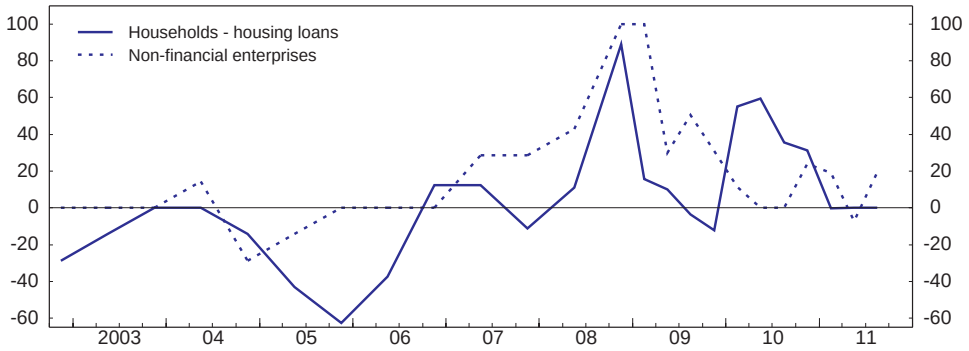
Source: Hungarian Financial Supervisory Authority.

… which could lead to credit rationing

The deterioration of credit quality combined with tighter financing conditions indicates that banks should be encouraged to accumulate more capital by refraining from distributing dividends and issuing high-quality new equity. The recent bank levy compounds the situation since all banks, even unprofitable ones, need to pay it. This creates a serious risk of credit rationing if banks choose to reduce lending instead of increasing the level of capital. For example, an increase in capital adequacy from 14% to 15% can be achieved by a 7% decline in risk-weighted assets under the assumption of constant amount of capital. The still high loan-to-deposit ratio (Figure 2.3) makes a further decline in lending more likely. In fact, a survey of credit officers indicates a tightening of credit conditions: banks charge a higher premium on risky loans and require from their borrowers lower loan-to-value and repayment-to-income ratios and higher credit scores (Figure 2.6). Such pro-cyclical behaviour of credit standards should be avoided in the future by a better regulation that has elements of counter-cyclicality and draws on the international debate in this area.

Figure 2.6. **Credit conditions and credit standards remain tight**

Net per cent of survey loan officers that have tightened or loosened credit conditions and standards[1]



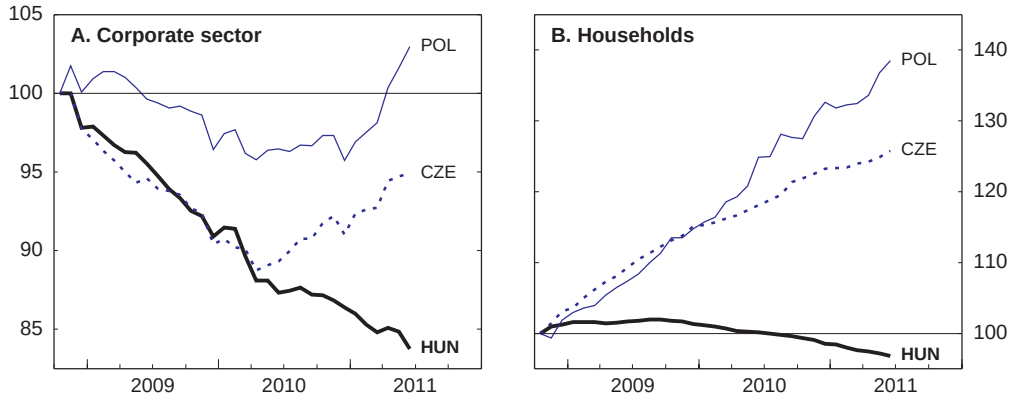
1. A positive figure indicates tighter credit standards and a negative figure indicates looser ones.

Source: MNB (2011), "Senior Loan Officer Survey on Bank Lending Practices", Magyar Nemzeti Bank, November.

Loans to both non-financial enterprises and households are far below their pre-crisis level and in marked contrast to recoveries in the Czech Republic and Poland (Figure 2.7). The steep drop in lending was caused by a drop in demand owing to the economic crisis but it is largely aggravated by supply factors, such as tighter credit conditions, banks' deleveraging (given a high loan-to-deposit ratio) and increased taxation of the financial sector. According to recent research of the MNB, the decline in supply and demand accounted for the drop in corporate lending by a ratio of around 2/3−1/3 at the end of 2010, respectively (Sóvágó, 2011). Especially damaging for economic growth, outstanding loans to the corporate sector have fallen by more than 15% since October 2008 and there are no signs of improvement (Figure 2.7). The decline has been even larger for small and medium enterprises.

Figure 2.7. **Corporate and household lending**

Exchange rate adjusted, October 2008 = 100



Source: MNB (2011), *Report on Financial Stability*, Magyar Nemzeti Bank, November.

Restoring financial intermediation requires a careful mix of measures

Restoring proper functioning of the financial market following the crisis is challenging since it could lead to conflicting measures. On the one hand, it is crucial that banks clean up their balance sheets and increase their solvency ratios. On the other hand, it is necessary to prevent a downward economic spiral by helping households to deleverage. While these two objectives could conflict with each other, they could also conflict with the third crucial objective of restoring fiscal sustainability. The government has been

pursuing these three objectives, but earlier measures taken to strengthen households' solvency or facilitate fiscal consolidation have been detrimental to the banking sector. The burden of restructuring should be more fairly distributed, taking into account the fiscal space of the government, the repayment ability of borrowers and the stability of the financial sector. A recent agreement between the government and the banking association is a welcome step in that direction.

Tighter regulation should take into account risks of procyclicality

The official data on loan-to-value (LTV) ratios is published since March 2009 by the MNB and it shows that 66% of FX loans and 58% of subsidised and non-subsidised forint loans (which account for a smaller share of the total bank portfolio) were disbursed at that time with LTV ratios exceeding 70%. This includes mortgages that were disbursed without collateral (partly for renovation or reconstruction purposes), which was the case of 9% of FX loans (5% including home equity loans) and 25% of forint loans (23.5% including home equity loans). Although, no comparable data is available for the pre-crisis level, there is widespread evidence that loose credit standards, practiced by banks and allowed by financial regulation, have resulted in a high amount of non-performing loans and a high level of indebtedness of many borrowers. To address this problem, different solutions should be provided to tackle the flow and the stock problem. To prevent the flow of new reckless lending, regulation should be tightened, as was done at the end of 2009 when the government issued a decree on prudent lending that set the maximum LTV ratio for forint mortgages at 75%, for euro mortgages at 60% and other currencies at 45%.

Credit conditions were further restricted in August 2010, as FX mortgages were banned for households. The Home Protection Action Plan softens the ban by allowing persons that have income in FX above a certain threshold to borrow in this currency (Box 2.1). However, few borrowers fulfil these requirements. While such a *de facto* ban appears to be justified because of the risks entailed in foreign currency lending, it also prevents borrowers with sufficient income buffers to absorb currency risks from benefiting from lower interest rates in FX, increasing credit constraints at a time when risks of credit rationing are high. Moreover, there is some evidence that prudential measures to curb FX lending do not always work due to the increase in cross–border lending, which suggests that enforcement requires a close host–home cooperation (Polgár and Zdzienicka, 2010), as detailed in the last section. A more appropriate solution, recommended by the European Systemic Risk Board, is to tighten regulation of FX lending to account for the higher risks associated with it. The regulation adopted in 2009 with different LTV ratios depending on the currency (see above) would be suitable and could complement internal creditworthiness criteria applied by banks. In addition, LTV regulation should be supplemented with limits on repayment-to-income ratios, backed by a systematic verification of official proof of revenues (pay slip or tax forms). The existence of a comprehensive credit registry is crucial for enforcing this last requirement.

Box 2.1. **Major measures taken to reduce household indebtedness and to clean-up banks' portfolios in 2011**

The Home Protection Action Plan was announced on 30 May 2011 by the government and was voted by Parliament shortly afterwards. The Country Protection Action Plan was introduced in September 2011, allowing early repayment of FX loans at favourable exchange rates. Finally, in December 2011, the government and the Banking Association have agreed to introduce several changes to the earlier measures that ensure a fair burden sharing between banks and the state budget.

Home Protection Action Plan (May 2011 and modified by the December 2011 agreement)

Elimination of the foreclosure and eviction moratorium. The foreclosure moratorium was abolished for real estate properties valued above HUF 30 million (approximately EUR 110 000) and with an outstanding credit volume of more than HUF 20 million (approximately EUR 70 000) on 1 July 2011. In the case of loans and real estate properties of lower values the moratorium was abolished on 1 October 2011. For these lower value real estate properties a foreclosure quota will be introduced amounting quarterly to 2% in 2011, 3% in 2012, 4% in 2013 and 5% in 2014, of the loans with instalments more than 90 days overdue. The abolition of the eviction moratorium has taken place as of

1 July 2011, nevertheless it has had limited impact since then. First, because of low market activity in the property markets; second, for social reasons as another seasonal moratorium has been implemented according to which eviction in the winter months is prohibited.

Partial elimination of the *de facto* ban on mortgage loans in euros. The only borrowers allowed to take out euro based mortgage loans will be those who have a FX-based income 15 times higher than the minimum wage. At most 20 000 people are estimated to fulfil this criterion.

Temporary fixing of the exchange rate for mortgage debt servicing. The main point of the Plan involves a temporary fixed exchange rate (around 20% below the HUF/CHF rate at the time of the announcement) applicable to the instalments of performing mortgage loan debtors. Only borrowers with no instalments 90 days overdue have the right to participate. The difference between the fixed exchange rate payment and the actual exchange rate is accumulated on the separate forint account bearing the three month BUBOR interest rate, and banks are not allowed to charge any additional fees. After the expiration of the fixed exchange rate period at the end of 2014, borrowers have to repay the difference, meaning an increase in monthly instalments. The government provides a guarantee on 100% of the outstanding volume of the bridge loans during the fixation period until 31 December 2014 and 25% of the volume after the fixation period is over. For the guarantee banks pay a fee of 1.5% during the fixation period (but how much afterwards is unknown). The December agreement contains an extension of the exchange rate fixing programme, available for duly performing FX mortgage debtors and those who are delinquent with a delay of less than 90 days. Accordingly, the exchange rates of the instalments for the participants in the programme would be fixed until end-2016 at HUF/CHF 180, HUF/EUR 250 and HUF/JPY 2.5 exchange rates; borrowers may apply for participation in the programme until end-2012. The difference between the fixed and actual rates will be shared by the borrower, the state and the bank in a way that the principal part of the monthly instalment due will burden the borrower, whereas the interest rate portion of the instalment will be paid by the state and the bank in a 50-50% proportion.

Interest rate subsidy for defaulted borrowers, who are willing to move to smaller flats. Defaulted borrowers could have an interest rate subsidy from the government, if they are willing to move to a less valuable flat (and thus have a smaller loan but also relinquish some of their home equity).

A National Asset Management company. A company would take over the houses of 5 000 defaulted borrowers with the most desperate social background. According to the December agreement, this scheme will be extended to 25 000 residential properties by 2014 (8 000 of them in 2012), focusing on delinquent borrowers who have one or more children and are in the most social need.

Country Protection Action Plan (September 2011 and modified by the December 2011 agreement)

Early repayment of FX loans. Announced in September 2011, this measure allows an early repayment of FX loans at a fixed below-market exchange rate (CHF/HUF 180 and EUR/HUF 250). The repayment must be done in a single instalment by relying either on household savings or possibly voluntarily extended forint loans. The households pay no penalty and all the losses related to differences in exchange rates were initially planned to be incurred by banks. The December agreement allows banks to deduct from their 2011 bank levy 30% of the losses.

Other measures of the agreement between the Hungarian government and the Banking Association on foreign-currency mortgages (15 December 2011)

Conversion scheme for foreign-currency mortgages in arrears by more than 90 days. Borrowers fulfilling these conditions can apply to have their mortgages converted into forint loans and subject to a 25% write-down on their face value. This commitment applies only to mortgages secured against collateral with a value less than HUF 20 million (EUR 70 000). Banks may reclaim 30% of the losses resulting from the 25% write-off from the 2012 bank levy.

Debt restructuring programmes should not impose an excessive burden on banks and be well-targeted

While tighter regulation solves the problem of new FX loans, it does not solve the problem of the high stock of overdue and FX loans. To facilitate the deleveraging of households, the authorities have initially taken measures which have put the bulk of the burden on the banking sector by, first, imposing a moratorium on foreclosures. Recognising that this measure was preventing banks from cleaning their portfolios, the government subsequently proposed a Home Protection Action Plan and Country Protection

Action Plan (Box 2.1), which gradually lifts the moratorium on foreclosures and provides measures to reduce household indebtedness. The lifting of the moratorium is welcome since it should facilitate evaluation and/or selling of banks' collateral, and thus an eventual clean-up of their portfolios. The lifting of the moratorium should also mitigate moral hazard problems that have emerged as even solvent borrowers were late on their instalments. The fact that the lifting is gradual is appropriate as property markets are not very deep. Without a gradual adjustment, the flood of sold properties would lead to a collapse of housing prices (the ratio of potentially repossessed properties to transactions amounts to 125%; MNB, 2011).

The authorities have implemented several measures to mitigate the costs of future foreclosures by offering different options of loan restructuring to borrowers (Box 2.1). The first proposed scheme (adopted in May 2011) involved a temporary fixing of the exchange rate for mortgages in foreign exchange currency. If borrowers choose to participate in this program, their monthly instalments decrease until the end of 2014, but increase afterwards because they will be required to repay their original loan and a "bridge" loan covering the accumulated difference between the actual and the fixed exchange rate. Three thousand contracts were signed under this scheme by the end of December 2011. The second scheme (adopted in September 2011 and closed 30 December 2011) allows borrowers to repay their FX loans at an exchange rate that is approximately 25% below the market rate. The repayment must be done in a single instalment by relying either on household savings or forint loans. To increase participation, the authorities have additionally allowed employers to grant a tax-free support to employees taking part in this scheme (up to EUR 25 000 per person). This measure is expected to have been widely used with at least 20% of performing loans being repaid through this scheme. At the moment of the announcement, estimated losses amounted to the total amount of provisions accumulated by banks. Hence, banks were obliged to accumulate additional provisions to bear these unexpected losses. At the end of 2011, assuming that 30% of losses are deductible from the bank levy, related effective losses for banks amounted to one third of the accumulated loan-loss provisions.

Both "May" and "September" schemes are addressed at borrowers who have no significant arrears on their loan repayment and, hence, are not targeted to borrowers who experience real repayment difficulties. Joining the first ("May") scheme could be beneficial for borrowers who experience temporary difficulties in repaying their monthly instalments. However, unless the forint strengthens considerably (from HUF/CHF 250 to 160 or by 36%), borrowers that have chosen to pay their instalments under the fixed exchange rate will be confronted with an increase in their monthly instalments in 2014. The most indebted borrowers with low incomes will not be able to repay their higher monthly instalments at all. Thus, the current design of the programme appears to be only a temporary solution. The second ("September") scheme raises particularly strong equity issues. Since households need to be able to rely either on their savings or on a refinancing to repay such loans, this measure implicitly helps borrowers without liquidity constrains (also those who can benefit from savings of relatives or friends). Also, borrowers who are able to use this scheme will most likely be those whose mortgages are near maturity and who have been lucky to benefit from low interest rates on FX loans during the duration of their loans. Moreover, the financial situation of borrowers who cannot participate in the programme is likely to worsen if high participation in the programme triggers a depreciation of the forint due to high demand for foreign currency (in practice the central bank is using its reserves to reduce such risk). This scheme was neither negotiated with the banking community (the first scheme was), nor discussed with the MNB and the HFSA. Since it changes contracts in a retroactive and unilateral manner, it undermines creditors' rights in Hungary, and it has been challenged by banks and their home authorities.

In December 2011, a new program was announced by the government and the Banking Association that targets borrowers with non-performing FX mortgages and allows conversion of their loans in forint provided the value of the property serving as collateral did not exceed HUF 20 million when the mortgage was signed. This measure is accompanied by a 25% write-off of the debt and the borrowers should receive

an interest rate subsidy from the state on their forint loan. The design of this programme negotiated with banks has the potential of being better than earlier schemes since it creates conditions to be more focused on distressed borrowers and provides an element of forgiveness that should restore their solvency. Nevertheless, it still fails to apply objective criteria to target borrowers, such as repayment-to-income ratios and negative equity. Such targeting is essential to avoid moral hazard problems, which might be significant, because the government has created an atmosphere of bail-out expectations in the previous few months and some borrowers have stopped paying their instalments. Moreover, this programme does not help borrowers who are temporarily unemployed and would rather need a temporary suspension of payments.

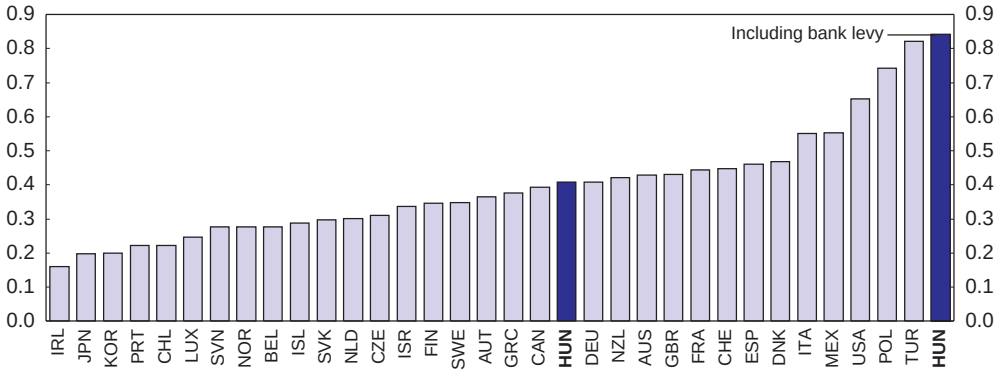
Since banks are reluctant to write off bad loans if they do not have sufficient provisions and capital, legislation should motivate banks to provision sufficiently for future losses. The current legislation often achieves the opposite. As banks are not obliged to put aside provisions on restructured loans that have never had any overdue payments, this encourages them to engage in preventive restructuring and to postpone the recognition of the problem. Such formal forbearance is short-sighted and should be avoided. Rather, the government should offer incentives such as tax credits for restructured loans. Hence, the decision that allows banks to deduct from the 2011 and 2012 bank levy 30% of the losses resulting from different schemes (the early FX mortgage repayment and debt forgiveness of non-performing loans, respectively) is an appropriate step. This should allow them to increase their level of capital and to write off bad loans. The results of the November 2011 stress test conducted by the MNB suggest that in the case of an adverse scenario (that allows a 30% take-up in the early repayment scheme) banks would require an additional capital that amounts to 7% of their own funds. To equip Hungarian banks with sufficient buffers, the commitment of parent banks is of paramount importance. If banks need to raise their capital ratios, they should be encouraged to do so by raising their capital level (by refraining from distributing dividends or by issuing new equity) instead of reducing their loan portfolios. Recapitalising banks when needed and restructuring their balance sheets will reduce future uncertainties and create sound conditions to restart lending.

The design of a financial levy should not hurt bank solvency

Starting from September 2010, the Hungarian authorities have imposed a financial levy on the assets of Hungarian banks, financial enterprises, insurance companies and other financial institutions, whose main purpose was to support fiscal consolidation. It was announced as a temporary measure and is supposed to be replaced by another tax in 2013. The current tax rate is very high in international comparison and its introduction in the midst of the downturn was unnecessarily procyclical. A tax of 0.15% is levied on small banks (up to HUF 50 billion), while large banks pay a rate of 0.53% on their assets in excess of HUF 50 billion. Before the introduction of the new bank tax, an average Hungarian bank - having a ratio of all taxes amounting to 0.4% of total assets – paid taxes at the OECD average, but the new tax has dramatically increased the tax burden of Hungarian banks (Figure 2.8). Adding the new levy to the average tax paid by Hungarian banks in the past brings the ratio to 0.84%, the highest in the OECD. Even if the authorities plan to halve the amount of the levy after 2012, its burden will remain high. On top of losses linked to provisioning on deteriorating portfolios, the tax has taken a considerable toll on the profitability of financial institutions by reducing return on equity of banks by 4.3 percentage points, of financial enterprises by 8.6 and of insurers by 12.3 percentage points. Since loss-making institutions are not exempt from tax obligations, their capital adequacy has deteriorated.

Figure 2.8. **The average ratio of taxes to total bank assets**

Per cent, 1996-2009



Source: *BankScope Database*, Bureau Van Dijk publishing and OECD calculations.

Given its harmful effects, the financial tax should be cancelled, but it could be replaced with a different levy. The mid-December 2011 agreement with banks confirmed earlier plans to halve the bank levy in 2013. As from 2014 the bank levy will be adjusted to the prevailing relevant legal framework of the European Union, or the practice in effect in member states. Many experts suggest that financial taxation could serve as an important complement to regulation in addressing macro-prudential concerns (European Commission, 2010; IMF, 2010) and it has been implemented in a number of OECD countries (see Table 2.2). If the Hungarian authorities opt for such a "Pigouvian" tax, its base should offer in–built incentives for financial institutions to accumulate capital and raise deposits, reducing reliance on more volatile cross-border funding in FX. While it is tempting to create incentives to lengthen the maturity of foreign funding, the fact that it comes primarily from parent banks renders the definition of the loan maturity irrelevant, because parent banks can always demand an early repayment of a long-term loan. In other words, any measure that favours long-term over short-term cross-border financing can be easily circumvented by foreign banks. At the same time, the recognition that parent bank financing is more stable than other cross-border loans will discriminate against domestic banks, which is not desirable. In this context, the best choice for a tax base is to consider total liabilities with the exception of capital and deposits, which are the most stable sources of funding.

Table 2.2. **Comparison between bank levies**

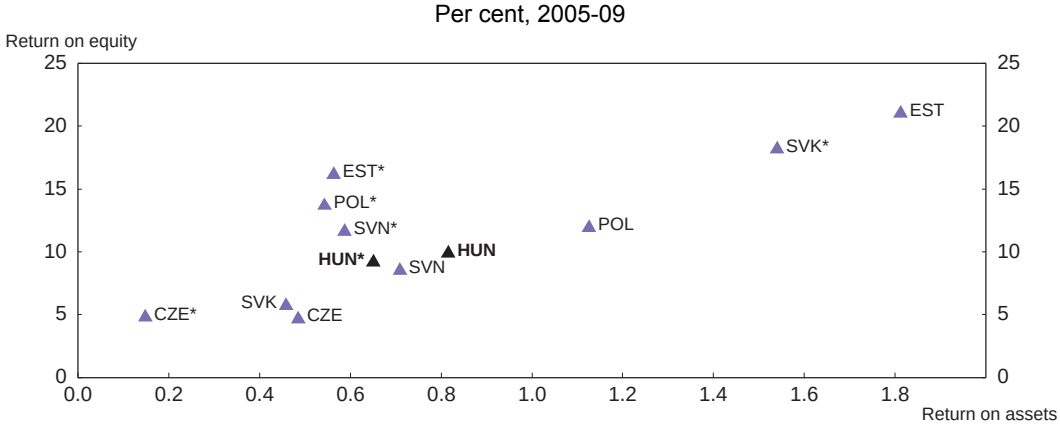
	Hungary	Austria	Germany	Sweden	United Kingdom	United States[1]
Start date	2010	2011	2011	2009	2011	. .
Funds raised contribute to	Treasury	Treasury	Banking Fund	Banking Fund	Treasury	Funds to recoup costs of TARP
Expected duration	Temporary	Permanent	Permanent	Permanent	Permanent	At least 10 years until TARP is fully repaid
Tax base	Total assets. Interbank loans and securities of credit institutions are excluded	Balance sheet. Insured deposits and capital are excluded	Liabilities. Non-bank liabilities and equity are excluded	Liabilities with some exceptions	Liabilities. Insured deposits and Tier 1 capital are excluded	Liabilities. Tier 1 capital and FDIC-assessed deposits are excluded
Threshold	None	Tax base of EUR 1 billion	None	None	GBP 20 billion of "relevant" liabilities	USD 50 billion of consolidated assets
Rate	0.15-0.53%	0.055-0.085%	0.02-0.04%	0.036%, but reduced rate for 2009-10. Could depend on risk in the future	0.07%. 0.035% tax rate for "stickier funding" (>1 year of maturity)	Not set but expected 0.15%

1. TARP: Troubled Asset Relief Program, FDIC: Federal Deposit Insurance Corporation.

Source: KPMG International Cooperative.

In addition, the Hungarian authorities might opt for a tax whose purpose is to raise revenues. Since financial institutions are exempted from value added tax, such a tax on financial activities might be desirable to create a level playing field between financial services and other sectors. If a tax is introduced to address this issue, its tax base should include all or a part of profits and remuneration, which would have a minimum distortive effect either on the way financial institutions generate profits or on their volume. It is important to find an appropriate tax rate that ensures a fair contribution to the budget, but does not impose a too high burden on the financial sector. Since 88% of banks in Hungary belong to international banking groups, a tax that reduces profits of foreign banks in Hungary might reduce the amount of resources provided by parent banks to their subsidiaries. In the past, parent banks have enjoyed higher levels of profits in Hungary than at home, but this advantage is not overwhelming and should be taken into account when designing a bank levy (Figure 2.9).

Figure 2.9. **Profitability of Hungarian banks in comparison to profitability of other banks in the region and parent banks in home countries**[1]



1. The average profitability of parent banks is marked with an asterisk, so that, for example, HUN indicates the average profitability of banks located in Hungary and HUN* presents the average profitability of parent banks that have subsidiaries in Hungary.

Source: *BankScope Database*, Bureau Van Dijk publishing and OECD calculations.

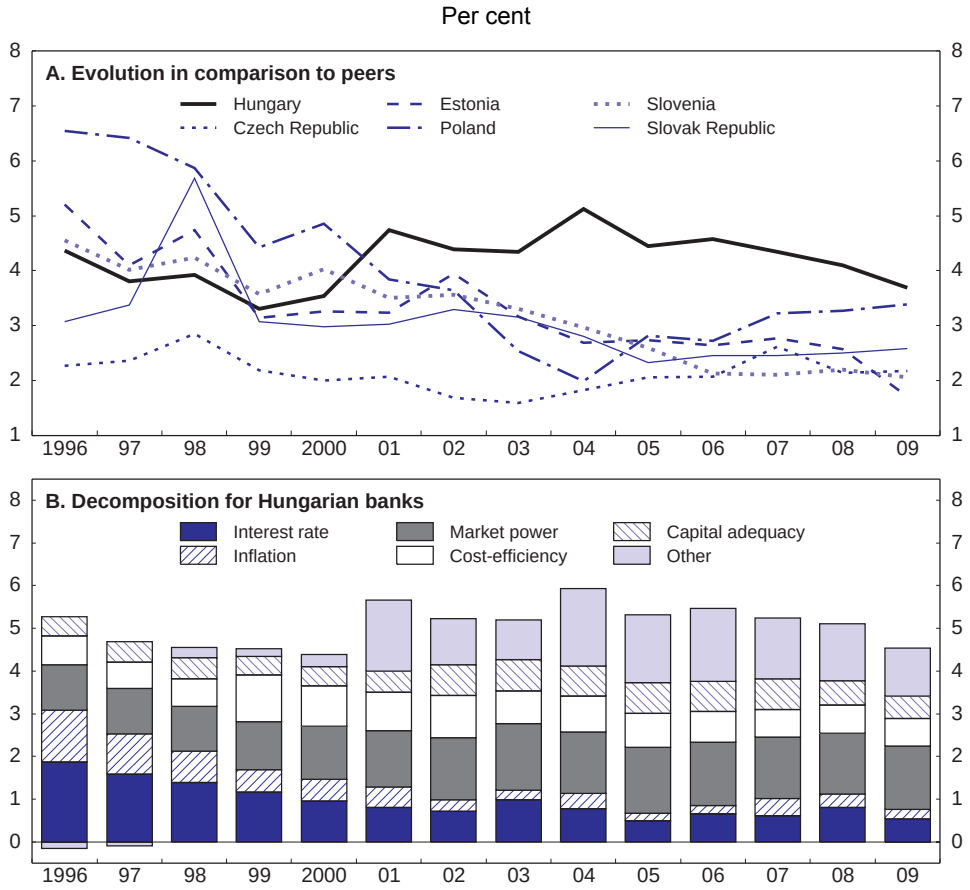
Sustainable financing of the economy requires lowering intermediation costs

Reduced costs of financial intermediation can allow borrowers to obtain funds at lower interest rates, while also contributing to financial stability, since lower interest rates decrease adverse selection and moral hazard problems. This is also consistent with empirical findings that efficiency of the financial sector is much more relevant for the economic growth than its sheer size. Although banks serve the primary role in the financing of the Hungarian economy, the development of capital markets and other financial intermediaries is also important. In particular, pension funds serve an essential function to accumulate savings with long maturities that can be productively invested long-term. In the following sections, we first discuss how banking intermediation can be rendered more efficient, and then we investigate ways to promote competition between pension funds.

High intermediation costs point to a lack of competition

Demand and supply of loans in Hungary appear to be dampened by high interest rates on loans. According to the EBRD Banking Environment and Performance Survey, 19% of Hungarian firms claim to be discouraged by high interest rates, a much higher proportion of firms than in Western Europe (5%) or in other countries in the region (Brown *et al.*, 2011). In a similar vein, the Global Competitiveness Report for 2011-12 places Hungary in 91st position in terms of loan affordability. Explaining high lending rates requires disaggregating them as a sum of funding and banking intermediation costs. The analysis shows that Hungarian banks are able to charge margins that are 1.7 percentage points higher than their OECD peers in Central and Eastern Europe, with margins amounting on average to 4.2% of banks' assets during 1996-2009 (Annex 2.1; Figure 2.10, Panel A). This wedge in net interest margins (NIM) can be partly explained by persistently higher inflation and money market rates in Hungary (Figure 2.10, Panel B). These macroeconomic factors are responsible for 0.4 percentage point difference in NIM between Hungary and its OECD peers. Higher costs of Hungarian banks additionally contribute 0.3 percentage point to the wedge, while the level of other factors such as credit risk, taxation and market power is similar in Hungary and its peers and, hence, do not contribute to explaining the wedge in NIM between these countries.

Figure 2.10. **Net interest margins in Hungary in comparison to its peers and decomposition for Hungarian banks**[1]



1. For more details on net interest margin decomposition see Annex 2.A1.

Source: *BankScope Database*, Bureau Van Dijk publishing and OECD calculations.

A closer look at market competition is warranted, given that banks' market power contributes the most to the cost of financial intermediation (1.3 percentage points out of 4.2 percentage points on average over 1996-2009; see Figure 2.10, Panel B). A lack of competition increases the cost of intermediation due to higher mark-ups as well as to the fact that banks with market power have fewer incentives to increase their efficiency (the "quiet life" hypothesis). Indeed, operating costs are an important driver of NIM for all banks (0.8 percentage point out of 4.2 percentage points on average over 1996-2009) and partly explain the wider interest margins of Hungarian banks relative to other banks in the region. Another measure of cost-efficiency can be obtained by stochastic frontier approaches that put Hungary in 22nd position among 25 EU countries between 2004 and 2008. Hungarian banks appeared to be far from the cost-efficiency frontier and there was room to increase their efficiency by 60-70 percentage points to reach the level of the most efficient banks in the EU (Molnar and Holló, 2011).

The simplest way to measure the degree of market competition is to rely on market structure measures such as the Herfindahl index and the share of the largest three banks (CR3). Additionally, one should consider measures that estimate econometrically the actual behaviour of banks, such as the Panzar and Rosse H-statistic and the Lerner index (Box 2.2). All these indicators point to the average level of competition of the Hungarian banking sector in comparison to its peer group (Figure 2.11). Nevertheless, the price-cost margin is 41% according to the Lerner index. Importantly, this average figure hides a wide

heterogeneity between markets with price-cost-margins reaching 60% in some consumer loans, while loan markets for enterprise loans are rather competitive (Molnar *et al.*, 2007). Such a high market power of banks calls for strengthening of competition that would exert a pressure on banks to increase their cost-efficiency and lower their spreads.

Box 2.2. **Measuring market competition**

Assuming that more concentrated markets lead to less competition, the easiest way to measure market competition is to rely on market concentration measures, such as the share of assets held by the top three largest banks (CR3) and the Herfindahl Hirschman index (HHI), defined as the sum of squared market shares and calculated separately for assets, loans and deposits.

Alternatively, the theory of contestable markets suggests that one can have competitive markets even in concentrated systems, whereas collusive actions can be undertaken even in the presence of many firms (Claessens and Laeven, 2004). Thus, a better approach is that of Panzar and Rosse (1987), who propose to investigate the extent to which a change in factor input prices is reflected in individual bank's revenues by estimating the following reduced-form equation on pooled samples for each country:

$$Ln(P_{it})=\alpha+\beta_1 ln(W_{1,it})+\beta_2 ln(W_{2,it})+\beta_3 ln(W_{3,it})+\gamma_1 ln(Y_{1,it})+\gamma_2 ln(Y_{2,it})+\gamma_3 ln(Y_{3,it})+\varepsilon_{it}$$

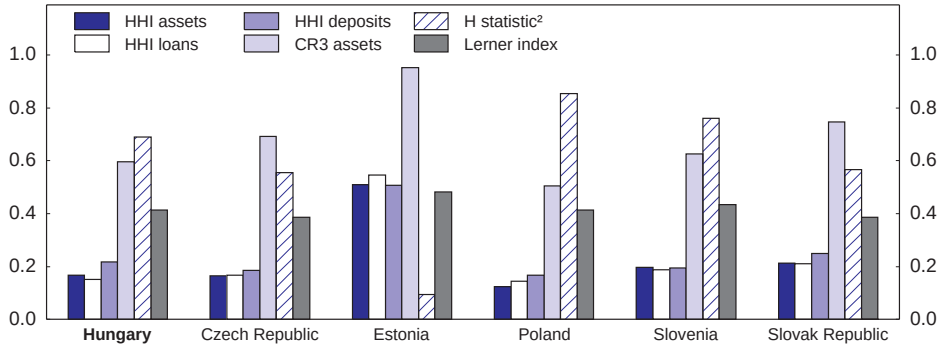
where P_{it} is the ratio of gross interest revenues to total assets, W_1, W_2, W_3 are the input prices of deposits, labour and fixed assets. Control variables are included, such as Y_1 – capitalisation ratio, Y_2 – the ratio of loans to total assets, and Y_3 – bank size measured by a logarithm of assets. The model provides a H-statistic which equals $\beta_1 + \beta_2 + \beta_3$.

Under monopoly, an increase in input prices increases marginal costs, reduces equilibrium output, and consequently lowers total revenues. Under perfect competition, an increase in input prices raises both marginal costs and total revenues by the same amount. Accordingly, the H-statistic is interpreted as follows: H<0 indicates monopoly; H=1 perfect competition; and 0<H<1 monopolistic competition.

Whereas the H-statistic provides a proven way to measure market competition, it does not allow measurement of the market power of an individual bank. The Lerner index measures a bank's market power and is computed as the difference between a bank's price of assets and the marginal cost, divided by the price. The index values range from 0 to 1, with higher numbers indicating greater market power and hence less competition. The marginal cost is estimated relying on the stochastic frontier approach on the basis of a translog cost function with one output (total assets) and three inputs (borrowed funds, labour and physical capital).

Figure 2.11. **Competition measures**[1]

1996-2009



1. Competition measures, such as the Herfindahl-Hirschman index (HHI), concentration ratio (CR3), H-statistic and Lerner index are explained in Box 2.2.
2. Panzar and Rosse approach.

Source: *BankScope Database*, Bureau Van Dijk publishing and OECD calculations.

Competition could be enhanced by encouraging consumer mobility

Traditionally, market competition in the banking sector has been enhanced by lifting entry barriers and removing product restrictions. As the Hungarian banking market is fairly liberalised, it is more challenging to design policies to achieve effective competition. Instead of further bank liberalisation and/or deregulation, one should encourage consumer mobility by lowering switching costs, increasing price transparency of various financial services, improving the design of "credit bureaus", lowering closing charges when borrowers decide to repay their loans early, discouraging product bundling and tying, and mandating easy portability of one's bank account number. Despite recent steps that go in the right direction to address some of these issues, there is room for further improvements.

The architecture of the credit bureaus should be further improved

The absence of credit information sharing between banks can lead to well-documented "hold-up" problems as borrowers cannot switch banks due to information asymmetries and are thus constrained to pay higher interest rates. A well-designed credit information sharing scheme has been shown to lower the cost of intermediation and to improve access to credit (Brown *et al.*, 2009). In Hungary, a private credit bureau – BISZ Central Credit Information System (CCIS) – provides negative credit information on consumers and negative and positive information on businesses since 1995, and two credit bureaus collect positive information on individuals on a voluntary basis. However, the level of coverage (16% of the adult population) lags far behind the OECD average of 64% and other countries in the region (96% in the Czech Republic and 75% in Poland).

A law passed in November 2011 providing the legal framework for mandatory sharing of positive and negative information regarding individual loans is an important step forward. The effective implementation of this new law is the key. The HFSA should ensure that all banks report credit information accurately and on time and it should have sufficient sanctions to punish institutions that refuse to do so. This is an important issue, as some large banks might not report such information because it will reduce their informational rents. In fact, some large banks (including the largest bank, OTP) and many small and medium banks have not joined the existing voluntary scheme – Credit Reference. Similarly, the HFSA should ensure that all borrowers have access to this information and can demand corrections in case of misreporting.

Although the new law is a welcome development, there are several ways to improve the design of the credit information sharing. The primary goals of any credit registry are to: *i*) help borrowers to switch banks by diminishing "hold-up" problems; *ii*) improve pricing of risk; and *iii*) help the supervisor. While the new law aims to achieve the first goal by collecting positive information, it falls short regarding the other goals. The new law allows individual borrowers to deny access to their data for other financial institutions. In the light of the current debate on prudent lending, this prevents banks from observing the overall debt level of their clients, so that prudential measures based on maximum repayment-to-income ratios cannot be implemented. The memory of the existing system covers five years and, since January 2011, information on bad loans is deleted after one year if they have been repaid. According to the World Bank's *Doing Business* indicators, this last measure is considered to have a negative effect on credit access because it decreases the depth of information sharing. Naturally, there is a trade-off between the need to discipline borrowers and the need to give them a "second chance" and credit bureaus in OECD countries retain data for very different periods (Rothemund and Gerhardt, 2011). Yet, the Hungarian authorities might consider strengthening the disciplining role of the credit registry by lengthening the memory of defaults to ten years and, if debt is recovered, to three years. A ten-year memory is above the EU average, but it is applied in a number of countries, such as the United States and Belgium, and is advisable in a country with a relatively poor credit culture.

Credit registries should additionally be used by the financial supervisor to monitor credit risk of individual financial institutions, as well as to analyse the stability of the entire financial system, improve policy design, analyse the impact of financial regulations and conduct research. In this respect, information that is being collected by private bureaus is not sufficient for such analysis as it lacks data on collateral and other risk mitigation factors, as well as data on overall borrower health (leverage, profitability, etc.). Moreover, for supervising purposes, data needs to be stored by the central bank or the financial supervisor (without an unnecessary duplication of databases) for a very long period, because long-time series are required to analyse credit cycles and credit risk over the long term. Such long-term storage can coexist with the individual data disclosure that is limited to a certain number of years. The importance of the use of credit information by a supervisor has grown after the introduction of Basel II, because the supervisor has to validate internal credit risk models of individual banks. In this respect, the supervisor could use information from the credit register to model the probability of default and loss-given-default and then evaluate banks' risk models against these yardsticks (Trucharte Artigas, 2004). The use of such data can also be used by the supervisor in the design of procyclical macro-prudential regulation, because it provides information about credit cycles in the past.

Enhancing transparency of bank products' pricing and further lowering switching costs to promote competition

The Hungarian authorities have made substantial progress in ensuring transparency of interest rates on loans and deposits and in establishing the necessary framework for clients' mobility between banks. In the second half of 2010, conditions for unilateral contract modifications were tightened to limit adverse contract modification to the following reasons: adverse changes in funding costs or availability of funding; credit risk growth; modification in legislation that has a direct effect on the costs in respect of loan, credit and lease contracts. A new law passed in November 2011 regulates the interest rate setting of mortgages by allowing contracts either with fixed or variable interest rates. According to this legislation, a fixed interest rate should remain fixed for the duration of the contract, while a variable interest rate should follow a transparent formula that includes a time-varying reference rate and a constant margin. If implemented in the right way, this reform should put an end to unilateral contract modifications of housing loans, thus ensuring interest rate comparability and fostering bank competition. Given these potential benefits, this legislation should not be restricted to mortgages and should be extended to all types of loans.

Switching costs have also been reduced from very high levels (4-8% of the present value for home mortgages and 4-10% for personal loans) to a maximum 1% for consumer loans and 1-1.5% for residential mortgages. Additionally, the new law that is in effect from late November 2010 sets a 0% closing charge for mortgages that simultaneously fulfil the following conditions: *i)* the borrower decides to make an early repayment of the mortgage for the first time; *ii*) the borrower took a loan more than two years ago; *iii*) the amount of early repayment does not exceed half of the mortgage; and *iv*) early repayment is not financed by another credit institution. Unfortunately, borrowers are not always aware of low closing charges, which naturally deters them from switching banks. The clause that customers cannot benefit from the 0% closing charges when the early repayment is financed by another credit institution should be dropped to foster bank competition. The effectiveness of low closing charges is further undermined by the lack of portability of state housing subsidies between banks, as a borrower loses such a subsidy if he switches banks (GVH, 2009).

The effect of these reforms in not felt yet, as the implementation of the law on transparent interest rate setting has been delayed at banks' request. This was done as part of the December 2011 agreement with the aim to reduce the burden on banks linked to numerous debt restructuring programs and the financial levy. Nevertheless, this means that Hungarian borrowers continue to pay much higher interest rates than borrowers in other countries in the region, discouraging their demand for new loans. In the future, the implementation of the new laws should be closely monitored by the Hungarian Competition Authority. The role of this independent agency should be strengthened by providing it with enough financial resources to

regularly assess the degree of competition in the financial market. Its enquiry into banking sector competition, published in 2009, has been a success and should become an annual exercise.

Efficient regulation of pension funds should spur long-term savings

Unlike banks that have short-term liabilities, pension funds enjoy long term stable funding that gives them a comparative advantage over banks to finance long-term investment via bond and equity markets. Hence, they can stimulate capital market development. The overall level of savings can increase as well, because pension fund assets are illiquid and households' demand for liquid assets has to be satisfied with other means. The development of long-term contractual savings also implies that long term interest rates should fall, further increasing the share of long-term projects that can be financed. Such theoretical considerations are supported by robust empirical evidence that the introduction of funded pension schemes, particularly with mandatory contributions, encourages capital market developments in Central and Eastern Europe (Hryckiewicz, 2009). As to pension fund members, they benefit because sources of their pension benefits are diversified and they could receive a higher return on their savings. The positive spillovers of pension funds on the economy are often recognised by policy-makers and incentives to invest in pension funds by offering tax credits are often provided (which is the case in Hungary). In this light, a decision to suppress the second fully-funded pillar of the Hungarian pension system (see Chapter 1) could have negative consequences for capital market development. Before the suppression, total assets of private pension funds amounted to 14% of GDP, but this has fallen to about 4% of GDP.

Returns of pension funds have been rather low in the past

Over the period 1998-2010, mandatory Hungarian pension funds achieved an average annual real net yield of 1.65%, which is very low in international comparison (Tapia, 2008). When compared with different benchmarks in Hungary, investment returns of private pension funds are lower than the growth of wages, the stock market or the yield on government debt securities in Hungary during the same period (Table 2.3). The performance of mandatory pension funds has suffered from the fact that they had started to increase their stock market investment just at the peak of the market in 2007. An alternative way to analyse the performance of pension funds is to see whether they are able to beat the market, which can be achieved with the help of alpha estimates or Sharpe and Treynor ratios. The results of such analysis for the period 1998-2004 suggest that Hungarian pension funds underperformed the market by 5% annually (Bohl *et al.*, 2011). The lower return of mandatory private pension funds is partly explained by their conservative investment policy; they mostly invested in Hungarian government bonds (Figure 2.12). Such policy is common for transition and developing economies that have shallow financial markets and possess little expertise in investing. However, the problems related to the shallow domestic capital markets could have been overcome by investing in foreign stock markets, which should be relatively easy as many pension funds are owned by foreign investors and regulations allow such a strategy. The international diversification should not only diminish risk of pension funds, but should also prevent local asset bubbles, which might be created if local markets cannot absorb large investment efficiently.

Table 2.3. **Relative performance of pension funds**

Per cent, 1998-2010

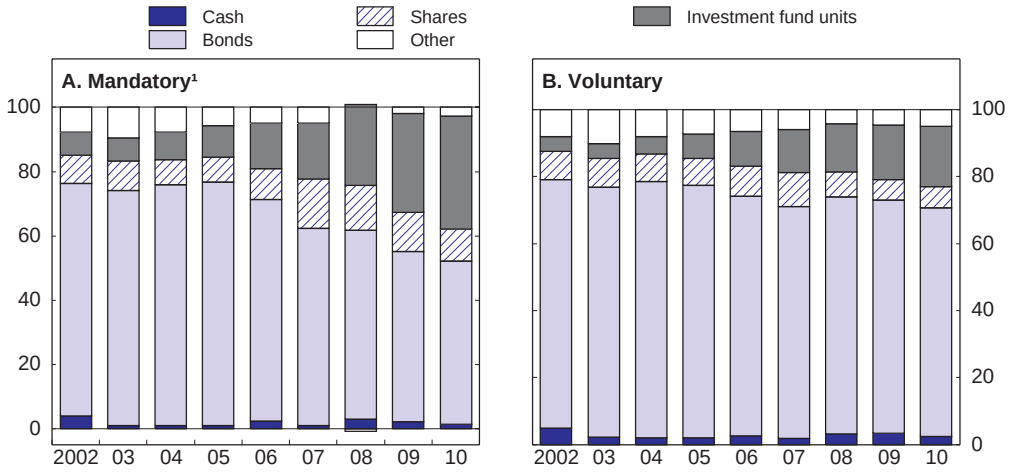
	Geometric mean[1]
Net yield of private pension funds	
Mandatory	1.65
Voluntary	1.13
Growth of the stock market (BUX index)	1.71
Wage growth	3.19
Benchmark yield on government debt securities (3 months)	2.17

1. All growth rates are real.

Source: Budapest Stock Exchange, Hungarian Financial Supervisory Authority, Hungarian Central Statistical Office and Magyar Nemzeti Bank.

Figure 2.12. **Portfolio composition of pension funds**

Per cent



1. In the "Other" category, in Q3 and Q4 2008, on the balance sheet date, the amount of the liabilities from securities transactions exceeded the value of the other securities.

Source: HFSA (2011), *Time series of sectors supervised by HFSA – Pension funds*, Hungarian Financial Supervisory Authority, September.

Pension fee structure needs to be rendered more transparent to promote competition

Hungarian pension funds are designed as defined contribution funds, which means that high administrative and asset management costs can erode investment returns. Pension funds charge fees to cover a host of operating costs. The structure of charges is fairly complex as it includes two different ratios. A fee on contributions is a front-loaded charge because its ratio to total assets falls over time as assets in the pension fund accumulate. A management fee is levied on accumulated assets and is constant over time. A reduction over time of the latter fee has a larger impact on the value of the pension, because it influences all assets each year. More importantly, the relative long-term effects of these fees on accumulated assets depend on the future rates of investment return and wage growth, which are difficult to forecast.

Given the complexity of fees, a comparison of pension funds' cost-efficiency within a country and between countries is far from straightforward. To summarise different fees and commissions, the standard approach is to compute a charge ratio, which shows the percentage of assets lost during the lifetime of accumulation due to different fees and commissions (Box 2.3). The level of the charge ratio depends on the assumptions regarding wage growth and investment return and hence, a comparison between countries requires common assumptions. Assuming zero wage growth and a 5% investment return, Hungarian pension funds charge fees that reduce the value of the pension by 22.6%, which is relatively high when compared to similar OECD countries (Table 2.4). If translated into an equivalent fee on assets, such a substantial reduction is equivalent to a 1% fee on assets per year. Besides a high fee level, Hungarian pension funds exhibit a very large variation in fees (from 0.5% to 2.2% of assets) suggesting that the market is not competitive. Pension funds that are managed by banks appear to charge higher fees on asset management.

Box 2.3. **Charge ratio**

To compute the charge ratio of pension funds, the total accumulated balance in the presence of two fees is first computed: one levied on contributions and one levied on assets.

$$A(a_1, a_2) = c(1 - a_1)e^{(r-a_2)T} w_0 \frac{e^{(g+a_2-r)T} - 1}{g + a_2 - r}$$

where a_1 is a charge which is levied in proportion to contributions, a_2 is a charge which is levied in proportion to assets, c – a pension contribution rate as a proportion of earning, r – investment return, g – growth of individual earnings, T – number of the year of contributions, w_0 – initial salary.

Next, the accumulated balance in absence of any fees is computed:

$$A(0,0) = ce^{rT} w_0 \frac{e^{(g-r)T} - 1}{g - r}$$

Finally, the charge ratio is:

$$C = 1 - \frac{A(a_1, a_2)}{A(0,0)}$$

Importantly, to calculate a charge ratio, one has to make assumptions about the growth of income and investment return. The variables on initial salary and contribution rate have no impact on the charge ratio because they disappear in the final formula. The above formula shows that a salary increase and a charge ratio have a negative relationship if fees are levied on assets and a positive one if fees are levied on contributions. Conversely, investment returns are positively (negatively) correlated with a charge ratio if fees are levied on contributions (assets). For more information on calculation and interpretation of charge ratio, see Whitehouse (2001)*.

* Whitehouse, E. (2001), "Administrative Charges for Funded Pensions: Comparison and Assessment of 13 Countries", *Private Pensions Systems: Administrative Costs and Reforms*, Private Pensions Series, No. 2, OECD Publishing.

Table 2.4. **Charge ratios and equivalent asset-based fees**

Per cent, 2001-07

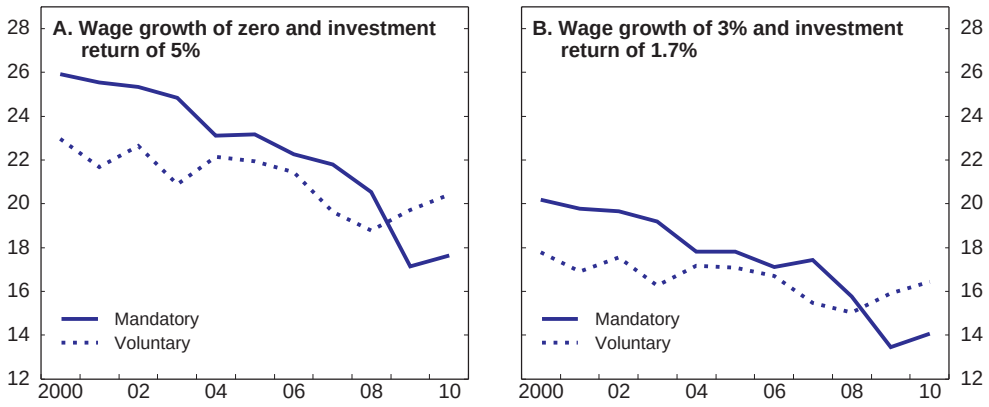
	Pension fund established (year)	Average charge ratio	Equivalent asset-based fee			
			Average	Minimum	Maximum	Standard deviation
Hungary	**1998**	**22.6**	**1.0**	**0.5**	**2.2**	**0.6**
Chile	1981	14.6	0.6	0.6	0.7	0.0
Czech Republic	1994	38.1	1.9	0.8	2.8	0.6
Israel	1995	13.7	0.6	0.1	0.7	0.2
Mexico	1997	14.9	0.6	0.5	0.9	0.1
Poland	1999	18.7	0.8	0.7	0.8	0.0
Turkey	2003	45.9	2.5	2.0	3.6	0.4

Source: D. Gomez Hernandez and F. Stewart (2008), "Comparison of Costs and Fees in Countries with Private Defined Contribution Pension Systems", *IOPS Working Papers on Effective Pension Supervision*, No. 6, International Organisation of Pension Supervisors.

It should be noted, though, that one of the reasons for high charges levied by Hungarian pension funds relates to their relative lack of maturity. International experience shows that operating costs decline sharply during the first decade after inception (Tapia and Yermo, 2008). Between 2001 and 2010, the charge ratio of mandatory pension funds has declined from 26% to 19%, while the ratio for voluntary pension funds has gone from 22% to 19% (Figure 2.13, Panel A). Importantly, if we assume that the wage growth and investment return are equal to their historic averages for the period 1989-2010, the charge ratio in 2010 is 15.5% for both mandatory and voluntary pension funds (Figure 2.13, Panel B).

Figure 2.13. **Charge ratios of Hungarian pension funds**

Under different wage growth and investment return assumptions, per cent



Source: OECD calculations based on the data available at HFSA (2011), *Time series of sectors supervised by HFSA – Pension funds*, Hungarian Financial Supervisory Authority, September.

High operating costs are usually associated with low levels of competition. In 2009, the Hungarian pension market consisted of 20 mandatory and 68 voluntary pension funds, which is a relatively high number for such an economy (Gomez Hernandez and Stewart, 2008). Despite this, the market for mandatory pension funds was rather concentrated (the concentration ratio [CR] for the largest three pension funds amounted to 63% and the Herfindahl Index was 0.18), while the structure of the market for voluntary pension funds was less concentrated (CR=39 and HHI=0.08). Previous studies have shown that the relationship between the number of pension providers and costs is not straightforward. Instead of fostering competition, a large number of providers appear to constrain pension funds from achieving economies of scale in small economies. Economies of scale on the country level can also exert a downward pressure on costs and they depend on the accumulated balance of pension funds, which is a function of the population size, average salary and contribution rate. This is the main reason for relatively high costs of voluntary systems that have low contribution rates and might have difficulties achieving economies of scale (Gomez Hernandez and Stewart, 2008).

Lower operating costs can be achieved via enhanced transparency

Competition can be spurred if members of pension funds can move their accumulated savings to more cost-efficient pension funds without an additional cost. As exit fees are prohibited, this is possible in Hungary, and this should theoretically exert market discipline and bring down costs. However, there is little evidence that members are responsive to high fees and appear, on the contrary, to be rather motivated to change pension funds under the influence of marketing and sales agents. Such counter-intuitive behaviour is easily understood if one considers limited economic education that leads to poor understanding of the fee structure (Tapia and Yermo, 2008). Moreover, two separate fees on contributions and assets render the comparison of fees virtually impossible for a non-specialist. Hence, more transparency is needed.

Currently, the HFSA is publishing information on its web page on net returns for each pension fund, as well as information on the amount of total fees and commissions as a share of total assets. Given the complexity of the fee structure, the latter ratio is misleading and should be complemented with information on charge ratios. Since charge ratios depend on the assumptions regarding wage growth and investment returns, charge ratios should be presented under different scenarios. This would allow fund members to choose the appropriate fund depending on their own wage growth expectation and riskiness of their

portfolios. Since such information can become very complex, this calls ultimately for simplifying the fee structure, allowing a fee either on assets or contributions. This would greatly improve the comparability of costs and a number of countries with competitive pension fund markets, such as Chile and Sweden, have opted for one fee.

The discriminatory regulation between mandatory and voluntary pension funds should be lifted

A complementary way to induce pension funds to reduce their costs is a regulatory limit on the maximum amount of fees and commissions that can be charged by pension funds. Indeed some of the countries with the lowest operating costs, such as Sweden and Israel, have achieved this partly due to different cost-limiting measures (Tapia and Yermo, 2008). The choice of such limit is crucial as it should be high enough to allow pension funds to cover their operating costs. Thus, it should be based on a sound analysis that looks *inter alia* at the dispersion of operating costs on the market. A low fee limit implicitly discourages pension funds from active asset management, which may be a good thing, because empirical evidence shows that very few institutional investors succeed in beating the market.

The choice of the fee limit is crucial in the Hungarian context. The dissolution of the second pillar led to a fragmented market with voluntary pension funds and much reduced mandatory pension funds (only 10% of their assets have not been transferred to the first pillar) that now both fulfil almost the same functions, but are subject to different regulatory requirements. The most important difference relates to the maximum fee limits. Voluntary pension funds face a 0.8% limit on their asset management fees and 6-10% limits on their contribution fees (depending on the size of contributions). At the same time, mandatory pension funds are currently confronted with much stricter fee limits that amount to 0.9% of assets and 0.2% of contributions that do not allow them to cover administrative costs and threaten their solvency. Such fees imply a charge ratio of 6%, which is not observed even in countries with the most efficient pension funds. To level the playing field, such discriminatory regulation should be lifted: the authorities should either drop the maximum limits on fees or should choose them more carefully and apply the same limits to both mandatory and voluntary pension funds.

Financial regulation and supervision has to take into account systemic risks

Macro-prudential regulation should be adapted to local credit cycles

In Hungary, there is little debate about the macro-prudential regulation that is appropriate to its domestic conditions. The only available macro-prudential tool involves a 90 day ban on activities that can pose risks for financial stability and is at the disposal of the HFSA. Such a measure can be used only in extreme situations and, hence, does not allow it to prevent the build-up of financial risks. One of the reasons for such a lack of an in-depth debate is the absence of a clear mandate for financial stability. Until recently, the responsibility for macro-prudential policy has been very fragmented in Hungary, divided between the Ministry for National Economy, the MNB and the HFSA with no clear mechanism to ensure that macro-prudential risk warnings and/or recommendations are followed up and translated into policy action.

A new cardinal law (subject to a two-thirds majority to be modified) on the central bank passed on 30 December 2011 equips the MNB with the mandate for macro-prudential regulation backed by regulatory independence to choose its instruments. This is a welcome development because it ensures a more transparent and efficient legal framework for the allocation of responsibilities and the MNB appears to have the necessary expertise to fulfil this new role (see below). The role of the micro-prudential supervisor, HFSA, was also strengthened by equipping it with some regulatory powers. At the same time, the Ministry for National Economy still has the right to issue regulations, including those on macro-prudential tools. While a transparent distribution of responsibilities is necessary to ensure accountability of

each agency, an effective cooperation between them is also essential in order to use the macro-prudential toolkit effectively (de Larosière *et al.*, 2009). It remains to be seen how the new system is implemented in practice. In this perspective, the Financial Stability Board (FSB), which includes the Governor of the MNB, the President of the HFSA and the Minister for National Economy, should ensure effective coordination between these three institutions.

Such a tripartite agreement is important in the Hungarian institutional context. The MNB is equipped with the mandate for financial stability, serves as a lender of last resort and its monetary policy transmission is affected via bank credit and capital channels. The HFSA should be consulted because it is responsible for micro-prudential supervision and has the best on-site expertise on the solvency of individual banks. The Ministry for National Economy should also be involved because it is responsible for taking the ultimate decision about whether to bail out insolvent banks with the help of taxpayers' money. Similar to other OECD countries that have tripartite arrangements, the main function of the FSB is not decision making but rather analysis and coordination and it may issue warnings as well. In this respect, the FSB has failed in the last months to ensure sufficient communication, as many measures that could potentially endanger financial stability have been adopted without proper consultation with the MNB and the HFSA. The fact that such consultations are not required when draft laws are submitted to Parliament by its individual members (as happened with the law on early repayment of FX loans at preferential exchange rates) is a clear concern that should be rapidly addressed.

Granting the mandate for macro-prudential supervision to the central bank is consistent with the emerging consensus among economists. The MNB already conducts macroeconomic analysis and is interested in financial sector stability because it ensures the transmission of monetary policy. Moreover, the conduct of macro-prudential policy requires the same amount of autonomy from political and interest group pressures as the monetary policy. The independence of macro-prudential policy is warranted because short-term electoral interests may bias policy away from longer-term societal interests and, moreover, technical complexity of the issues suggests delegation of decision-making to experts (BIS, 2011). The MNB already carries out a rather comprehensive analysis of systemic risks in its Financial Stability Report; it also has experience in macro stress-testing and has started to collect data related to financial stability issues. It had correctly identified foreign currency lending as the primary risk to financial stability long before the crisis, but no effective policy action was taken. Yet its macro-prudential analysis must be strengthened by defining systemic risk indicators, and creating early warning and spillover models. Macroeconomic stress testing approaches should be improved with the aim to test the resistance of the banking sector to different types of risk, such as those arising from credit developments, the interest rate, the exchange rate, asset prices and liquidity.

But macro-prudential analysis cannot be meaningful unless it can somehow impact bank regulation and supervision. To illustrate the urgency of this issue, consider the stress-test results published by the MNB in its November 2011 Stability Report that uncovered additional capital needs by Hungarian banks. Leaving this warning unanswered undermines the stability of the financial system. Therefore, it is a welcome development that in the new law on the central bank the MNB received not only the responsibilities, but also instruments to ensure macro-prudential stability. The MNB has been empowered to issue legally binding decrees on: the prevention of excessive extension of credit; liquidity requirements to prevent the growth of systemic liquidity risks; the timing, architecture and functioning of anti-cyclical capital buffers; and the additional capital requirements of systemically important institutions. It is important, however, that the macro-prudential regulation does not interfere with the conduct of the monetary policy. Unfortunately, the new law does not ensure a separate decision-making process for monetary policy and financial stability decisions inside the central bank, and thus the MNB should be particularly vigilant in setting its priorities in a transparent way and explaining the possible trade-offs in its reports.

Since the mandate for financial stability requires the same level of institutional independence as the conduct of monetary policy, several important amendments to the law on the central bank raise concerns. A new procedure was established to select the external members of the Monetary Policy Council (MPC) by a parliamentary committee and four new members were appointed this way in early 2011. Further amendments subject to a two-thirds majority were introduced at the end of 2011. The power of the governor to nominate his two deputies, also members of the MPC, was repealed and transferred to the prime minister, while the maximum number of MPC members was raised from seven to nine and that of deputy governors from two to three. Although such appointment procedures exist in many OECD countries, they represent a clear departure from best practices (Cukierman *et al.*, 1992; European Commission, 2006). Undertaken against the backdrop of frequent government criticism of the central bank decisions and its governor, multiple previous changes to the law (which have already significantly cut the remuneration of the governor and his deputies), these changes could undermine central bank independence. The European Central Bank and European Commission have expressed significant concerns about central bank independence on several occasions. It is crucial to ensure an effective independence of the central bank. The authorities have announced their readiness to resolve these issues. Furthermore, a transitional provision of the new constitution allows for a merger of the central bank with the Hungarian Financial Supervisory Authority (HFSA) into a new institution. Although the government indicated that such a merger will not happen until the end of the current governor's mandate, the fact that the central bank governor would become deputy of the new institution is incompatible with the provisions of the Treaty on the Functioning of the European Union, as well as the Statute of the European System of Central Banks.

The financial independence of the HFSA should also be improved to equip it with enough resources to fulfil its mission. A larger budget would allow it to pay more attractive salaries to its employees, which is paramount for retaining the most competent experts and improving the quality of supervision. This is also essential for limiting regulatory capture by the regulated financial institutions. The HFSA authority is funded through supervisory fees and other supervisory income, which is a good sign as it sufficiently ensures its independence from the state budget. However, such turnover-based funding has declined during the crisis by almost 20% due to reduced activity of financial institutions, precisely the period during which the supervisor urgently needed more resources for supervision. In this respect, the provision of past and present acts on the HFSA to allow the institution to create reserves up to 15% of its actual annual revenues should be put into practice.

Asymmetry between host and home regulation should be addressed

In the wake of the crisis, the cooperation between host and home regulators has been strengthened due to the establishment of supervisory colleges. Such cooperation is essential in order to enforce prudential regulation, share information on cross-border loans, contain contagion risks and prepare bank resolutions. The Hungarian authorities often claim to rely on the EU guidelines that are in the process of being designed. While international harmonisation is important, it is equally important to address local particularities, such as the fact that large systemic financial institutions are owned by foreign investors and their regulation and supervision require a very close host-home cooperation. It is unfortunate, for example, that the discussion about bridge banks, where assets and liabilities of distressed banks could be transferred, has stalled. Such a solution would foster market discipline by forcing insolvent banks to fail, but would ensure the continuity of essential banking operations of systemically important banks.

Supervision of foreign subsidiaries can be effectively undermined by the ease with which multinational financial groups could side-step regulatory controls. Facing tighter regulation in Hungary, foreign banks are well placed to provide direct cross-border loans, which would be registered on balance sheets of parent banks, thereby circumventing host regulation and supervision. While this poses no problem from the point of micro-prudential regulation of individual banks, such cross-border lending can contribute to imbalances and threaten financial stability, but there is no way for host regulators to impose

macro-prudential regulation on such flows (Pistor, 2010). To avoid such regulatory arbitrage, host and home supervisors should collect and share detailed data on cross-border loans. Moreover, credit bureaus of home and host country should share information on defaulted borrowers given the importance of such credit information sharing for the development of financial intermediation.

Another example of asymmetry between host and home regulation relates to the introduction of Basel II and III, which allow banks to rely on their own empirical risk models to calculate the required capital for credit risk. In the case of international banks, such models should be subject to the assessment and eventual approval by home and host regulator, and the HFSA is involved in such decisions via its participation in supervisory colleges. According to the EU legislation, the application of the internal rating based approach can be different for each entity within an international financial group, and the Hungarian authorities should insist more on a special treatment of foreign subsidiaries based in Hungary. Given the shorter time span of credit risk information, poorer quality of the data and structural breaks, banks should be much more prudent in their reliance on models in Hungary than in developed home countries, such as Austria, Germany or Italy. Importantly, the existence of a long-term comprehensive credit-registry could help authorities to calibrate default probabilities appropriate for the Hungarian market.

Box 2.4. **Policy recommendations to ensure financial stability and efficiency**

Smoothing households deleveraging while avoiding credit rationing

- To avoid moral hazard problems, any debt restructuring programme should be targeted to borrowers with high repayment-to-income ratios and/or negative equity.
- Regulatory forbearance should be avoided and loans that have been restructured (even if they have not yet experienced arrears) should be subject to increased loan loss provisioning to reflect the risk of future losses.
- Replace the exceptional bank levy by a less distortive tax in 2013 and ensure a recapitalisation of banks if needed by recommending banks to retain earnings and raise high-quality new equity.

Improving the efficiency of financial intermediation

- To enhance the disciplining role of credit information sharing, the central registry should be comprehensive and borrowers should not have the right to opt out. Its memory should be lengthened to ten years for defaulted borrowers and to three years for delinquent borrowers who have repaid their loans. The HFSA and the MNB should be allowed to store the information for a longer time for supervision purposes. To foster bank competition, the clause that customers cannot benefit from the 0% closing charges when the early repayment is financed by another credit institution should be dropped.
- To avoid unilateral loan modification and to reduce borrowing costs, transparent rules on setting fixed or varying interest rates should be extended to all loans.
- The discrimination in regulation of mandatory and voluntary pension funds should be lifted.
- Ensure that pension fund members receive information not only about pension fund returns, but also fees and commissions. Charge ratios should be calculated under different scenarios regarding wage growth and investment returns and published by the financial supervisor (HFSA). Ultimately, the authorities should consider simplifying the fee structure by keeping only one fee, either on assets or on contributions.

Enhancing framework conditions of financial stability

- Ensure an effective independence of the central bank.
- Strengthen the financial independence of the HFSA by increasing the level of supervisory fees and eventually accumulating a reserve fund.
- Cooperation between host and home regulation of foreign banks should be improved with a view to improve implementation of prudential regulation, sharing information on cross-border loans and defaulted borrowers, containing contagion risks and preparing bank resolutions.

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Annex 2.A1.

Determinants of net interest margins in Hungary and its OECD peer group in Central and Eastern Europe

In order to compute the impact of different determinants on net interest margins (NIM), the following equation has been estimated (with the value of parameters, all statistically significant at 5%, presented below):

$$NIM_{it} = \underset{}{\alpha_0} + \underset{(0.05)}{\alpha_1 Cap_{it-1}} + \underset{(0.07)}{\alpha_2 LLP_{it-1}} + \underset{(0.16)}{\alpha_3 Costs_{it-1}} + \underset{(0.03)}{\alpha_4 L_{it-1}} + \underset{(0.08)}{\alpha_5 Int_{it-1}} + \underset{(0.06)}{\alpha_6 GDP_{it-1}} + \underset{(0.05)}{\alpha_7 Inf_{it-1}} + \underset{(0.48)}{\alpha_8 Tax_{it-1}} + \varepsilon_{it}$$

where Cap_{it} – is the ratio of equity to total assets, an inverse of a leverage ratio;

LLP_{it} – a ratio of loan loss provisions to total loans to proxy for credit risk;

$Costs_{it}$ – a ratio of operating costs to total assets;

L_{it} – a Lerner index;

Int_{it} – a money market interest rate;

GDP_{it} – GDP growth;

Inf_{it} – CPI inflation;

Tax_{it} – the ratio of taxes paid to total assets.

The model is estimated on a sample of 125 banks in OECD countries of Central and Eastern Europe (Hungary, Czech Republic, Estonia, Poland, Slovak Republic and Slovenia) for 1996-2009, relying on random effect estimation. The data is taken from the BankScope database that provides information on banks' balance sheets and income statements.

The results indicate that better capitalised banks pass the cost of capital to their clients. Higher loan portfolio risk and cost-inefficiency are also compensated by higher margins. Banks with market power succeed to either charge higher lending rates or pay less to depositors. As to macroeconomic environment, economic growth leads to higher margins because it is easier for borrowers to repay their loans, while higher inflation and money market rate lead to higher spreads. There is one percentage point remaining unexplained by macroeconomic environment and banks' financial statements. The other factors that cannot be controlled in the model relate to portfolio composition (currency, maturity, borrower type), cost of regulation, transfer pricing, uncertainty, etc.